

### **Acknowledgements**

The insights and ideas in this Brief were shaped through dialogue and iterative review. In particular, this Brief reflects the knowledge and collective wisdom of the authors and critical contributions from advisors and reviewers: Gwen Bridge, Deborah Curran, Kevin Kriese, Deana Machin, Tara Marsden, Jon O'Riordan, Anna Warwick Sears, Ian Sharpe, and participants in the 2021 "Water Objectives Learning & Doing Workshops."

Thank you to Marci Janecek (Marsupial Design) for document layout and design.

Title photo: Province of British Columbia, flickr.com





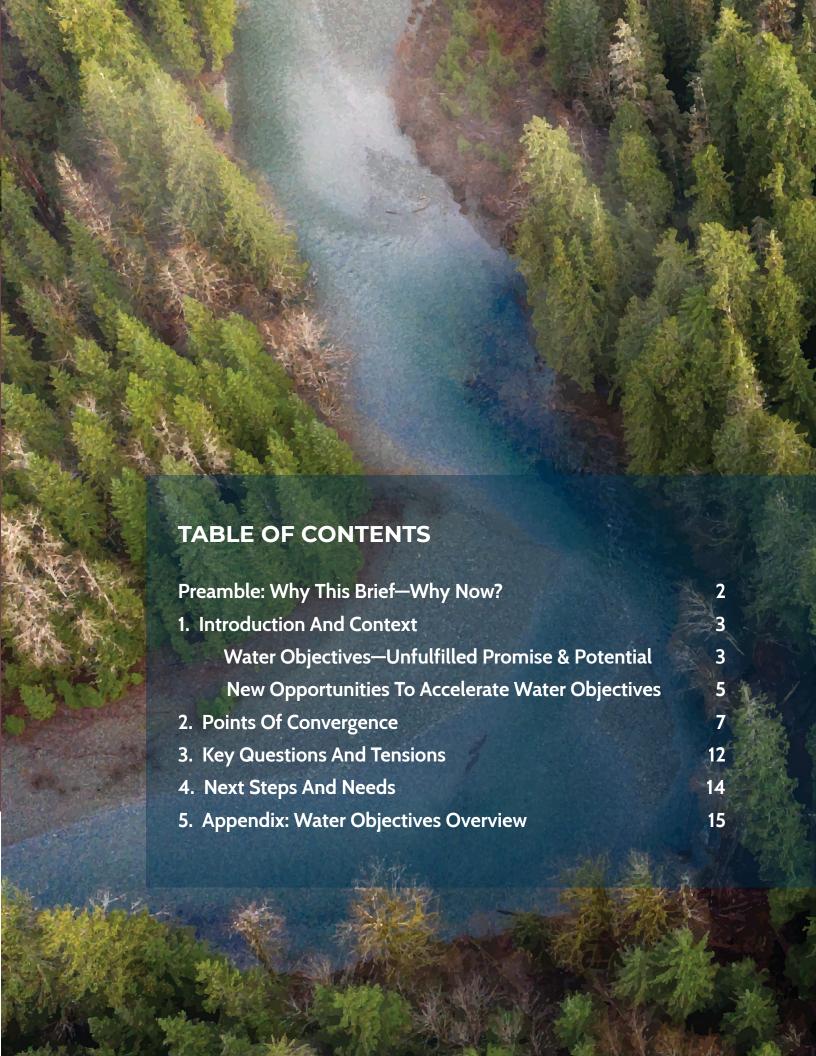












## **Preamble: Why This Brief—Why Now?**

This Innovation Brief flows from a series of workshops that POLIS and the Northern Confluence Initiative hosted in 2021 (see Box 2 below). It synthesizes key learnings from those workshops, discussions, and review processes. This document also outlines areas of convergence, tensions, and important questions about Water Objective development, interpretation, and implementation.

This Brief intends to help drive a deeper discussion and application of Water Objectives as a viable legal and policy tool under the *Water Sustainability Act* (WSA). It specifically presents ideas about how the provincial government and Indigenous leaders and communities might think about Water Objective development and implementation—whether as part of a government-to-government land use plan, an Indigenous-led watershed plan, or as a standalone approach to address a specific concern.

By summarizing and consolidating the state of understanding about Water Objectives and revealing areas of uncertainty, we hope to:

- provide a useful accelerant for the provincial government to deploy Water Objectives as part of a comprehensive approach to watershed security; and,
- drive creative thinking about how communities might advance local watershed sustainability priorities, plans, and co-governance approaches.

### 1. Introduction and Context

### Water Objectives—Unfulfilled Promise & Potential

Water Objectives were introduced as part of the WSA in 2016 and broadly welcomed as a promising legal tool to advance water sustainability in BC. Water Objectives offer many potential benefits, including the ability to:

- link land and water decision making;
- create standards and thresholds to guide decision making for the Province and various levels of government;
- articulate place-based ecological priorities and cultural values within both Crown and Indigenous legal systems; and,
- advance co-governance and reconciliation efforts by expressing Indigenous law and authority.

Despite their potential, progress on Water Objective implementation has been extremely limited to-date. No Water Objectives have been set, nor has government provided public policy direction. Uncertainties persist about where, when, and how Water Objectives can be most effectively deployed to address the pressing issues communities are facing—including droughts, floods, degraded watersheds, critical and persistent low flows, threatened fish populations, contaminated water quality, and cumulative effects on the landscape.

### **Water Objectives 101**

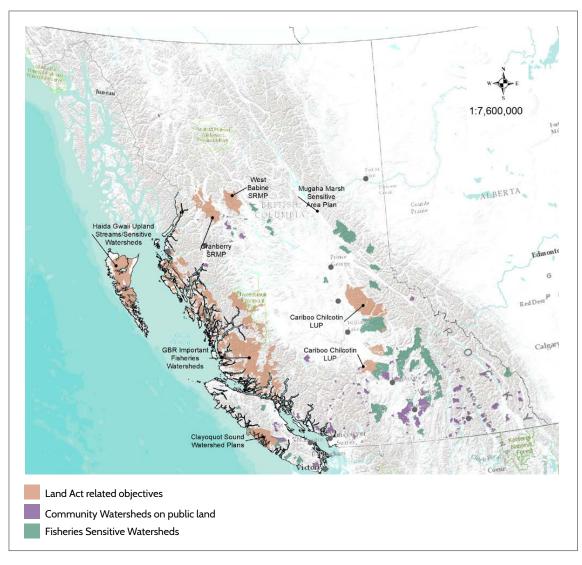
### Water Objectives are:

- a legal tool under the Water Sustainability Act (s. 43)
- possible spaces to express Indigenous law and authority in the Crown water (and land) management regime
- a mechanism to establish water quality, quantity, and aquatic ecosystem health targets and thresholds
- a means to formally link land and water decisions
- a flexible tool that can be set at variety of scales (provincial, regional, watershed, and site specific)
- a way to help address cumulative effects and provide consistency for decision making across jurisdictions and authorities
- a means to provide clear direction for land and water managers, tenure holders, and as part of professional requirements

### **BOX 1: Filling in the Gaps on Watershed-level Objectives**

According to a recent Forest Practices Board Special Report on Forest Practices and Water, only 9 per cent of land in BC currently has a watershed-level objective in place (see map below). None of these objectives are WSA Water Objectives. This demonstrates the major underuse of objectives generally—and certainly emphasizes the need for Water Objectives specifically to better manage the land base, including in the context of forestry and water interactions.

Water Objectives are a critical tool to fill this gap and to address not only forestry impacts on water, but cumulative impacts of *many* land and water uses and activities (including mining, agriculture, urban development, etc.) on watershed health and long-term sustainability.



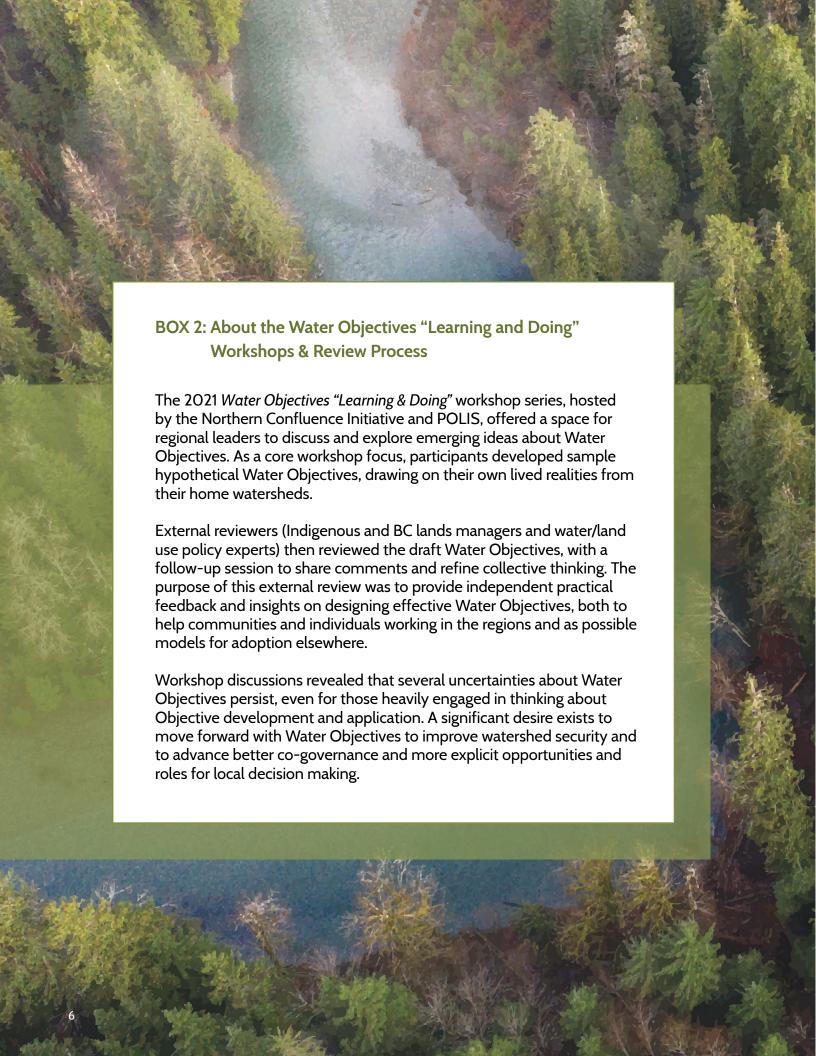
Map of designated watersheds in BC with watershed-level objectives<sup>2</sup>

### **New Opportunities to Accelerate Water Objectives**

The current water context in BC, coupled with provincial government priorities around reconciliation, watershed security, climate adaptation, nature-based solutions, and protection of biodiversity and salmon only add urgency and offer many new opportunities to apply Water Objectives.

Water Objectives have significant potential as part of a comprehensive regime to address watershed and climate insecurity. They are critical in light of:

- the next generation of government-to-government and co-governance agreements in the context of the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA), where Water Objectives offer a potential practical tool to express Indigenous Knowledge, laws, and authority;
- the renewed emphasis on modernized land use planning, and the importance of legal objectives as a building block for local plans;
- the growing number of Indigenous nations developing their own local land and watershed plans, policies, and standards through their Indigenous laws and authorities;
- the need to shift from emergency crisis response to droughts, fires, and floods to more nuanced and preventative responses to climate change;
- the historic Yahey v. British Columbia decision, which found that cumulative effects infringed on the Blueberry River First Nations' treaty rights and identifies major deficiencies in government's existing cumulative effects framework, underscoring the urgency of advancing a modernized and more sustainable approach to cumulative effects provincially;
- the provincial government's mandated commitments to Coastal, Salmon, and Watershed Security Strategies and a Watershed Security Fund;
- the recently announced creation of a new Ministry of Land, Water, and Resource Stewardship to facilitate improved local planning and co-governance initiatives; and,
- the ongoing priority of improving Professional Reliance and accountability.



### 2. Points of Convergence

Workshop discussions and reviewer comments identified a number of insights and considerations for effective Water Objective development and application. This section consolidates six themes where points of convergence and agreement generally exist.

# Water Objectives integrate land and water decision making in a place-based approach.

- Water Objectives provide clarity among water and land managers and across authority holders (including Indigenous, federal, provincial, and local governments) about acceptable conditions for water quality, flow, and ecosystem health. They provide clear thresholds and a common set of "rules" (or targets and goals) on the land and water base.
- Water Objectives are one of only a few legal mechanisms to explicitly link land and water in an explicit and holistic and integrated way.
- Water Objectives are critical to help connect often abstract policy intentions (such as
  environmental flows, water quality thresholds, or riparian guidelines) to specific sites or
  place-based activities. As such, they offer a useful point of focus for communities and
  local decision makers.
- Water Objectives have versatility, which allows them to influence multiple levels of authority and possibly integrate across various legal orders. Water Objectives might provide an avenue to express Indigenous laws and authority in the context of water and watershed planning and management.
- Water Objectives offer a target, threshold, or explicit set of considerations that can act as planning and organizing tools in themselves, or as foundational parts (anchors) for larger more elaborate planning efforts (see #5 below).

# Water Objectives are most effective if they move beyond a strictly Crown law and western science approach.

- Legal objectives set in past land use planning efforts in BC relied on, and were embedded in, Crown law and western science methods. These legal objectives, while useful, were largely oriented around technical, measurable aspects for narrowlydefined values (often with a clear economic link), often at the expense of Indigenous and local Knowledge, more integrated values, cultural indicators, and whole-ofecosystem function and ways of knowing and understanding.
- As Water Objectives are developed and deployed, a more holistic perspective will be crucial not only for long-term community buy-in, but ultimately for more effective and adaptive ecosystem-based approaches.

- Indicators that are developed must effectively blend Indigenous Knowledge and western science. It is not "either, or" but "both, and"—with an integrated system working together across multiple ways of knowing (see sidebar).
- The ability to establish Water Objectives with legal impacts (consequences) is important, but this is best done in a shared authority approach, where authority and legitimacy come from Crown statutes as well as Indigenous legal orders. Water

Objectives offer real opportunity as a practical tool for shared decision making: they can express important thresholds and criteria in differing legal orders in a way that is complementary to drive common outcomes and reinforce co-governance and shared authority efforts (consistent with UNDRIP and reconciliation).

- Water Objectives are most effective if they are achievable, clear, and provide maximum certainty and direction for implementation.
  - Generally, Water Objectives are best set as tight, plain language descriptions of "desired states" for ecosystem health and function, which are then supported by detailed technical indicators or information. In some cases, however, Objectives might be better as results-based or prescriptive statements. See Box 3 below for examples and short discussion.

Beyond western science-based thresholds and their supporting numeric criteria, Water Objectives and indicators can be generated by communities and grounded in Indigenous Knowledge. This might include indicators like:

- rivers and creeks deep enough to navigate by canoe
- rivers and creeks deep enough to fully cover the backs of salmon during migration and spawning
- water deep enough for weirs or fish traps
- flow measured with landmarks like large boulders, dipping platforms, or markers on the beach.

- Clear, plain language Water Objectives minimize room for misinterpretation and are easily understood by all governments, industry, communities, and parties, including those that will be impacted or will need to change their actions.
- Balancing specificity to ensure maximum impact reveals one of the more significant challenges in Water Objective development: creating sufficient clarity and specificity such that they can be implemented, but not at the expense of flexibility or divorced from the broader ecosystem function.
- Technical details—which might include additional targets, indicators, and implementation guidance and strategies—can be used as supplemental to help provide necessary detail and nuance.

### **BOX 3: Examples of the Versatility of Water Objectives**

Different contexts, ecosystem issues, and parameters may be amenable to different types of Water Objectives. For example:

### **Desired State Water Objective**



As an overarching goalpost, a desired state objective is aspirational and provides high-level management direction—e.g., water that is swimmable, drinkable, and fishable. A suite of specific thresholds and indicators (e.g., critical flow levels or water quality indicators) could be nested within this overall objective, along with strategies and interventions (e.g., a requirement to reduce groundwater pumping in hot summer drought months) that activate to achieve the desired goal.

### **Results-Based Water Objective**



A results-based objective sets a clear target for a given parameter. Examples:

- 100% of riparian cover must be retained
- a critical flow level of 7cms must be maintained

### **Prescription-Based Water Objective**

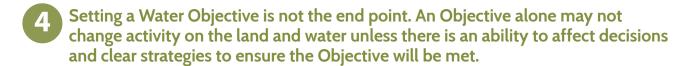


A prescription-based objective describes a set of actions that permit holders and land and water users must follow.

### Examples:

- do not deposit a certain kind of substance (e.g., selenium)
- minimize sediment flow into stream

These types of objectives can be easily measured, give clear direction to land and water users, and can be used as prevention for negative outcomes.



- A Water Objective may not be what is actually implemented, since it speaks to a
  desired outcome, target, or environmental state. Instead, a series of specific strategies
  and management interventions to achieve the desired objective will be the driver of
  implementation and impact.
- Achieving the "goal" provided by the Water Objective requires a clear link to the
  decisions and activities that can actually be changed in order to achieve the Objective.
   Some examples of this linkage are outlined in Box 4 below.

### BOX 4: Examples of Water Objectives, Indicators, and Strategies & Interventions

### **Environmental Flows**

SAMPLE OBJECTIVE



Summer water flows remain at levels that support fish and a healthy ecosystem

# POSSIBLE INDICATORS

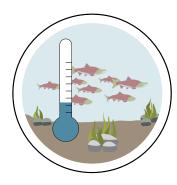
- degree of submersion/ exposure of major boulders in the river
- hydrometric flow readings relative to critical flow threshold of 7cms

# POSSIBLE STRATEGIES

- conditions in water licences to reduce water use in summer month
- critical flow and fish population protection orders prepared in anticipation of low flows
- seasonal irrigation schedule to reduce agricultural water use during summer months
- moratorium on new licences in water-stressed systems

### Water temperature

SAMPLE OBJECTIVE



River temperature remains below 17 degrees C at all times of the year for healthy salmon populations

# POSSIBLE INDICATORS

- presence/absence of fish in shallower water
- thermometer readings relative to maximum temperature threshold

# POSSIBLE STRATEGIES

- riparian cover requirements for forestry and development permits
- critical flow levels linked to enforceable regulatory orders
- interventions to limit groundwater pumping and maintain infusion of colder water

### Water Objectives are versatile: they can exist at many scales and may be set alone or as part of a planning bundle.

Water Objectives could be extremely focused (e.g., set for a specific stream reach) or apply to a larger river, lake, or watershed—all the way up to an Objective that might apply across a whole region or province.

- Water Objectives may be established alone (planning "lite") as an interim way to establish some protections in the absence of a more intensive planning process. They can also be added to an existing land use, water, or forestry plan as a way of updating it to address watershed management issues and to provide some "legal" backing to already agreed-upon objectives, targets,
- planning process or 'superstructure' like in a Water Sustainability Plan or modernized land use plan to drive to outcomes and changes in management and operational activities.
- or thresholds. Water Objectives may also be established as elements of, or nested within, a broader responses." Ensuring tight linkages between Water Objectives, decisions, and interventions will
- Indigenous nations may develop their own Objectives as expressions of Indigenous authority and law, which may then be specifically translated into a WSA Objective to reinforce and amplify those values and priorities across both Indigenous and Crown laws.
- Water Objectives need to be adaptive (and revisited) in the context of a rapidly changing climate, with ongoing monitoring and feedback to decision makers.
  - Predictions based on past hydrological conditions are a thing of the past. Communities in BC are experiencing accelerating extremes and cascading effects associated with flood, drought, temperature fluctuations, wildfire, land use change, and other cumulative stressors.
  - Water Objectives must be designed to be able to adapt over time as circumstances change. This requires monitoring baselines and metrics that incorporate seasonal variations. Indigenous Knowledge, based on Indigenous nations' history of living through millennia of changing climates, offers guidance for adaptation-based Water Objectives.
  - Indigenous guardians and related monitoring programs are an important aspect of developing and implementing adaptive Water Objectives. Through on-the-ground knowledge and oversight, guardians and monitors can provide a regular feedback loop to ensure Objectives remain relevant and up-to-date as conditions change.
  - Ongoing training for monitoring is required, with independent verification and review of self-monitored results by industry and water users.

Yahey v. British Columbia identifies the lack of thresholds and implementation strategies as a core weakness in BC's Cumulative Effects Framework:

"The Province's Cumulative Effects Framework does not set out thresholds, or limits, beyond which decision makers will start being concerned about the status of a particular value, and take action.... Notably, the cumulative effects framework does not establish or change any objectives government currently has in place, and the objectives do not dictate appropriate management

be critical for success going forward.

### 3. Key Questions & Tensions

In addition to areas of convergence, the workshop dialogues also identified a number of points of uncertainty. The following five tensions are some of the more significant challenges authority holders will need to address when developing and implementing Water Objectives. This Brief does not attempt to resolve these complex and challenging questions, but rather flags them as areas that will require focused ongoing exploration and work.

Given that Water Objectives are 'forward looking' (and cannot affect or 'undo' past decisions), in what contexts are they most effectively applied?

It remains unclear which water and ecosystem problems and threats Water Objectives are best suited to solve:

- How do Water Objectives help in deeply degraded watersheds experiencing multiple cumulative effects from past authorizations? Are they more amenable to places that to-date have experienced fewer pressures but face intensifying development?
- To what extent can strategies to meet Water Objectives in a degraded situation include restoration efforts?

Water Objectives are defined in legislation that predated BC's support for UNDRIP and enactment of DRIPA. How compatible are they with Indigenous laws and a holistic ecosystem health approach?

Per #2 above, convergence exists around the notion that Water Objectives need to shift from operating exclusively in a Crown legal and colonial western science framework towards an approach that reflects holistic ecosystem health and cultural understandings. This shift must include sensitivity to multiple legal orders and shared authority. Yet overarching questions remain:

- How useful and adaptable is this type of Crown law and policy tool to be consistent with, and express, a holistic integrated approach and Indigenous laws, knowledge, and cultural values?
- Can Water Objectives adequately 'capture' the integration and interconnections that exist in watersheds and between water quality, flows, riparian, and temperature, for example?
- How are Water Objectives best situated in Crown law to ensure an appropriate level of authority aligned with the priority and level of integration within Indigenous law?
   How can differences be reconciled?<sup>3</sup>

<sup>&</sup>lt;sup>3</sup>The relevant level and place for Water Objectives within Indigenous law is unknown: are they at story level (i.e., law), or protocol or prescription level? Or, are they already contained in Indigenous law—in which case, what is the relevance of new Water Objectives at a lower level of authority on the Crown side?

### At what scale are Water Objectives best set?

A strong general shared understanding exists that Water Objectives are best as a place-based tool, and that each site, watershed, or region will have unique thresholds, values, and standards.

• Is there *also* a role for some provincewide Objectives to offer some basic standards as a framework that can then be flexibly adapted and applied in regions but with greater consistency? For example, a provincewide presumptive standard for critical environmental flows can provide a precautionary minimum flow level while more detailed regional and site-specific thresholds are established.<sup>4</sup>

### Are Water Objectives best as regulation or policy?

Water Objectives set in regulation are potentially more powerful than policy (in creating consequences when they are not met), but also require a higher degree of political will and additional process at least in the Crown legal system (including Cabinet approval for example). Codifying a Water Objective as a more generic policy statement can still have influence, but would require fewer formal steps and likely be more adaptable to specific or shifting circumstances.

- What is the best way to get maximum impact from this kind of water management tool?
  - How is Government thinking about Water Objectives: as standalone tools, as elements of broader land use and water plans, or both?

The provincial government recently produced updated guidance on legal objectives for its modernized land use planning mandate. Various pilot projects are also underway to deploy key tools in the WSA, but no guidance has yet been developed on Water Objectives, despite increasing urgency in watersheds across the province.

• In light of several interlinked government commitments (e.g., salmon, coastal, climate, biodiversity, and watershed security strategies; renewed approach to cumulative effects per the *Yahey v. British Columbia* decision), how is government thinking about Water Objectives as a tool to deliver these mandates?

For more details see pgs. 22-23 in Awash With Opportunity: Ensuring the Sustainability of BC's New Water Law https://poliswaterproject.org/files/2015/11/ Awash-FINAL-WebVersion-compressed.pdf

# 4. Next Steps and Needs

Based on the workshops, supporting review process, and the themes, questions, and gaps summarized in this Brief, POLIS and the Northern Confluence Initiative identify the following critical next steps and practical needs to advance Water Objective development and implementation in BC:

### 1. DO SOME WATER OBJECTIVES.

Perfection should not be the enemy of the good. It is better to be bold and set initial Water Objectives than to wait until all the information is available. Learning by doing and adapting to real challenges being faced on the ground (and indeed in the water) is critical. An important opportunity to begin deploying this potentially useful watershed security and sustainability tool will be through the planning and activities of the new Ministry of Land, Water and Resource Stewardship.

### 2. CLARIFY GOVERNMENT'S APPROACH AND INTENT.

Water Objectives are a provincial government tool and the Province must engage and indeed in some cases lead these discussions to help demystify where and how they intend to use Objectives, and what might be needed to ensure success by communities and those facing the challenges on the ground. In addition, the BC government has this as an existing tool to use to address recent climate emergencies and reduce crises.

# 3. STRENGTHEN LINKAGES BETWEEN POLICY STAFF DEVELOPING FRAMEWORKS AND THOSE IN THE REGIONS SUPPORTING IMPLEMENTATION AND DOING THE WORK.

Water Objectives are not a theoretical exercise and need tightly integrated teams with a mix of expertise and practical watershed insights.

# 4. DEVELOP CLEAR AND PRACTICAL GUIDANCE ON BEST PRACTICES FOR *HOW* TO MEET SPECIFIED WATER OBJECTIVES.

Clear areas of priority relate to environmental and critical flows, riparian area management, sedimentation, and temperature.

Going forward, our team intends to use this work to:

- help build a community of practice around Water Objectives with those who are actively working on Objective development and learning-by-doing in various place-based initiatives;
- engage the Province (and especially the new Ministry) to help develop a comprehensive understanding of Water Objectives as a useful ecosystem-based management tool; and,
- develop supplemental educational events and tools.

We have a strong ongoing interest in supporting communities and those engaged in the development and future thinking around Water Objectives, including encouraging government to work in partnership to address and advance the many issues outlined and discussed in this document.

# 5. Appendix: Water Objectives Overview<sup>5</sup>

Water Objectives under the *Water Sustainability Act* are useful tools in planning and advancing water sustainability and local priorities, with the possibility to express Indigenous laws and authority related to sustainable land use and water and watershed security.

### What are they?

Water Objectives are a way of setting water/watershed thresholds or targets in regulation that will influence decision makers. They establish criteria for water quality, quantity, and aquatic ecosystem health (e.g., environmental flow levels, water quality standards, temperature etc.) that land and resource use decision makers (including local government) are required to consider when making their individual decisions or plans. They can apply to the landscape or site-specific level and are a critical means to get away from the current siloed and "death by a thousand cuts" approach to land and water decision making.

### What Problems do they solve?

Water Objectives, from a provincial government perspective, can be set in regulation to sustain the necessary water quality and quantity for specific uses of water (e.g., drinking) or to sustain aquatic ecosystems.

### How do they work?

Water Objectives are an important way the WSA reaches "out of the water" to influence decision making on the land. To this end, the regulations that create Water Objectives can, for instance:

- require that decision makers under a specific Act (e.g., under the Forest and Range Practices Act) consider the Water Objective in their decisions; and,
- authorize a decision maker to impose terms and conditions on, for example, permits that may have an impact on the Water Objective.
- Require Water Objectives be addressed in plans made under other acts.

Water Objectives are a critical means to link and integrate cross-ministry land and water decision making. They are potentially powerful tools to address water supply, quality, and aquatic habitat issues, as Objectives can be set to prioritize water in other legislation.

<sup>&</sup>lt;sup>5</sup>Adapted from:

<sup>-</sup>Advancing Freshwater Protection: Tools and Opportunities in British Columbia's Water Sustainability Act (https://poliswaterproject.org/polis-research-publication/advancing-freshwater-protection/)

<sup>—</sup>Awash With Opportunity: Ensuring the Sustainability of British Columbia's New Water Law (https://poliswaterproject.org/files/2015/11/Awash-FINAL-WebVersion-compressed.pdf)

### ABOUT THE POLIS WATER SUSTAINABILITY PROJECT

The POLIS Water Sustainability Project (WSP) is an action-based research group that recognizes water scarcity & sustainability is a social dilemma that cannot be addressed by technical solutions alone. The project focuses on the following five themes crucial to a sustainable water future:

- Water Law and Policy
- Watershed Governance
- International and Transboundary Water Governance
- The Water-Energy Nexus
- Water Conservation and the Water Soft Path

The WSP works with Indigenous nations, industry, government at all levels, civil society, not-for-profits, communities, professional associations and individuals to develop and embed water conservation and watershed governance approaches that benefit the economy, communities, and the environment. The WSP is a focus initiative of the POLIS Project on Ecological Governance at the University of Victoria's Centre for Global Studies.

www.poliswaterproject.org

### ABOUT THE NORTHERN CONFLUENCE INITIATIVE

The Northern Confluence Initiative is dedicated to conserving the salmon watersheds that sustain our communities, economies and shared futures. We are rooted in northwestern British Columbia and draw together perspectives from across the region. We focus on solutions. Together, we are working to improve land use decisions that respect Indigenous laws and rights and are based on sustainability principles. Northern Confluence is a project on MakeWay's shared platform.

www.northernconfluence.ca



