

Watersheds 2018

A bundle of seven freshwater-focused events held between January and June, 2018



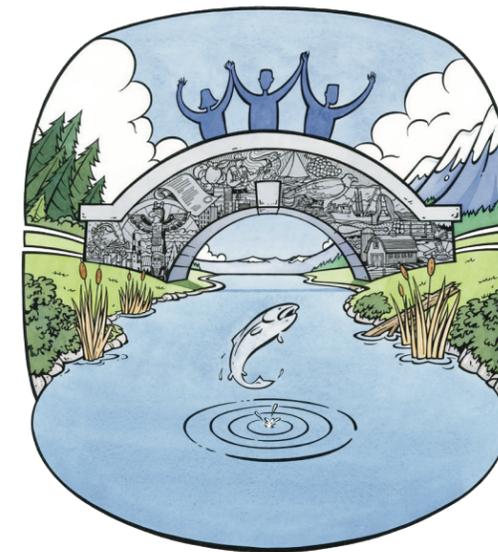
Convened virtually and in Victoria, B.C. on the unceded Coast Salish territories of the Songhees, WSÁNEĆ, and Esquimalt Nations

Edited Proceedings

#watersheds2018

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Edited Proceedings

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Acknowledgements

Watersheds 2018 was part of an almost decade-long tradition of building and deepening connections among B.C.'s freshwater community. Past forums – including *Watersheds 2016*, *Watersheds 2014*, and the *2012 Solutions Forum* – have sought to find sustainable solutions to pressing water problems and enhance collective capacity to advance watershed governance.

For the first time, *Watersheds 2018* was organized as a series of in-person and virtual events, framed by a focus on “planning for success,” water-centric land use, and building robust and innovative partnerships. A living archive with event descriptions, video recordings, presentation slides, and other resource materials for the ongoing series of *Watersheds* gatherings is available at: <https://watershedsforum.ca/>.

These proceedings provide a written record of the core discussions and questions raised during each of the *Watersheds 2018* events, and are based on notes taken by Roleen Sevillena, Rosie Simms, and Megan Spencer. The capstone event, the half-day online forum “Planning for Success: New Thinking for Land Use and Water Governance,” was organized by the *Watersheds 2018* Planning Team, which was comprised of representatives from several freshwater organizations and initiatives. The organizers thank Roleen Sevillena for her diligent efforts to coordinate the Planning Team and organize logistics and technical aspects for all seven events. *Watersheds 2018* was also made possible through the generous support of event sponsors and partners.

The editors thank all of the above, as well as those presenters who took the time to provide comments and suggestions during the development of this report. Megan Spencer led the compilation and editing, Rosie Simms provided review and revisions, Laura Brandes provided copy editing, and German Ocampo provided layout and design.

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Introduction and Context

Fresh water in British Columbia faces many challenges that will require innovative and cross-cutting solutions in water law, policy, and governance. Grappling with these challenges will require that we work together – across cultures, disciplines, and institutions – and build or re-build relationships with each other based on trust, respect, and meaningful collaboration.

Watersheds 2018 took place in the context of accelerating impacts from climate change and increasing stressors and demands on water, and a collective understanding that urgent change is needed in how we manage our relationships with water—and with each other. For the first time, *Watersheds 2018* was organized as a bundle of seven freshwater-focused events that occurred between January and June 2018. All together, the events convened 22 diverse speakers and over 780 water champions, practitioners, academics, and representatives from all levels of government: federal, Indigenous, provincial, and local.

The capstone event for *Watersheds 2018*, Planning for Success: New Thinking for Land Use & Water Governance, highlighted innovative examples from the constellation of solutions-driven partnerships and initiatives underway in B.C. Collectively, these initiatives are building a more resilient future for the watersheds and the communities they sustain:

- **Tara Marsden (Gitanyow First Nation)** described how the *Gitanyow Lax'yip Land Use Plan* integrates several protections for fresh water and foreshadowed the development of a water management plan and water quality policy for Gitanyow territory.
- **Chief Aaron Sumexheltza and Chris Walder (Nicola Watershed Governance Pilot)** spoke about the new watershed governance pilot initiative in the Nicola watershed, and the steps taken to establish a meaningful collaborative partnership between five Nicola First Nations chiefs, the provincial government, and local communities.
- **Michelle Tung (Nadleh Whut'en First Nation)** reflected on the development and implementation of the Yinka Dene 'Uza'hne' Surface Water Policy, which is being used as a tool for collaborative water management in the Nechako watershed across all levels of government.
 - **The majority of this document focuses on the proceedings of the *Watersheds 2018* capstone event Planning for Success: New Thinking for Land Use & Water Governance (June 5, 2018).** This half-day online forum explored successes and challenges experienced on the ground through water-centric planning and watershed governance initiatives across B.C.
 - **This document provides brief summaries of the following events that, together with the capstone event, comprised *Watersheds 2018*:**
 - **Columbia River Treaty Symposium (May 28th, 2018)**—This one-day forum identified key science and technical issues and explored opportunities for innovative, modernized governance of the Columbia River and the Columbia River Treaty.
 - **The Hard Work of Hope in the Anthropocene (April 27, 2018)**—This public lecture and discussion examined specific sources of hope, with a focus on the transformative potential of sustainability science.
 - **Treaty Talks: Paddling Up the Columbia River for People and Salmon (April 18, 2018)**—This public film screening and panel explored the renegotiation of the Columbia River Treaty, the role of Indigenous nations, and the numerous issues and concerns that have emerged since the Treaty was ratified.
 - **Focus on the Fraser: A Peer-to-Peer Watershed Governance Dialogue (March 13, 2018)**—This webinar focused on updates and lessons learned through three watershed governance and sustainability initiatives underway in B.C.'s Fraser region.

- **Water, Peace, and Global Security: Canada's Place in a Changing Water World (January 23, 2018)**—This panel discussion highlighted the global-to-local risks to fresh water and Canada's role in advancing governance and policy solutions to the global water crisis.
- **Collaborative Consent and Revitalizing Indigenous Laws (January 15, 2018)**—This webinar explored insights from recent research and applied work on collaborative and Indigenous-led approaches to watershed governance, specifically "collaborative consent."

Watersheds 2018: Planning for Success: New Thinking for Land Use and Water Governance

An online forum for water practitioners, watershed groups, First Nations, and other decision-makers held on June 5th, 2018

Planning for success through a 'water-centric' land-use planning approach was the central focus for the *Watersheds 2018* capstone forum. Water-centric planning cuts across scales and promotes a whole-system or 'whole of watershed' perspective, which can be applied to better protect freshwater resources, promote sustainable development, and mobilize watershed governance.

The *Watersheds 2018* forum highlighted examples of water-centric planning and collaborative water governance initiatives underway in B.C. Experts in Indigenous law, water planning and management, and community watershed champions offered perspectives and examples of changes experienced on-the-ground (and in the water), and identified the solutions and partnerships being created in response.

This forum was the first large-scale gathering in the *Watersheds* series of events to be held in a virtual platform¹, which was well-received by participants. The forum was hosted by the POLIS Project on Ecological Governance and was attended by approximately 230 practitioners and water champions from across B.C., representing all levels of government, including local, provincial, federal, and First Nations, academia, and the not-for-profit and philanthropic sectors.

These proceedings are based on the presentations given, questions raised, and online discussions held during the virtual gathering. They are intended to be a resource and reference document alongside the forum workbook and resource package, session videos, and PowerPoint presentations, which are available online through the Watersheds forum website: <https://watershedsforum.ca/watersheds2018/>.

Session One: Indigenous Water Law & the Emerging Priority of Water-centric Planning

By Val Napoleon (Faculty of Law, University of Victoria), Deborah Curran (Faculty of Law, University of Victoria), and Tara Marsden (Gitanyow First Nation)

Moderator: Laura Brandes (POLIS Water Sustainability Project)

View online at <https://www.youtube.com/watch?v=iN-DetZTr40>; presentations start at 05:00.

This session explored the connections between Indigenous water laws and water-centric planning, looking to initiatives led by Indigenous communities in partnership with the University of Victoria's Indigenous Law Research Unit, and to the Gitanyow Nation's water-centric planning process in the Skeena region. Speakers discussed how Indigenous water laws and traditional governance processes are being revitalized and how they might be applied in conjunction with the colonial legal system to advance watershed sustainability.

¹ An e-survey was sent to participants following the *Watersheds 2018* capstone forum. The results indicate that 83% of respondents rated the virtual meeting room as 'very good' or 'good', while 64% appreciated the opportunity to network via the virtual chat box. Further insights from this survey are presented in Appendix A.

Introduction to Indigenous law

By Val Napoleon (Faculty of Law, University of Victoria)

Indigenous law exists at the same scope and scale as Canadian law. Indigenous law is informed by several branches of law, which co-exist and interplay with one another, including: deliberative law, customary law, positivist law, natural law, and sacred law. As an intellectual process, Indigenous law is culturally informed and alive, but not always intact or explicitly in use.

The University of Victoria's Indigenous Law Research Unit² brings together legal researchers in partnership with Indigenous communities to rebuild and apply Indigenous laws. The projects typically progress through five phases: a research question workshop with the community, analysis of existing resources, interviews and ground-truthing findings, synthesis and organization within a legal framework, and implementation and evaluation.

Key Lessons:

It is important to know what the law is to know when it is broken.

There are many “spaces of lawlessness” – areas where Indigenous law is undermined or absent and where Canadian law has failed. Violence and suffrage are often experienced by Indigenous peoples in these spaces, which may be addressed when the community's Indigenous laws are rebuilt and applied.

Do not make assumptions about Indigenous law or undermine it as a legal process.

Declarations are just one aspect of Indigenous law. Indigenous laws provide a guiding framework for the governance processes that are used to address a community's ethical and legal questions.

Indigenous water law in action

By Deborah Curran (Faculty of Law, University of Victoria)

British Columbia's siloed approach to water law, management, and governance is problematic. A more holistic, modernized approach would integrate water- and land-use decision-making at the watershed-scale, ensuring that decisions are informed by both Western science and Indigenous laws and knowledge.

Fresh water in B.C. faces an uncertain future – climate change is shifting the hydrology of the province's watersheds so that “normal” hydrologic regimes no longer exist. The Province's water allocations system was not built to respond to these changes, and in many populous areas, water is fully allocated for decades into the future.

B.C.'s water allocations system also does not accommodate the Aboriginal right to water. While Aboriginal and treaty rights are defined in s. 35 of Canada's *Constitution Act* (1982), this definition has predominately been applied to land and does not delegate a specific volume of water to Aboriginal peoples. Yet, it is clear that the realization of Aboriginal rights depends on functioning ecosystems with healthy environmental flows and stable hydrology.

Fresh water will be both the primary driver and limiting factor for future land-use decisions in the province. Innovations and strategies pursued through mechanisms in Indigenous law and colonial law offer opportunities to better protect fresh water in B.C., including watershed-based planning and co-governance with Indigenous nations.

Examples of Indigenous-led strategies to advance water and watershed protection include:

Declarations and water policies. The *Syilx Nation Siwlk^w Declaration*³ was developed by the Okanagan Nation Alliance and outlines the responsibilities and relationships between Syilx peoples and the waters in their traditional territory. The Yinka Dene 'Uza'hné

*Surface Water Management Policy and 'Uza'hné Guide to Surface Water Quality Standards*⁴ were developed by the Nadleh Whut'en and Stellat'en First Nations to protect surface water using traditional laws (see page 9 for details about the Yinka Dene surface water policy).

Environmental assessments. The Secwepemc Nation and the Tsleil-waututh Nation have developed community-led environmental assessment processes based on traditional laws, which are used to evaluate proposals for resource development on traditional lands.

Negotiated agreements. Negotiated agreements between the Province of B.C. and Coastal First Nations,⁵ and between the Province of B.C. and the Haida Nation,⁶ have initiated ecosystem-based management regimes within the Great Bear Rainforest and Gwaii Hanaas. Land-use plans developed by the involved First Nations were used as the basis for both agreements. The final agreements were adopted into colonial law and into the Indigenous legal orders of the involved First Nations.

Watershed boards. The Cowichan Watershed Board was co-created by Cowichan Tribes and its activities remain guided by Indigenous laws (see page 7 for details on the Cowichan Watershed Board).

Gitanyow Lax'yip Water Planning

By Tara Marsden (Gitanyow Hereditary Chiefs)

The *Gitanyow Lax'yip Land Use Plan*⁷ emerged in response to a long history of unsustainable forestry practices in Gitanyow territory, located in the Skeena region of northwestern B.C. The plan was initially released in 2012, following ten years of negotiations between Gitanyow First Nation and the Province, and was renewed in 2016. While the plan primarily focuses on protecting land from forestry interests, it integrates several protections for fresh water. For example,

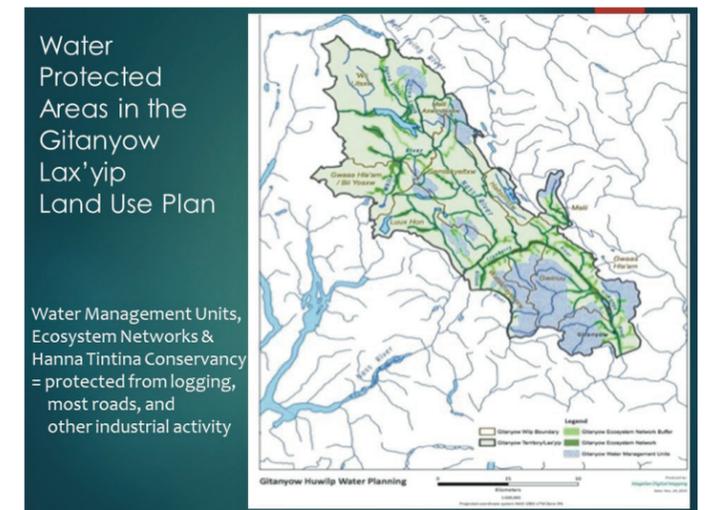


Figure 1: Water protected areas in the Gitanyow Lax'yip Land Use Plan. Source: Marsden, 2018.

“water management units” are designated in high-elevation catchment areas within Gitanyow territory. Logging, most road development, and other industrial activities are not permitted within these areas (see Figure 1).

Smaller snowpacks and receding glaciers in northern Gitanyow territory have shifted the locations for suitable spawning habitat for sockeye salmon. Historically, 80 per cent of the spawning habitat for Nass River sockeye salmon was protected within Hanna-Tintina Conservancy in northeastern Gitanyow territory. The glacier that historically fed the watersheds within the conservancy has now receded and lesser snowpacks are being recorded. More suitable spawning habitat for Nass River sockeye now exists in the streams along the northwestern side of Meziadin Lake, outside the boundaries of Hanna-Tintina Conservancy. Gitanyow Nation is considering whether to propose to expand the conservancy's boundaries to include the new spawning habitat. The flexibility of the Nation's land-use plan will be tested in the response to this situation.

² For more information about the Indigenous Law Research Unit, see <http://www.uvic.ca/law/about/indigenous/indigenoulawresearchunit/index.php>

³ Syilx Nation. (2014, July). *Siwlk^w Declaration*. Retrieved from https://www.syilx.org/wordpress/wp-content/uploads/2012/11/Okanagan-Nation-Water-Declaration_Final_CEC_Adopted_July_31_2014.pdf

⁴ Yinka Dene Alliance. (2016). *'Uza'hné Surface Water Management Policy and 'Uza'hné Guide to Surface Water Quality Standards*. Available at <http://www.carriersekani.ca/news/yinke-dene-uzahne-guide-to-surface-water-quality-standards>

⁵ Bill 2 – 2016: Great Bear Rainforest (Forest Management) Act. (2016). 40th Parliament, 5th session. Available at <https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/land-use/land-use-plans-objectives/west-coast-region/great-bear-rainforest/great-bear-rainforest-legal-direction-agreements>

⁶ Council of Haida Nation and Province of BC. (2007). *Haida Gwaii Strategic Land Use Agreement*. Available at <https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/land-use/land-use-plans-objectives/west-coast-region/haidagwaii-slua>

⁷ The *Gitanyow Lax'yip Land Use Plan* appears within the *Gitanyow Huwilp Recognition & Reconciliation Agreement* (2012) at pp. 8-12, see <http://www.gitanyowchiefs.com/images/uploads/land-use-plans/Gitanyow-R-R-Agreement-2012.pdf>

Water management plan & water quality policy: Phase 1 Scoping Document & Framework (Jan 2018)

- Current status of aquatic ecosystems and water bodies
- Current pressures on aquatic ecosystems
- Framework for developing a water quality policy
- Building on relevant sections of the GLLUP
- Assess implications of WSA relevant to Gitanyow rights and title and water planning
- Provide technical support for Gitanyow staff and leadership to establish water working group with other Skeena and Nass First Nations
- Two-year plan for development/implementation

Figure 2: Gitanyow water management plan and water quality policy. Source: Marsden, 2018.

Driven by growing concerns for freshwater and ecosystem health, Gitanyow Hereditary Chiefs completed a scoping exercise in early 2018 for a water management plan and water quality policy for Gitanyow territory (see Figure 2). Much research is still needed to inform the plan and policy, including addressing a deficit of water quality and quantity data, and better identifying existing water uses and pressures within the territory. Gitanyow Nation also intends to develop a collaborative water working group with other Skeena and Nass First Nations. A two-year work plan is proposed for development and implementation of the plan and policy.

Discussion: The role of ethics and sociocultural impacts assessments

How is “ethics” considered within the bodies and systems of Indigenous law? Are ethics so embedded in aspects of Indigenous law that we can’t tease Indigenous notions of ethics out of Indigenous law?

Val Napoleon: Law is founded upon our understandings of the world – our cosmologies and aspirations for society. The underlying beliefs of a legal order inform how people behave within their society. In Indigenous legal orders, ethical concerns are woven throughout the construct and operation of the law itself. Most Indigenous societies were traditionally decentralized, so an underlying ethic in Indigenous

law is a resistance to hierarchical governance structures and a commitment to decentralized social organization. The hierarchical structures imposed on Indigenous communities through the *Indian Act* are therefore highly problematic and persist as a source of friction.

Ethical principles also inform the foundation for the aspirations of Indigenous laws. For example, ethical principles from Cree and Anishinaabe law reflect concerns for fairness, inclusion, and safety. These concerns help determine who makes certain decisions and how decisions are made. The legal agency of collectives versus individuals is also an important distinction that is based on deep ethical considerations. For example, the Wilp (house groups) of the Tsimshian and Gitksan are rights-holding entities that hold collective liability and other collective responsibilities.

Can Indigenous law form a bridge to connect the impacts to health or cultural continuity from resource development that cannot be addressed through risk frameworks, like Environmental Impact Assessments (EIAs)? Where is the space for Indigenous laws in EIAs?

Tara Marsden: Gitanyow First Nation uses “sociocultural needs assessments” in addition to environmental assessments to determine the human impacts from resource development projects. Surveys are used to gauge how the health and well-being of individuals and the broader community are impacted by major development projects. The surveys include traditional questions about housing and employment status, but also inquire whether a community member participates in community feasts, if they have access to traditional foods, and if they speak their Indigenous language.

The assessments are completed every time a major project is proposed and are repeated over a five-year term to provide a measure of whether community health improves or declines over time. The survey data and trends are a useful resource for when Gitanyow meets with government or industry to discuss the sociocultural impacts of a development project.

Session Two: Watershed Governance Roundup: Lessons and Updates from On the Ground (and In the Water)

By Tom Rutherford & Lydia Hwitsum (Cowichan Watershed Board), Chief Aaron Sumexheltza & Chris Walder (Nicola Watershed Governance Pilot), and Michelle Tung (Nadleh Whut'en First Nation)
Moderator: Rosie Simms (POLIS Water Sustainability Project)

View online at <https://www.youtube.com/watch?v=iN-DetZTr40>; presentations start at 1:43:00.

There is no one-size-fits-all approach to watershed governance in B.C. Many different entry points, functions, and forms of watershed governance are possible and are already emerging across the province. This panel picked up on discussions from previous *Watersheds* forums and offered insights from three prominent and innovative watershed governance initiatives underway in B.C.’s Cowichan, Nicola, and Nechako watersheds. Each initiative is approaching the issues of watershed sustainability, reconciliation, and shared authority through unique pathways, though they find common ground in the cultivation of trusting partnerships, recognition of Indigenous laws, and maintenance of strong local interest in healthy watersheds.

Lessons learned and updates from Cowichan Watershed Board

By Tom Rutherford & Lydia Hwitsum (Cowichan Watershed Board)

The 2003 drought in the Cowichan watershed⁸ served as a wake-up call for concerned parties in the region to come together and collaboratively address the watershed’s water supply and demand concerns.

In 2004, the Cowichan Valley Regional District, Ministry of Environment, Fisheries and Oceans Canada, Catalyst Paper, the Pacific Salmon Commission, and Cowichan Tribes embarked on a three-year collaborative planning process that resulted in the Cowichan Basin Water Management Plan (CBWMP).⁹ The plan challenges the traditionally siloed approach to land- and water-use management and is the foundational document for the Cowichan Watershed Society and the Cowichan Watershed Board (CWB).

Cowichan Tribes and the Cowichan Valley Regional District facilitated the first steps in developing the CWB, which was established in 2010 and has become a leading example of collaborative watershed governance.¹⁰ The CWB is grounded in the understanding that looking after a watershed is a job for everyone, not one single entity.

The CWB recognizes the unextinguished Indigenous rights and title held by Cowichan Tribes and views Indigenous law as a source of authority. This framework has enabled CWB to strengthen and deepen relationships between Cowichan Tribes and other board members.

The CWB is supported by a Technical Advisory Committee who, under the guidance of the board, distilled the CBWMP into seven measurable “watershed targets,” which provide guidance for the Plan’s implementation. These targets are addressed by technical working groups, comprised of representatives from local government, environmental organizations, industry, and Cowichan Tribes. This approach has measurably improved the health of Cowichan watershed.

⁸ In the 2003 drought, water levels in Cowichan River and Cowichan Lake reach critically-low levels. An integrated management plan was not yet in place to respond to the crisis.

⁹ The Cowichan Basin Water Management Plan is available online, see <http://www.cowichanwatershedboard.ca/doc/cowichan-basin-water-management-plan>

¹⁰ For a case study of how the Cowichan Watershed Board has brought watershed governance into action, see Hunter, R., Brandes, O.M., Moore, M-L., & Brandes, L. (2014). The Cowichan Watershed Board: An Evolution of Collaborative Watershed Governance. Victoria, Canada: POLIS Project on Ecological Governance at the University of Victoria. Retrieved from <https://poliswaterproject.org/polis-research-publication/cowichan-watershed-board-evolution-collaborative-watershed-governance/>

Water supply, water quality, and impacts to habitats and ecosystems are primary concerns in the Cowichan watershed. CWB's strong partnership model and use of "whole-of-watershed" thinking¹¹ are spawning solutions to these challenges. For example,

water supply concerns are being addressed through a collaborative water-use planning process,¹² while water quality issues in the Koksilah sub-watershed are being addressed through monitoring, outreach, and education with local farmers about nutrient management.

Next Steps:

- ✓ Maintain and strengthen the relationships between CWB partners
- ✓ Empower community members through local water governance partnerships
- ✓ Achieve and maintain the CBWMP targets (and ensure that Indigenous and local knowledge is applied)
- ✓ Take action on reconciliation with Indigenous peoples; for example, realize the principle of *Nutsamat kws yaay'us tth qa': we come together as a whole to work together to be stronger as partners for the watershed* and include it in CWB's governance manual

Key Lessons:

- ✓ Partnerships are powerful. Complex water issues cannot be tackled by a single organization
- ✓ Good science and traditional knowledge are needed to support decision-making
- ✓ Patience is a virtue. Take small steps along the path towards watershed governance
- ✓ Indigenous voices and values are critical to success
- ✓ Capacity development is necessary for Indigenous peoples to participate
- ✓ Have a plan with short-, medium-, and long-term objectives

Nicola Watershed Governance Pilot and MOU with Nicola Chiefs

By Chief Aaron Sumexheltza & Chris Walder (Nicola Provincial Watershed Governance Pilot)

On March 23rd, 2018, the Province of B.C. and five chiefs of First Nations bands in the Nicola Valley co-signed the *Nicola Watershed Pilot Memorandum of Understanding (MOU)*,¹³ an agreement to collaboratively manage water resources in the Nicola watershed. The Nicola MOU establishes a partnership between the Province and Syilx and Nlaka'pamux peoples with territories in the watershed, whose interests and values associated with water are aligned (see Figure 3).

The MOU envisions the sustainable governance of water resources in the Nicola watershed through a deepened partnership between the five Nicola chiefs,



Figure 3: Syilx and Nlaka'pamux aligned water interests. Source: Sumexheltza and Walder, 2018.

¹¹ For an explanation of 'whole-of-watershed thinking,' see Brandes, O.M. (2012). "Thinking Like a Watershed: Watershed Governance, the Future for Water Sustainability." In Roseland, M., *Toward Sustainable Communities: Solutions for Citizens and their Governments, 4th Edition*. Gabriola Island: New Society Publishers.

¹² Recommendations for water supply and storage options for Cowichan Lake and Cowichan River system were presented on June 11, 2018, see <https://www.cvr.bc.ca/DocumentCenter/View/90085/Cowichan-Water-Use-Plan>

¹³ For more information about the Nicola watershed governance pilot, see <https://news.gov.bc.ca/releases/2018ENV0012-000484>

the provincial government, and local communities. Goals for the pilot include access to safe and clean water for people, fish and wildlife, now and for future generations.

In recent years, the Nicola watershed has experienced changes in water quality and quantity, declines in aquatic ecosystem health, and major land-use modifications. These issues are the drivers for the watershed pilot, along with the overarching vision for a healthier, sustainably managed watershed, and the region's strong history of collaboration.¹⁴ The pilot will use a collaborative and co-developmental approach, and local communities will be engaged to share their interests and concerns.

The Syilx and Nlaka'pamux peoples have recognized jurisdiction to manage the waters within their territories. The colonially-dominated history in the Nicola watershed creates a need for the Province and First Nations to work towards reconciliation and sets an impetus for First Nations to rebuild Indigenous knowledge and laws. Through the Nicola pilot, revitalized Indigenous laws could be viewed as a source of future authority and used to inform water management decisions with colonial water legislation through a new approach to water governance (see Figure 4).



Figure 4: Nicola pilot intersections with Indigenous laws and authority. Source: Sumexheltza and Walder, 2018.

¹⁴ Local residents and interest groups are promoting the long-term sustainability of the Nicola watershed, see the Nicola Watershed Community Round Table (<http://www.nwcr2016.org/index.htm>) and Fraser Basin Council (https://www.fraserbasin.bc.ca/tr_nicola_watershed_resources.html)

¹⁵ In 2014, monitoring in Francois Lake, the Endako River, and streams originating from the Thompson Creek Metals' mine (Endako mine) indicated that its effluent was impacting aquatic environments, see <http://www.vancouver.sun.com/technology/Endako+mine+effluent+affecting+aquatic+environment+north+central/9514940/story.html>

¹⁶ The Yinka Dene's 'Uza'hne' Surface Water Management Policy and 'Uza'hne' Guide to Surface Water Quality Standards are available online, see <http://www.carriersekani.ca/news/yinka-dene-uzahne-guide-to-surface-water-quality-standards>

Key Lessons:

- ✓ Co-design the project process/framework (i.e. reflect Indigenous and Crown interests)
- ✓ Recognize and address the potential limitations of existing legal frameworks
- ✓ Maintain continuous communication with project partners and stakeholders
- ✓ Ensure sufficient resources are available for planning, engagement, and implementation (especially for First Nations participation)

Development and Implementation of the Yinka Dene Surface Water Policy

By Michelle Tung (Nadleh Whut'en First Nation)

For thousands of years, Yinka Dene laws have governed Nadleh Whut'en and Stelat'en territories located in what is now considered north-central B.C. The traditional lifestyles of Nadleh and Stelat'en peoples are reliant on the unobstructed access to their waters and natural resources, which are inextricably linked to their culture and governance.

In 2014, concerns around the environmental impacts of the Endako molybdenum mine reached a tipping point. Effluent discharged from the mine was releasing toxic chemicals into the surrounding watersheds at levels that exceeded B.C.'s water quality guidelines, and habitat quality was degrading for critical species like chinook and sockeye salmon.¹⁵ Out of this situation, the Nadleh and Stelat'en leadership took action to develop a surface water policy.

The Yinka Dene 'Uza'hne' Surface Water Policy¹⁶ was enacted by the Nadleh Whut'en and Stelat'en leadership in 2016 as the first Indigenous water management regime in Canada. The hereditary leadership framed the policy as an opportunity for collaborative water management in the Nechako watershed across all levels of government.

“The Policy itself is an expression of our living governance and laws. The health of surface waters throughout our Territories, and the life they sustain, are of fundamental importance to our continued enjoyment of our Aboriginal title and rights. The Policy was developed to fulfill our legal obligations as stewards and to respond to the ongoing impacts to surface waters in our Territories.”

– statement from Nadleh and Stellat’én hereditary leaders

The policy framework consists of three elements for managing the quality and flow of surface waters within the territories of the Nadleh and Stellat’én (see Figure 5):

3 Technical Elements

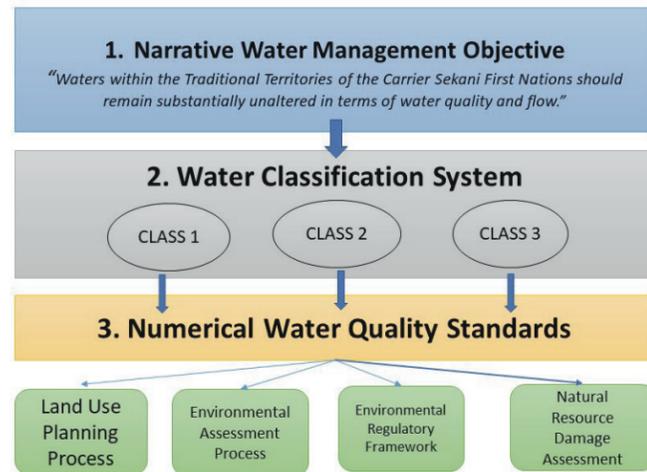


Figure 5: Technical elements in Yinka Dene 'Uza'hne' Surface Water Policy. Source: Sumexheltza and Walder, 2018.

- 1. Narrative water management objectives** which provides the policy’s overarching structure.
- 2. Water classification system** that divides waterbodies into three classes based on different values and provides management goals for each of the classes. The classification system integrates and reflects the knowledge and values of the Nadleh and Stellat’én and the categorization is validated at the community level.

- 3. Numerical water quality standards** are science-based tools that establish specific water quality standards for different contaminants. The standards can be directly incorporated into existing natural resource management frameworks, like B.C.’s land-use planning and environmental impact assessment processes

The policy was designed as a guiding document for government and industry and has already achieved many “wins” around its implementation:

- The Provincial regulator fully supported implementation of the policy, which now acts as the foundation for the Nadleh, Stellat’én, and the Provincial regulator to set agreed-upon water quality objectives.
- The company that operates Endako Mine has willingly adopted the surface water policy as a foundation for future mitigation and management.
- The policy was also willingly adopted by the proponent into the Environmental Assessment process for the proposed Blackwater Mine. Preliminary classifications have been assigned to relevant waterbodies and water quality standards are included as part of the table of conditions. Broader changes to the mine’s design, operations, and management plans were also made to better reflect the policy’s principles.

Next steps:

- ✓ Develop processes and frameworks to support comprehensive and consistent implementation of the policy
- ✓ Proactively classify all waterbodies in Nadleh territory
- ✓ Develop opportunities to pilot implementation of the policy
- ✓ Continue to learn from ongoing processes (for Endako Mine and Blackwater Mine)
- ✓ Encourage the ongoing active participation of Nadleh Whut’én leadership, staff, community members, and collaboration with industry and government

Discussion: Building trust and enduring political changes

How has your initiative worked to build trust?

Tom Rutherford and Lydia Hwitsum: “Whole-of-watershed” thinking teaches us that natural systems don’t stop at jurisdictional boundaries. We are reliant on the whole watershed, not just one part. We’ve established mutual trust and respect by taking a holistic perspective. While everyone has a role and responsibilities, we are all connected and rely on the same watershed.

Chief Aaron Sumexheltza and Chris Walder:

We established a good relationship with the Province through the development of the MOU with Nicola Chiefs, which we hope to maintain in our continuing work. We put the issues of the past behind us and we look forward to a better future. We’ve established trust by having honest dialogues and being patient with each other. But building trust often means taking a leap of faith!

How has your initiative been shaped to endure the short-term political cycles that we operate under in B.C.?

Tom Rutherford: Having a plan with long-term targets that are referenced in plain language makes it easier to adjust when political changes happen. The CWB is supported by the local community, which reflects the interests of citizens in maintaining the health of the Cowichan watershed. This support carries enough momentum so that the CWB (and its activities) are still considered priorities when political shifts occur.

Chris Walder: Long-term community support and momentum is critical. Crown governments are also trending towards co-governance arrangements with First Nations and increasing community involvement in water management. Despite the recent change in B.C.’s provincial government, we are still moving

towards that trend and don’t expect to be shifted off course. We are also hopeful that revitalized Indigenous laws and principles will be used as the foundation for decision-making and that this foundation will remain in place regardless of shifts in political leadership (Indigenous and non-Indigenous).

Conclusions and Take-Aways

Conclusions and take-aways that arose from the capstone event and the other six *Watersheds 2018* events are discussed on page 24.

Columbia River Treaty Symposium

A science & technical workshop and discussion¹⁷ held on May 28th, 2018 at the University of Victoria

View presentations online at <https://youtu.be/s6s1oJNteUs>

On May 29, 2018, the United States and Canada began formal negotiations to update the Columbia River Treaty. For the past five years, both countries have been exploring their respective opportunities to improve the more than 50-year-old Treaty based on consultations with the public, experts, and all levels of government, including First Nations and Tribes.

The Columbia River Treaty Symposium was held on May 28, 2018 at the University of Victoria. It was a special event of the Canadian Water Resources Association (CWRA) 2018 National Conference and was also part of the POLIS Project's Watersheds 2018 series of events. One of the objectives of the symposium was to consider how restoration of ecosystem function in the Columbia River Basin could be reconciled with hydropower and flood risk management to meet the challenges of the 21st century—especially given the looming changes to the Basin's hydrology due to a changing climate. The symposium also explored the potential roles and responsibilities for First Nations and Tribes in a modernized Columbia River Treaty.



Symposium panelists discuss Indigenous representation and an inclusive, modernized Treaty (left to right): Jim Heffernan, Alexandra Banford, Jay Johnson, Elliott Tonasket, and Zita Botelho. Photo by Jodie Walsh.

3. **Participants agreed that the Columbia River and its basin are a single functioning entity and that negotiations should integrate the interests of the parties within the Basin as a whole.** This will require a different governance model that includes ecosystem-based functions and managed utilities with a dual focus on flood control and power generation. A governance system that provides a decision-making body with oversight of operating entities and authority to adapt within agreed upon limits, combined with a science advisory body, a citizen advisory body, and meaningful engagement with Indigenous peoples and accommodation of their interests would enhance the adaptability and integration of shared river management over the coming decades.

Summary of Options and Solutions Proposed

1. **There is urgency around the need to reconcile both the rights of Indigenous peoples and the interests of all citizens in the maintenance of healthy and functioning ecosystems in the Basin.**
2. **Future management in the Columbia Basin will have to be more innovative and flexible.** The existing model of the Treaty, which extends over a 60-year period, is no longer viable. Improving A wide range of experts delivered presentations on the solutions that are underway or proposed to address the range of technical and governance challenges experienced in the Columbia Basin, including changing hydrology; degrading habitats for fish and wildlife; changes in energy supply and demand; and the impact of these challenges to local residents, including Indigenous peoples. Three key themes emerged: the balance of benefits from flood control, energy systems management, and ecosystems maintenance and restoration in the face of climate change will require innovative approaches to future water storage and release regimes. Adaptive management for rapidly evolving values, both in commercial uses of water and ecosystem restoration will establish greater resilience. While robust science is needed to inform better decision-making, solely technocratic solutions cannot address the complex social, ecological, and economic issues in the Columbia Basin.

¹⁷ This summary was adapted from the introduction to the symposium proceedings, which are available at <https://poliswaterproject.org/polis-research-publication/columbia-river-treaty-symposium-edited-proceedings/>

The Hard Work of Hope in the Anthropocene

A public lecture and discussion¹⁸ held on April 27th, 2018 at the University of Victoria

View presentations online at <https://youtu.be/s6s1oJNteUs>

This event brought together approximately 60 individuals for an engaging discussion with sustainability experts **Dr. Tim O’Riordan** (Emeritus Professor of Environmental Sciences, University of East Anglia, UK) and **Dr. Jon O’Riordan** (Strategic Water Policy Advisor, POLIS Water Sustainability Project; Advisor, Adaptation to Climate Change Team, Simon Fraser University). The speakers discussed sources of hope in the new Anthropocene epoch, with a focus on the transformative potential of sustainability science and a shift in human consciousness.^{19, 20}

Jon O’Riordan opened the event by sharing insights from his book *The Climate Nexus* (2015). He explained that the climate nexus is comprised of four interdependent factors: water, food, energy, and a thriving biodiversity supported by healthy ecosystems. Over the next several decades, climate change and a reduction in the Earth’s carrying capacity will cause a crisis for the climate nexus. In particular, a global water crisis is looming—a United Nations-sponsored report suggests that by 2040 at least 11 major cities around the world could run out of water as a result of climate change, loss of natural storage capacity, and population growth.



Jon O’Riordan and Tim O’Riordan discuss sources of hope in the new Anthropocene epoch. Photo by Jodie Walsh.

Jon O’Riordan then shared five key messages from his book *The Hard Work of Hope* (2017):

- 1. Resilience in low-carbon economies and societies.** The United Nations’ Paris Agreement (2016) requires all signatories to endeavour to become carbon neutral by 2050 and to reduce carbon emissions to levels that can be absorbed within the Earth’s natural capacity. However, much work is still needed to reduce and manage the risks associated with climate change.
- 2. Water is at the heart of the nexus.** Globally, freshwater management is inadequate to prevent serious water issues. Approximately 70 per cent of the world’s freshwater is used for agriculture, and in the United States, 40 per cent of water consumption is used to fuel coal power plants.

- 3. Disruptive technology.** A key shift from fossil-fuels to renewable energy sources is needed. The Government of Canada plans to phase out coal plants by 2030, which can only happen if the existing hydropower grid is integrated across a large-scale, and if major investments are made in wind and solar energy production.
- 4. Communications and education provide mixed messages on science.** A need exists to better communicate the science of sustainability and to use engagement strategies to change individual behaviours.
- 5. The Earth is under strain from factors linked to climate change.** We cannot solve the climate crisis without addressing social justice and inequality; these challenges are inextricably linked.

Next, Tim O’Riordan discussed sustainability science as a source of hope in overcoming the climate crisis. Sustainability science departs from the traditional view that science should only be done by elite professionals. Rather, it is a social science that creates opportunities for everyone to contribute as “citizen scientists.” Sustainability science is rooted in deep social and ethical principles, including creativity, imagination, reciprocity, partnerships/relationships, and intuition. It is also based on the human morality that in order to flourish, we should reduce our consumption of unrenowable resources and give back to the Earth.

Jon O’Riordan and Tim O’Riordan offered closing remarks around innovations in water and land-use planning in their respective jurisdictions: British Columbia and the United Kingdom.

In B.C., there is a need to maintain resilient, natural watersheds. Water should be left to percolate into the landscape rather than quickly captured and diverted elsewhere. One tool to address this is through Water Sustainability Plans under the provincial Water Sustainability Act, which make the critical link between water and land-use planning.

In the United Kingdom, the Department for Environment, Food & Rural Affairs recently released its 25-year national plan of action,²¹ which outlines

commitments to improve the natural environment. The plan embeds the “environmental net gain” principle for housing and infrastructure development, meaning that all development projects must demonstrate a net gain to nature. Landscape-wide and habitat-based planning have also gained traction, which use ecological, rather than jurisdictional, boundaries. Beyond these planning innovations, the Government of B.C. and the Government of the U.K. share a desire to adapt to the new climate reality. There is hope that these jurisdictions can adapt and create a better future.

Key Discussion Questions

How does the environmental situation in British Columbia relate to the global climate crisis?

Jon O’Riordan: Newcomers to B.C. have maintained a colonial relationship with the environment; the province’s resources are extracted and sold elsewhere. We need to quash the ethic of resource exploitation and instead appreciate the intrinsic value of the environment. The Great Bear Rainforest is an example of where this shift is occurring. Two-thirds of the forest is now legally protected, and the remaining third that is not protected is managed using ecosystem-based management. The Great Bear Rainforest Agreement instils an appreciation that the value of trees (as a form of carbon storage) is greater than the value of producing timber products in the short term.

¹⁸ This event was made possible by financial contributions to the POLIS Water Sustainability Project from The Gordon and Betty Moore Foundation, the Real Estate Foundation of B.C., The University of Victoria, the Sitka Foundation, Environment and Climate Change Canada, and the Eco-Research Chair of Environmental Law and Policy. Event co-hosts were the Centre for Global Studies and the POLIS Project on Ecological Governance at the University of Victoria.

¹⁹ For a discussion about the looming global water crisis and how British Columbia can better manage its water resources, see O’Riordan, J., and O’Riordan, T. (2018, April 22). “Island Voices: Sustainability, the new science,” *Times Colonist*. Retrieved from <https://www.timescolonist.com/opinion/op-ed/island-voices-sustainability-the-new-science-1.23275810>

²⁰ Robert Sandford and Jon O’Riordan are co-authors of *The Climate Nexus: Water, Food, Energy and Biodiversity in a Changing World* (2015), which explores the challenges facing the Nexus and identifies several required transformative policy responses across the economy, equity, social justice, fairness and the environment.

²¹ UK Department for Environment, Food & Rural Affairs (Defra) (2018). *A Green Future: Our 25 Year Plan to Improve the Environment*. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

The underlying human factor—fear of change—is rarely addressed in the context of the climate crisis. Do we need to address the psychological factors alongside the necessary shifts in technology and institutions?

Tim O’Riordan: Any technological “fix” will only serve to reinforce old patterns of behaviour. We are all desperate to stay exactly as we are. None of the proposed solely technical solutions will change “us” as humans. We all have deep, spiritual connections to the planet, other people, and who we are, but we often suppress it. We must realize that we have an innate capacity to think, act, and achieve things differently.

Jon O’Riordan: People won’t engage in a doom-and-gloom scenario. History shows us that real change happens when we shift our attitudes and perceptions. Although climate change is forcing tremendous pressures on the global system, a shift in human perception will make adaptation more possible. We can’t rely solely on being disruptive and raising the alarm.

Treaty Talks: Paddling Up the Columbia River for People and Salmon

A panel discussion and film screening^{22,23} held on April 18th, 2018 at the University of Victoria

This event convened approximately 60 individuals for a film screening and panel discussion on the Columbia River Treaty. Panellists **Jay Johnson** (Chief Negotiator and Senior Policy Advisor, Okanagan Nation Alliance), **Kathy Eichenberger** (Executive Director, Columbia River Treaty Review, B.C. Government), and **Jesse Baltutis** (Graduate Fellow at the University of Victoria’s Centre for Global Studies and Water, Innovation, and Global Governance Lab) explored the history and future directions for the Columbia River, including the upcoming Columbia River Treaty negotiations.

The documentary *Treaty Talks: Paddling up the Columbia River for People and Salmon* follows a crew of young filmmakers as they make the 1243-mile journey from the Pacific Ocean to the headwaters of the Columbia River in five dugout canoes. Their expedition mimics the journey of Columbia River salmon, who have been unable to reach their spawning grounds in the Upper Columbia River since their passage was blocked by the construction of several dams as part of the Columbia River Treaty. The film includes conversations with Indigenous nations, advocacy groups, and interviews with citizens along the river’s course.

After the film screening, Jay Johnson, Kathy Eichenberger, and Jesse Baltutis discussed the upcoming renegotiation of the Columbia River Treaty, the role of Indigenous nations in a modernized treaty, and the numerous issues that have emerged since the Treaty was introduced, including ecosystem integrity, including Indigenous values and perspectives in decision-making; a shift in regional energy demands; and climate change.

With the renegotiations at a pivotal state, the panellists emphasized the overarching importance of collaboration—both between Canada and the United States, and between Indigenous nations, local governments and other stakeholders along the Columbia River. This collaborative approach has not only made government’s formal process of engagement more inclusive, but has heightened the dialogue for including ecosystem objectives and enhancing salmon passage in a modernized Treaty.



Panelists discuss the upcoming renegotiation of the Columbia River Treaty (left to right): Rosie Simms (moderator), Kathy Eichenberger, Jay Johnson, and Jesse Baltutis. Photo by Jodie Walsh.

²² This event was made possible by financial contributions to the POLIS Water Sustainability Project from The Gordon and Betty Moore Foundation, the Real Estate Foundation of B.C., The University of Victoria, the Sitka Foundation, Environment and Climate Change Canada, and the Eco-Research Chair of Environmental Law and Policy. Event co-hosts were the Canadian Freshwater Alliance, the University of Victoria’s Environmental Law Centre, First Nations Fisheries Council, the Water, Economics, Policy and Governance Network, Watershed Watch Salmon Society, the Water, Innovation and Global Governance Lab at the University of Victoria, and the Centre for Global Studies and the POLIS Project on Ecological Governance at the University of Victoria.

²³ The 36-minute documentary film *Treaty Talks: Paddling up the Columbia River for People and Salmon* is available to stream online at <https://vimeo.com/116831814>.

Focus on the Fraser: A Peer-to-Peer Watershed Governance Dialogue

An online webinar and discussion²⁴ held on March 13th, 2018

The Fraser River watershed is vitally important to British Columbia. Home to 60 per cent of the province's population, the watershed supports more salmon runs than any other river in the world, and is critical to B.C.'s economy. The Fraser and its subwatersheds also face an array of threats to freshwater health—from critically low summer flows in the Nicola River system, to flood infrastructure in the Fraser Valley that fragments waterways and blocks access to critical salmon habitat.²⁵

A variety of initiatives and programs led by Indigenous nations, local/provincial/federal governments, watershed groups, NGOs, and other stewardship entities are working to protect watershed health and ecological integrity within the Fraser Basin, from source to sea. In this webinar, the speakers shared updates and lessons learned from three Fraser River watershed governance projects, providing an opportunity for peer-to-peer learning between upstream and downstream initiatives.

In part one of the webinar, **Natasha Overduin** (Program Manager and Research Associate, POLIS Water Sustainability Project; Research Associate and Watershed Governance Project Manager, Centre for Indigenous Environmental Resources) introduced the concept of "Stepping Stones for Watershed Governance" as a tool for watershed groups to assess their successes and identify opportunities to expand their impact.

Overduin highlighted that no one-size-fits-all approach to watershed governance exists. For example, different approaches are needed in each of the Upper, Lower, or middle Fraser regions. And despite shared issues across the vast watershed (e.g. salmon habitat, fisheries restoration), local priorities still determine the scope and goals of watershed initiatives. Although collaboration is seen as an important approach to advancing water priorities—and in fact, 100 per cent of participants on the webinar noted through a poll that collaborative approaches are part of their work—collaboration is also messy and requires deep commitment from the partners involved.

In part two of the webinar, speakers shared their experiences as managers/leads of watershed governance projects along the Fraser River, providing a snapshot of each initiative's recent developments and key opportunities going forward.

Michelle Tung (Environmental Projects Manager, Upper Fraser Fisheries Conservation Alliance) shared insights on Indigenous-led initiatives on environmental flows, weir management, and habitat restoration based on her work with the Upper Fraser Fisheries Conservation Alliance (UFFCA). Most notably, UFFCA completed its draft Nithi Weir Management and Operations Plan, which will

E.g. Self-Assessment Q's at Stone 1	E.g. Outcomes at Stone 2
<ul style="list-style-type: none"> • What projects have been collaboratively funded and supported? • Did projects support the interests/goals of Indigenous Nations? • Were relationships strengthened in the process? • What lessons were learned from joint collaboration? 	<ul style="list-style-type: none"> • The governance problems and solutions are clearly articulated: i.e., underlying decisions/laws and policies that relate to the priority watershed concerns are understood and communicated; key decision-makers identified • Core funding support is secured for central coordination and facilitation of the watershed initiative.

Figure 6: Examples of self-assessment questions and outcomes for watershed groups. Source: Overduin, 2018.

be piloted later in 2018. A management agreement with the Province also allows UFFCA to operate the weir to enhance fish values.

Lina Azeez (Connected Waters Campaign Manager, Watershed Watch Salmon Society (WWSS)) discussed advocacy efforts by the Watershed Watch Salmon Society (WWSS) to reconnect and restore salmon habitat in the Lower Fraser watershed. WWSS recently commissioned a review by the Environmental Law Centre at the University of Victoria to better understand the legal requirements to manage fish and fish habitat affected by flood control infrastructure in the Fraser Valley. The review offers recommendations for updating infrastructure to provide enhanced fish protection, including advising municipalities on best practices and technology; and working with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to improve authorizations under s.11 of the Water Sustainability Act. As momentum builds for this work, many groups envision that a collaborative governance structure would offer significant opportunities for improved river management.

Kim Menounos (Nechako Watershed Roundtable Coordinator, Fraser Basin Council) shared updates on the work of the Nechako Watershed Roundtable (NWR). The NWR has an important role in coordinating different initiatives; engaging communities, First Nations, local groups, researchers, and the Province; and providing an information hub. The NWR governance structure is currently in transition, as Fraser Basin Council's role as co-chair is outgoing. The intention to establish a co-governance structure with a First Nations co-chair would lay the groundwork for enhanced collaborations into the future, and support efforts to meet the goals of the Nechako Watershed Strategy. The NWR recognizes several other opportunities to improve collaboration in the watershed, including: working with residents and community groups, enhancing environmental awareness, and deepening the connection between a healthy environment and economic development.

²⁴ This event was made possible by financial contributions from the Gordon and Betty Moore Foundation, the Real Estate Foundation of B.C., the Centre for Global Studies at the University of Victoria, the Sitka Foundation, and Environment and Climate Change Canada. It was organized and hosted by the POLIS Water Sustainability Project and was also part of the 2017/2018 Creating a Blue Dialogue webinar series.

²⁵ For an assessment of the threats and health indicators for the Fraser River watershed, see WWF's Watershed Report for the Fraser-Lower Mainland (2015), available at: <http://watershedreports.wwf.ca/#ws-2/by/health-overall/health>

²⁶ Partridge, M., & Curran, D. (2017). Legal Review of Flood Management and Fish Habitat in British Columbia. Report prepared by the Environmental Law Centre, University of Victoria for Watershed Watch Salmon Society. Retrieved from https://www.watershed-watch.org/wordpress/wp-content/uploads/2017/10/ELC-WWSS_Flood_ManagementFish-Oct_2017.pdf

Water, Peace and Global Security: Canada's Place in a Changing Water World

A public lecture and discussion^{27,28} held on January 23rd, 2018 at the University of Victoria

This event explored the importance of and risks to fresh water from the global to the local, and Canada's role in advancing key governance and policy solutions to the growing water crisis worldwide. Speakers **Robert Sandford** (EPCOR Chair in Water and Climate Security at the United Nations University Institute for Water Environment and Health) and discussant **Dr. Jon O'Riordan** (Strategic Water Policy Advisor, POLIS Water Sustainability Project; Advisor, Adaptation to Climate Change Team, Simon Fraser University) explored the UN 2030 Sustainable Development Goals from the global-local water nexus perspective.²⁹ Special remarks were given by B.C. Lieutenant Governor, the **Honourable Judith Guichon**.

Bob Sandford kicked off the event with a compelling look at the tight links between climate change and the acceleration of the global water cycle, and the urgent need to act to stay within Earth system boundaries.³⁰ "There is a huge—and growing—gap between awareness of global water challenges and the actual level of global cooperation," said Sandford. "However, the United Nations' 2030 Sustainable Development Goals are a key vehicle through which water cooperation can be advanced."



Bob Sandford discusses how the accelerating impacts of climate change are pushing the Earth's system boundaries.

Photo by Jodie Walsh.

Sandford explained that the earth is on the verge of entering the Anthropocene, a new geological epoch characterized by the collapse of natural systems and existing resilience strategies. We have already reached the tipping points for biosphere integrity, with dramatic losses in genetic diversity, and major shifts in global nitrogen and phosphorus cycles. As climate change takes effect, more water will move more rapidly through the global water cycle, meaning more extreme floods, droughts, and weather events will become the new normal. Changes in water availability, quality, and temperature are all expected to occur.

Despite this sobering reality, Sandford has hope for water security and climate stability. In his book *Storm Warning: Water and Climate Security in a Changing World* (2015), Sandford explains the unprecedented changes to the global hydrological cycle and discusses how we can respond to the planetary crisis and create a better world by taking action through adaptation.

Sandford suggested that the United Nations' 2030 Sustainable Development Goals (SDGs) offer another pathway to a global transformation in sustainability. Global freshwater targets are captured in Goal 6: "Ensure access to water and sanitation for all." Achieving these ambitious goals will require significant collaboration, leading to lasting international commitments and actions. Between 2018 and 2028, the UN Decade of Action for Water for Sustainable Development also provides international governments with the opportunity to raise awareness and define a roadmap to advance the global water agenda.

Next, the Honourable Judith Guichon gave remarks, reiterating not only the importance of water and the need to build climate resilience, but also the role of sustainable agricultural practices as part of the solution.

Jon O'Riordan offered closing remarks on how climate policy in British Columbia might be restructured to address the UN Sustainable Development Goals. The Province must fully integrate carbon reduction strategies with climate adaptation, and climate and sustainable development policies must become central in future policy-making. B.C.

²⁷ This event was made possible by financial contributions to the POLIS Water Sustainability Project from The Gordon and Betty Moore Foundation, the Real Estate Foundation of B.C., The University of Victoria, the Sitka Foundation, Environment and Climate Change Canada, and the Eco-Research Chair of Environmental Law and Policy. Event co-hosts were the Centre for Global Studies at the University of Victoria, the Pacific Institute for Climate Solutions, and Rocky Mountain Books, and the POLIS Water Sustainability Project at the University of Victoria.

²⁸ The presentation slides for "Water Peace and Global Security: Canada's Place in a Changing Water World" are available online, see <https://poliswaterproject.org/polis-event-webinar/water-peace-global-security-canadas-place-changing-water-world/>

²⁹ Robert Sandford and Jon O'Riordan are co-authors of *The Hard Work of Hope: Climate Change in the Age of Trump* (2017), which examines the most recent global and federal (Canadian) policies and strategies that are proposed as solutions to the global climate crisis.

³⁰ For a deeper discussion of the dangers of approaching the Earth's system boundaries and the role for Canadians and British Columbians in a global sustainability transformation, see Sandford, R.W. (2018, January 23). "Comment: We still have a chance to save our environment." *Times Colonist*. Retrieved from <https://www.timescolonist.com/opinion/op-ed/comment-we-still-have-a-chance-to-save-our-environment-1.23152083>

would also benefit from an explicit policy focus on water security, and a new approach that links land and water planning. Policy shifts are needed to make space for emerging sustainability approaches and considerations, such as the collaborative consent model, environmental flows, and pricing water use. O'Riordan concluded that moving towards shared decision-making with Indigenous groups at the regional and local level is one strategy that could improve the balance of power and set B.C. on track towards a resilient, low carbon future.

Collaborative Consent and Revitalizing Indigenous Laws

An online webinar and discussion^{31,32} held on January 15th, 2018

View online at <https://youtu.be/G50ENqJxzig>

In recent years, governments at all levels in Canada have stated their commitments to reconciliation and building nation-to-nation approaches with Indigenous peoples. Both the federal and B.C. governments have committed to implementing the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP), which reiterates the need to secure consent and ensure Indigenous peoples are full partners in Confederation. Fresh water offers an important opportunity around which to start building these new relationships and consent-based governance approaches.

In this webinar, speakers shared insights from recent research and applied work on collaborative and Indigenous-led approaches to watershed governance, drawing on the research report *Collaborative Consent and Water in British Columbia: Towards Watershed Co-Governance* (2017) and initiatives led by Indigenous communities in partnership with the University of Victoria's Indigenous Law Research Unit.

In part one of the webinar, **Rosie Simms** (Project Manager and Researcher, POLIS Water Sustainability Project) and **Michael Miltenberger** (Principal, North Raven Consulting) elaborated on the collaborative consent model, including its seven "hallmarks" (see table, p. 23).

Collaborative consent is a mutual consent process through which Indigenous and non-Indigenous governments commit to working together with the goal of achieving each other's consent, whether that is to decisions, policies, laws, or plans. It requires that both parties adjust their institutions, governance regimes, and timelines to create shared space to deal with problems and shared concerns (see Figure 7).

Simms and Miltenberger provided examples of collaborative consent in action, including a case study of its application in the Northwest Territories.

Collaborative consent 101

- Does not mean that all parties are involved in all decisions, but that they decide **where collaboration is necessary (or not)**



- **Bending the beams:** Both Indigenous and Crown governments adapt institutions, governance regimes, and timelines – **creating shared spaces**

Figure 7: Collaborative consent requires both Indigenous and Crown governments to decide when to collaborate and 'bend the beams.' Source: Miltenberger and Simms, 2018.

Seven Hallmarks of Collaborative Consent

1. Collaborative consent is fundamentally based on trust, respect, and diplomacy between partnering governments.
2. All governments recognize each other as legal authorities.
3. Collaborative consent tables are decision-making tables.
4. The scope of issues that are under consideration can be extensive and ultimately must be satisfactory to all parties.
5. Collaborative consent starts at the front end of a process and all governments commit to remaining at the table for the long haul.
6. Each government's interests must be dealt with in a satisfactory manner from their own point of view.
7. The process generates real outcomes.

Source: Miltenberger and Simms, 2018.

Key Discussion Question

How can stewardship groups (who don't have authority but who are working on water initiatives) support the implementation of collaborative consent and build meaningful partnerships with First Nations?

Rosie Simms: First Nations should be included at the very outset of any collaborative process and help shape the design, guiding priorities, and principles. It is essential for non-Indigenous watershed organizations and governments to make meaningful effort to understand First Nations' rights, history in the watershed, current activities/and interests, and the goals of the Indigenous nations involved. There needs to be flexibility in the design to accommodate the nation's needs and priorities, and consideration given to capacity and support needs.

In part two of the webinar, **Simon Owen** (Lawyer and Senior Researcher, Indigenous Law Research Unit, University of Victoria) discussed how the Indigenous Law Research Unit works with Indigenous laws today, with a focus on the "Water Laws: Lessons from Indigenous and Colonial Stewardship" project.

In this project, the Indigenous Law Research Unit and Environmental Law Centre, both based in the University of Victoria's Faculty of Law, are working with communities in three British Columbia watersheds to articulate principles and processes regarding how water is governed and managed within Indigenous, as well as colonial, legal traditions. Indigenous community partners in this project are the Lower Similkameen Indian Band, Cowichan Tribes, and Tsilhqot'in National Government.

³¹ This event was made possible by financial contributions from the Gordon and Betty Moore Foundation, the Real Estate Foundation of B.C., the Centre for Global Studies at the University of Victoria, the Sitka Foundation, and the Forum for Leadership on Water. It was organized and hosted by the POLIS Water Sustainability Project and was also part of the 2017/2018 *Creating a Blue Dialogue* webinar series.

³² A webinar summary and the presentation slides for "Collaborative Consent and Revitalizing Indigenous Laws" are available online, see <https://poliswaterproject.org/polis-event-webinar/collaborative-consent-revitalizing-indigenous-laws-pathways-indigenous-water-governance-co-governance/>

³³ Phare, M.A., Simms, R., Brandes, O.M., & Miltenberger, M. (2017). *Collaborative Consent and Water in British Columbia: Towards Watershed Co-Governance*. POLIS Project on Ecological Governance and Centre for Indigenous Environmental Resources. Available at <https://poliswaterproject.org/polis-research-publication/collaborative-consent-water-british-columbia-towards-watershed-co-governance/>

Conclusions and Take-Aways for Watersheds 2018

The discussions held at *Watersheds 2018* contributed to an ongoing and evolving dialogue around B.C.'s freshwater challenges and opportunities for solutions with a clear focus on water(shed) law, policy and governance innovation. This dialogue has unfolded for over a decade through a series of critical milestone events squarely focused on freshwater and governance. It began formally with the international conference *Water in the City* (2006), and continued the series of biennial *Watersheds* events including: *Water Gathering: Collaborative Watershed Governance in B.C. and Beyond—Solutions Forum* (2012), followed by *Watersheds 2014: Towards Watershed Governance in B.C. and Beyond* (2014) and *Watersheds 2016: Building Capacity for Collaboration and Watershed Governance in British Columbia* (2016). These gatherings have demonstrated that B.C.'s freshwater movement has emerged, is sophisticated, and must be taken seriously as a source for innovative solutions.

Three main themes have spanned all of these events and remain touchstones upon which future events and activities will build:

- 1. We are entering the age of adaptation.** Across B.C., water quality and quantity problems are on the rise. In a changing climate, more extreme extremes will be expected – floods, droughts, and wildfires will fundamentally change our landscape and impact our collective water security. Currently, not enough tools exist to proactively respond. Resilience planning and taking uncertainty seriously are critical priorities as we move forward.
- 2. Water matters socially, ecologically, economically, and spiritually, and those impacted want a say.** The conversations at *Watersheds 2018* have demonstrated that the **appetite for change is growing**—water champions, watershed groups, First Nations, and other decision-makers are challenging the status quo and starting to implement solutions in their local watersheds.
- 3. Shared decision-making is not a matter of if but when.** The possibilities to act more collaboratively are increasingly present through legal and policy windows in both Crown and Indigenous laws. Let's be the architects of our freshwater future.

B.C.'s *Water Sustainability Act* offers firm legal protections for fresh water, fish and offers opportunities to further enhance protections through regulations. B.C.'s first watershed governance pilot project is now underway in the Nicola Valley and could prompt the critical shift from pilots to a provincewide program.

"Innovative spaces" are emerging for deep collaboration and genuine co-governance between Crown and Indigenous governments, starting with the Crown's stated commitments to reconciliation and implementation of the *United Nations' Declaration on the Rights of Indigenous Peoples* and through formal pathways such as government-to-government agreements, basin-wide and regional partnerships and agreements, and efforts to better understand and integrate Crown and Indigenous laws with co-governance provisions.

How can we accelerate and seize these opportunities? We must make a point of choosing approaches that are transformative and innovative, begin to seriously *think like a watershed*, and face all the complexities and collaborations that requires.

Milestone Events in B.C.'s Evolving Freshwater Dialogue

- Water in the City was held in 2006 in Victoria, B.C. For more information, see <http://waterbucket.ca/rm/files/2017/06/Water-In-The-City-Victoria-Conference-Program.pdf>
- A Water Gathering: Collaborative Watershed Governance in B.C. and Beyond was held on January 26th and 27th, 2012 in Vancouver, B.C. For more information, see <https://watershedsforum.ca/pastforums/solutionsforum2012/>
- Watersheds 2014: Towards Watershed Governance in British Columbia and Beyond was held from January 27th to 29th, 2014 in Duncan, B.C. For more information, see <https://watershedsforum.ca/pastforums/watersheds2014/>
- Watersheds 2016: Building Capacity for Collaboration and Watershed Governance in British Columbia was held from September 30th to October 1st, 2016 in Vancouver, B.C. For more information, see <https://watershedsforum.ca/pastforums/watersheds2016/>

Appendix A: Feedback from Watersheds 2018 Follow-up Survey

Watersheds 2018 Planning for Success: New Thinking for Land Use & Water Governance

At a Glance

- **5th milestone gathering** in the Watersheds series
- **230+ water champions and practitioners from across B.C.** in attendance
- **6 presentations** focused on Indigenous water law, water-centric planning, and watershed governance lessons and updates
- Forum for **peer-to-peer learning and building capacity and networks**

Key Survey Feedback

In your opinion, what is the most important change that we need to achieve modern and innovative land-use and water planning/governance in BC?

- Increase the number of climate and hydrometric monitoring stations across B.C. and make this information more accessible
- Strengthen collaborations among all partners to support integrated and multi-jurisdictional planning initiatives
- Encourage the Province (in collaboration with partners) to implement the tools and regulations in the WSA
- Better integrate Western science and First Nations' traditional knowledge into decision-making

Building partnership and trust between Indigenous and non-Indigenous groups was a clear theme in the presentations. In your experience, are there strategies or governance models that help facilitate these relationships?

- Place-based strategies/approaches to watershed governance are necessary—there is not a one-size-fits-all governance model

- Develop personal relationships and establish common interests and goals, such as through visioning exercises or watershed tours
- Commit to long-term relationship building to enable genuine involvement of Indigenous groups
- Facilitate open dialogues and define clear objectives and processes for decision-making

Impact & Value to Participants

- 88% of respondents said that *Watersheds 2018* was a good use of their time
- 86% of respondents felt that Session 2: Watershed Governance Roundup was valuable
- 83% of respondents rated the virtual meeting room as good, while 64% appreciated the networking opportunity via the virtual chatbox

"Thanks to the POLIS team for affording all the participants a chance to get together (virtually) and discuss some of the issues we are all passionate about. I learned a lot today and was impressed by the substantial accomplishments of the other panel members."

"[This event] made me realize how important this work is, and that we're all on the same path forward to improve water governance."

How could this event be improved next time?

- Provide background materials/resources to participants well in advance
- Switch up the venue: provide a more interactive virtual space and host virtual and in-person *Watersheds* forums





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