

XWULQW'SELU (Koksilah) Water Sustainability Plan Scoping Project

STEERING COMMITTEE SUMMARY
AND RECOMMENDATION



JULY 2021





Credit: Taylor Roades

TABLE OF CONTENTS

3	PREFACE
4	BACKGROUND & CONTEXT
6	STEERING COMMITTEE AREAS OF COMMON UNDERSTANDING AND AGREEMENT
8	FINAL RECOMMENDATION OF THE STEERING COMMITTEE
9	APPENDICES
	APPENDIX A - NEXT STEPS
10	APPENDIX B- STEERING COMMITTEE (AND WORKING GROUPS) GOVERNANCE DIAGRAM
11	APPENDIX C - SUMMARY OF WORKING GROUP FINDINGS AND CONSULTANT PRODUCTS
16	EXTERNAL ENGAGEMENT SUMMARY



Credit: Barry Hetschko

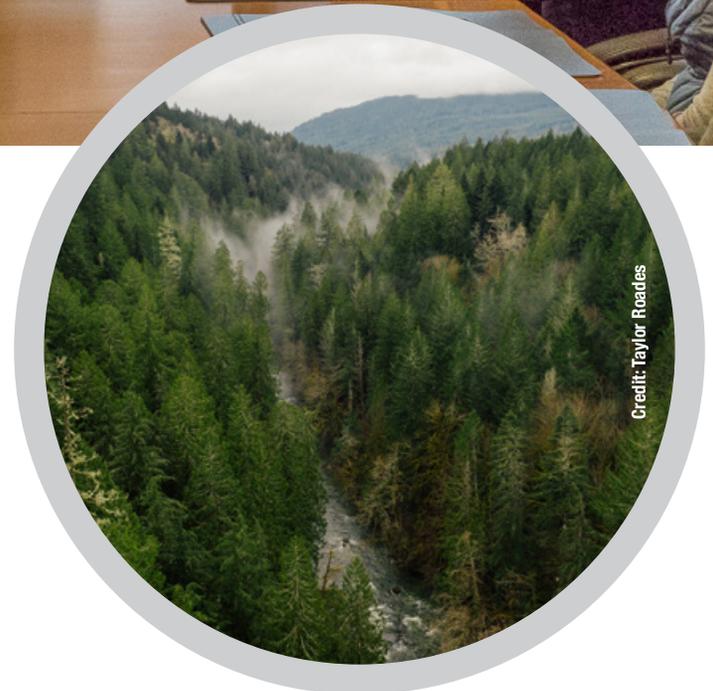
PREFACE

This Recommendations Brief summarizes the outcomes from a 16-month scoping process undertaken by Cowichan Tribes and the Province of BC (FLNRORD) to:

- develop consensus decisions regarding planning in the Xwulqw'selu - Koksilah Watershed; and,
- scope a long-term agreement with respect to ongoing collaborative management and governance of the Watershed.

It is being provided to Cowichan Tribes Chief and Council and the Minister of Forests Lands and Natural Resource Operations to conclude the activities under the 2020 Interim Letter of Agreement and to seek a mandate to initiate recommended next steps.

Pending confirmation by the authority holders, this document may then be shared more broadly with community members, water users, interest groups, and others who care about the future of the Xwulqw'selu - Koksilah Watershed.



Credit: Taylor Roades

Drone image of the Xwulqw'selu Watershed

*Ist' hwialasmut tu
Xwulqw'selu Sta'lo'
– We are taking care
of the Koksilah River*

1. BACKGROUND & CONTEXT



FORMAL AGREEMENT & IDENTIFIED CONCERNS

On February 7, 2020, Cowichan Tribes and the Province of BC (FLNRORD) (“the partners”) entered into an Interim Agreement¹ (government to government relationship) to seek consensus recommendations regarding planning in the Xwulqw’selu - Koksilah Watershed and to scope a long-term agreement with respect to ongoing collaborative management and governance of the Watershed.

The partners recognize ongoing concerns with low water flows in the Xwulqw’selu - Koksilah River during summer months and flooding in the winter. The partners acknowledge the need for action in the Watershed to protect fish, ecological communities, and Cowichan Tribes Indigenous rights, as well as to provide sustainable employment and economic opportunities.

Both partners recognize the importance of a long-term evolving relationship to actively build trust through this process and other partnerships.



STEERING COMMITTEE MANDATED OBJECTIVES & OUTCOMES

In February 2020, the partners struck a Steering Committee (SC) to oversee the scoping process, with a workplan and Terms of Reference guided by the Interim Letter of Agreement (ILOA). The SC was mandated through the ILOA to make sustained, substantive progress towards:

- seeking consensus recommendations regarding Xwulqw’selu - Koksilah Watershed planning;
- seeking consensus on values and principles to guide the Xwulqw’selu - Koksilah Watershed planning process; and,
- scoping a long-term agreement with respect to ongoing collaborative management and governance of the Xwulqw’selu - Koksilah Watershed.

¹ See https://cowichanwatershedboard.ca/wp-content/uploads/2020/02/2020-02-07-Cowichan-Tribes-_-BC-Interim-Letter-of-Agreement-_-Koksilah.pdf

² In 2019, for instance, flows in the Koksilah River reached critically low levels, necessitating the implementation of a Section 88 order under the *Water Sustainability Act*. This order suspended the right of license holders to withdraw water, resulting in significant costs and economic hardship for the agricultural and industrial sectors.

³ See Appendix B for a schematic summarizing the SC structure.

1. BACKGROUND & CONTEXT *Cont.*

ACTIVITIES AND PROGRESS

Over the course of a year, despite significant challenges due to COVID-19, the SC demonstrated a strong commitment to the process and completed significant work, including:

- Biweekly SC meetings since March 2020 to advance collective understanding of the issues and opportunities in the Xwulqw'selu - Koksilah Watershed.
- Development of Working Groups to oversee key content development by expert consultants.⁴
- Completion of expert consultant studies and presentation of insights and conclusions to the SC and to Cowichan Tribes Committees of Council.
- Identification of areas of consensus regarding the state of the Xwulqw'selu - Koksilah watershed and priority outcomes for a subsequent planning process.
- Securing \$500,000 through the Healthy Watershed Initiative to support the next steps of the process.
- Creation and maintenance of a website⁵ to keep the broader community informed about the progress of the SC.
- Development of a final consensus recommendation (see section 3 below).

⁴ Working Groups were comprised of Steering Committee members and additional advisors and invited experts. See Appendix B for an overview of Steering Committee governance and Appendix C for a list of Working Group outputs and consultant deliverables.

⁵ <https://www.koksilahwater.ca/>



Credit: Genevieve Singleton

Xwulqw'selu Sia'lo' in the early summer.

2. STEERING COMMITTEE AREAS OF COMMON UNDERSTANDING AND AGREEMENT

GUIDING COMMITMENTS

Ist' hwialasmut tu Xwulqw'selu Sta'lo' – We are taking care of the Koksilah River

The SC recognizes a core commitment of the partners is effective watershed stewardship, including the protection of fish populations, ecological communities, and Cowichan Tribes Indigenous rights and responsibilities. The partners understand that a healthy watershed includes healthy communities and a sustainable economy. The partners' approach to watershed preservation will be inclusive and balanced to support the needs of a diversity of groups and communities.

Each partner is an equal authority with distinct legal traditions and responsibilities. Cowichan Tribes rights and Indigenous laws are recognized as parallel and equal authorities to Crown law. Government-to-government partnerships like this one are an important part of BC's commitments to reconciliation and implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

The SC recognizes that BC's Declaration on the Rights of Indigenous Peoples Act requires it to take all measure necessary to ensure BC laws, including the Water Sustainability Act, are consistent with UNDRIP, which recognizes the existing human rights that constitute the minimum standards for the survival, dignity, and well-being of Indigenous peoples.

Areas of Consensus Regarding the State of the Xwulqw'selu - Koksilah Watershed

An explicit multi-session process in the fall of 2020 helped the partners identify areas of consensus and agreed-upon priority outcomes for a subsequent planning process.

The SC members broadly agree to the following statements regarding the state of the Xwulqw'selu - Koksilah Watershed:

- Summer water flows in the Xwulqw'selu - Koksilah River have been low enough at times that the survival of resident and migrating salmonid species is threatened.
- Links between groundwater and surface water use are poorly understood.
- Climate change is creating more extreme hydrological events of flooding and drought, which have consequences for this socio-ecological system.
- Activities (including industrial and private uses) have significant impacts on land and water, including more extreme seasonal impacts (high and low flow volumes).
- Summer water use has exceeded—and will likely continue to exceed—the summer water budget.
- Activities in the Cowichan and Koksilah Watersheds affect Cowichan Tribes' operations, infrastructure, land management, and the safety and well-being of their members; and,
- Cowichan Tribes has not had a meaningful role in Crown (or provincial) water management and decisions in their territory.

2. STEERING COMMITTEE AREAS OF COMMON UNDERSTANDING AND AGREEMENT *Cont.*

PRIORITY OUTCOMES FOR A SUBSEQUENT WATERSHED PLANNING PROCESS

The SC also identified priority outcomes for a subsequent planning process, including:

- co-governance and shared decision making;
- the need for sustainability of environmental flows and water extraction;
- attention to linkages between land use and watershed health;
- more knowledge regarding fish, ecosystems, and environmental flows;
- pooling collective knowledge, science, and understanding of the Xwulqw'selu - Koksilah Watershed and ecosystem health;
- articulation of a clear vision and values for the Xwulqw'selu - Koksilah Watershed to guide governance and planning;
- development of a water budget (with improved monitoring and reporting) based on both western science and traditional knowledge for the Xwulqw'selu - Koksilah Watershed to inform decision making and ongoing adaptive planning;
- identification of priority areas for protection and restoration;
- development of guidance (with incentives) for more sustainable land use practices; and,
- interventions to reduce seasonal water use and adapt land use practices.



Indigenous chef Qwustenuxun (Jared Williams) prepares a traditional Pi'qwun salmon feast.

Credit: Barry Hetschko

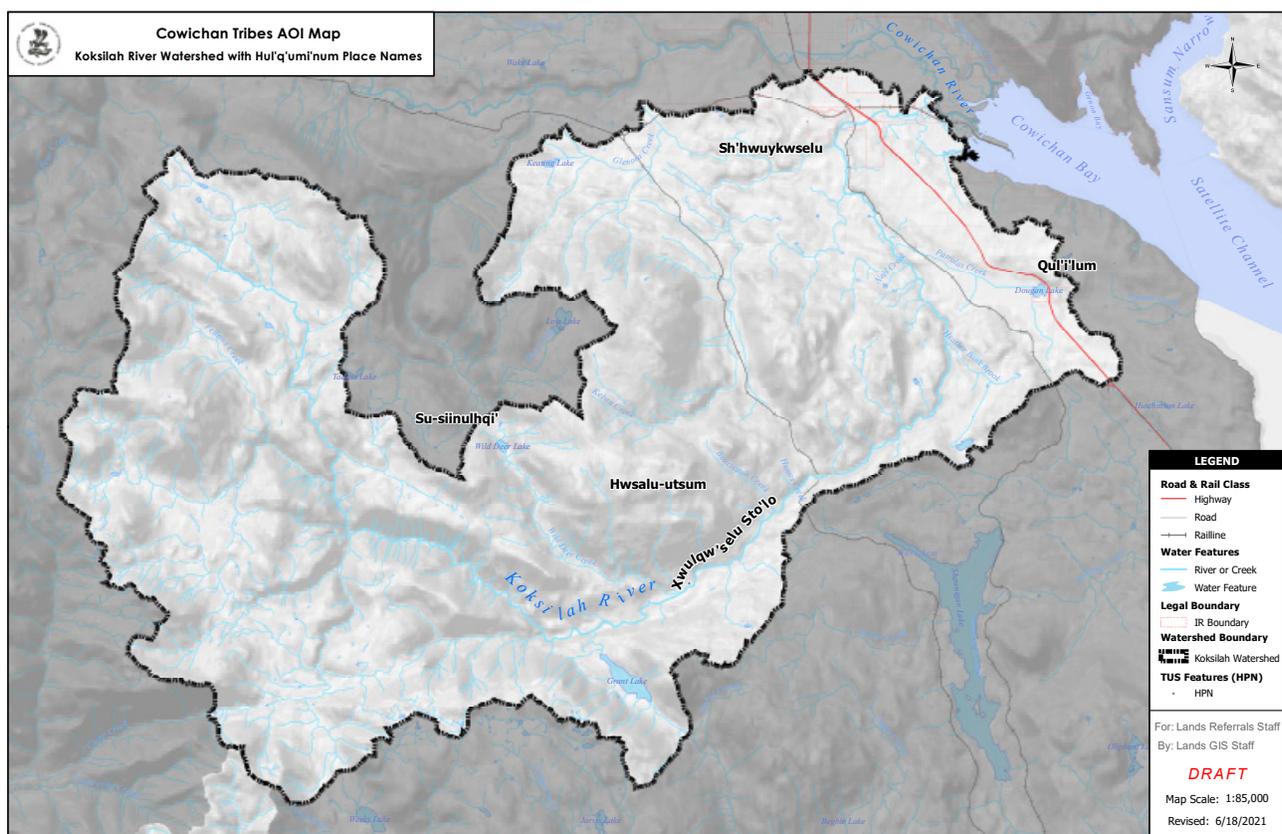
3. FINAL RECOMMENDATION OF THE STEERING COMMITTEE

Based on the outcomes from the scoping activities undertaken from March 2020-May 2021 as guided by the ILOA, the Steering Committee recommends that Water Sustainability Plan be developed and implemented for the Xwulqw'selu - Koksilah Watershed.

Other tools (e.g., land use planning instruments or additional *Water Sustainability Act* provisions) maybe used in conjunction with the Water Sustainability Plan to achieve the vision and planning objectives.

This recommendation follows a motion by Cowichan Tribes Chief and Council on May 11, 2021, in favor of *moving forward with a Water Sustainability Plan for the Koksilah Watershed, either supported, or not supported, by other tools.*

The Steering Committee requests that the Minister, by order, designate the area described as the Koksilah Watershed (see map below) for the purpose of the development of a Water Sustainability Plan.



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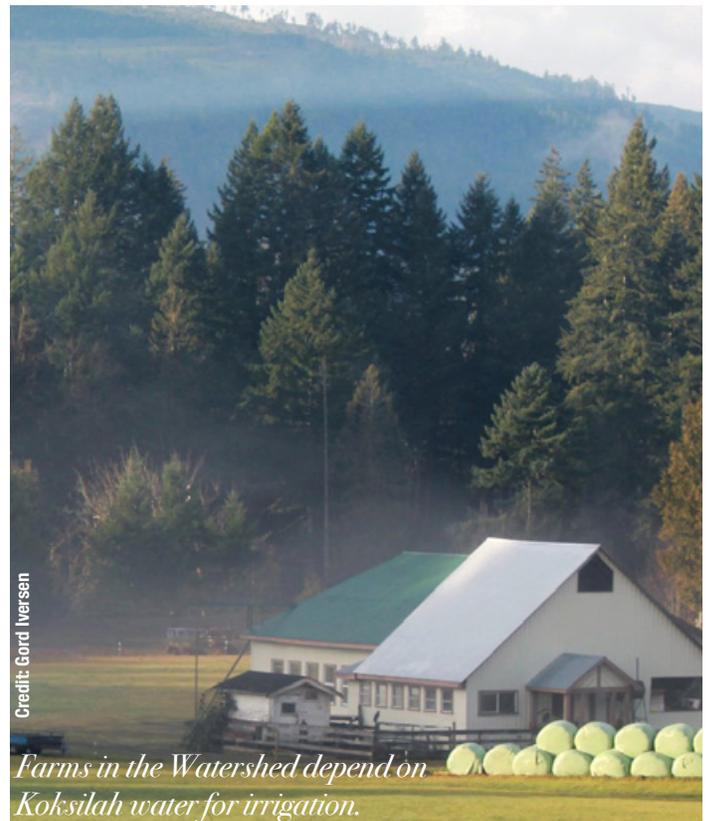
4. APPENDICES

APPENDIX A

NEXT STEPS

The SC identifies the following next steps to support Water Sustainability Plan initiation:

- **Developing a Memorandum of Understanding between Cowichan Tribes and the Province of BC to guide the government to government relationship and Water Sustainability Plan process**
- **Designating the entity (“Responsible Person”) responsible for preparing the proposed plan**
- **Confirming other entities to support Water Sustainability Plan development** (e.g., independent science and knowledge trust)



- **Developing the Water Sustainability Plan Terms of Reference**
- **Initiating a visioning process**
- **Continuing recommended interim actions, e.g.:**
 - Closing the source
 - Implementing an irrigation schedule for 2021
 - Identifying outstanding priority areas of uncertainty for further investigation

APPENDIX B

STEERING COMMITTEE (AND WORKING GROUPS) GOVERNANCE DIAGRAM

LEGEND

- Decision Makers
- Secretariat
- Advisors
- Working Groups
- Terms of Reference

Schematic Representation of Koksilah WSP Scoping Initiative

SC Advisors

- Oliver M. Brandes (POLIS)
- Jennifer Archer (BCFLI)
- Deborah Curran (ELC)
- Tom Rutherford (CWB)

- Provide advice + strategic direction
- Support secretariat work as able



SC Members

(authority holders)

Cowichan Tribes:

- Larry George, Director, Lands & Governance
- Tracy Fleming, Lead Referrals Coordinator
- Candace Charlie, Referrals Coordinator

FLNRORD

- Pat Lapcevic, Director, Resource Management, West Coast Region
- Cali Melnechenko, Section Head, Water Authorizations
- Jessica Doyle, Section Head, Water Protection
- Supported by Jennifer Vigano (ENV)

Working Groups: Work at direction of, and report to, SC

• **Public Engagement & Outreach Working Group**

- Tom Rutherford reporting to CT
- FLNRORD reps: Cali Melnechenko & Ben Robinson

Other WG Advisors:

- Alison Nicholson (Cowichan Strn. Area Assn)
- Jennifer Archer (BC Freshwater Legacy Initiative)
- Rosie Simms (POLIS)
- Zita Botelho (Watersheds BC)

Cowichan Tribes Internal Outreach WG

- CT Reps: Candace Charlie, Tim Kulchyski, Tracy Fleming

Water Management Technical WG

- CT Reps: Tracy Fleming & Darryl Tunnicliffe
- FLNRORD reps: Jessica Doyle & Sylvia Barroso

Other WG Advisors:

- Oliver M. Brandes (POLIS)
- Deborah Curran (ELC)
- Steve Henry (Malahat Nation)
- Amber Fox (Malahat Nation)

APPENDIX C

SUMMARY OF WORKING GROUP FINDINGS AND CONSULTANT PRODUCTS

TECHNICAL WORKING GROUP SUMMARY OF FINDINGS⁶

CONSULTANT'S PRODUCTS & DELIVERABLES

The Technical Working Group retained Hatfield Consultants LLP (Hatfield) to complete a Koksilah Watershed Hydrological Analysis to identify potential causes (including relative importance) of declining summer flows in the Koksilah River. Hatfield completed the report in January 2021.

Deliverables included:

- a technical report with a plain language executive summary;
- a presentation of preliminary results to the Technical Working Group; and,
- presentations of findings and results to the SC and Cowichan Tribes Tumuhw Committee.

⁶ See full report at: https://6ddb7b34-9d35-46ef-9cda-04266d8c3f8a.filesusr.com/ugd/deeaf5_bbd2e2d8581645108f2fcd5a2d3e3d2.pdf



Credit: Chloe Mitchell, CWB

Khowutsun Forestry Service crew training as aquatic habitat field technicians for the Twinned Watershed Project, May 2021



Salmon fry in Xwulqw'selu Sta'lo.

Credit: Jeremy Koreski

The goals of the Hydrological Analysis were to: identify the possible causes of low flows in the summer;

- determine which causes are most important and which causes are less important;
- identify additional information (knowledge/ data gaps) needed to understand the problem; and,
- provide recommendations for steps or actions that might be taken to manage summer low flows, including recommendations for new or additional studies that might be needed.

Cowichan Tribes and FLNRORD identified the following potential causes of declining low flows to be investigated:

- people using water for agriculture (irrigation), drinking water, industry, or other purposes;
- changes in forest cover due to forestry practices;
- climate change;
- changes or impacts on the river channel (stream morphology); and,
- Other factors identified by Hatfield.

SUMMARY OF FINDINGS

There appears to be two main reasons for the decline in summer flows:

1. Increased use of both groundwater and surface water

- There has been a large increase in water use in the watershed. Water use now is almost three times higher than it was in the 1960s.
- Surface water use has not increased by much since about 1980, but groundwater use has continued to grow.

2. The effects of climate change

- Spring and summer have been up to 5 degrees C warmer since the 1960s. Warmer temperatures cause trees and

plants to use more water for growth and nutrition through evapotranspiration. More evapotranspiration means more of the rainfall falling on the watershed is lost back to the atmosphere and less water arrives in the Koksilah River as runoff and groundwater flow.

- It rains less in the summer (June, July, and August) than it did in the 1960s. Drier summers lead to less runoff and lower summer flows in the river.

These two main causes appear to be roughly equal in terms of their relative importance. In addition, the study found that forest cover changes related to forestry activities in the watershed are also important:

- The analysis focused on changes to evapotranspiration as a result of clearcutting, tree age, type, and growth.
- Results showed that streamflow may increase or decrease depending on the relative amount of evapotranspiration of the various forest stages (clear-cut and various stand ages) compared to mature tree stands (100 years or more). Specifically, summer flows may have increased following years of intense logging in the 1980s and 90s. However, as the forest regrows, evapotranspiration increases, peaking when forest stands are 40-50 years of age, resulting in declining flows that the river is now experiencing.
- The study acknowledges forestry effects on low flows are complex. This is an active area of current research.

RECOMMENDATIONS

Create plans to address key issues affecting water availability:

- Water Sustainability Plan to address challenges related to water use
- Forest Management Plan to address risks related forest cover changes on water availability

Studies that can be done by the community (Cowichan Tribes and FLNRORD):

- Complete an Environmental Flow Needs study (how much water do fish need)
- Determine changes or impacts on the river channel (habitat and stream morphology assessments)
- Build a water balance model and/or groundwater model to help predict and plan for future conditions in the watershed

Studies that could be done by the scientific and academic communities:

- Studying evapotranspiration for forest stands of different ages and characteristics (e.g., tree type, height, and size)
- Measuring precipitation (rain and snow) at higher elevations in the watershed

TECHNICAL WORKING GROUP RECOMMENDATIONS FOR NEXT STEPS

- Further work and/or research on the effects of forestry on summer flows taking site-specific information (e.g., local evapotranspiration rates, tree types, and riparian buffers) building on the most current research.
- Additional monitoring of water levels, weather, and climate in different parts of the watershed (Kelvin Creek, Glenora Creek, Patrolas Creek, and mid/upper watershed).
- Indigenous Flow Needs study (how much water does the Indigenous community need for their well-being and maintenance of cultural practices (cultural flows)) including Indigenous methods of watershed management.
- Assessment of amount and locations of karst deposits in the watershed and potential effects on groundwater storage.
- The importance of building a strong relationship with Mosaic Forest Management Inc., one of the largest land holders in the watershed.



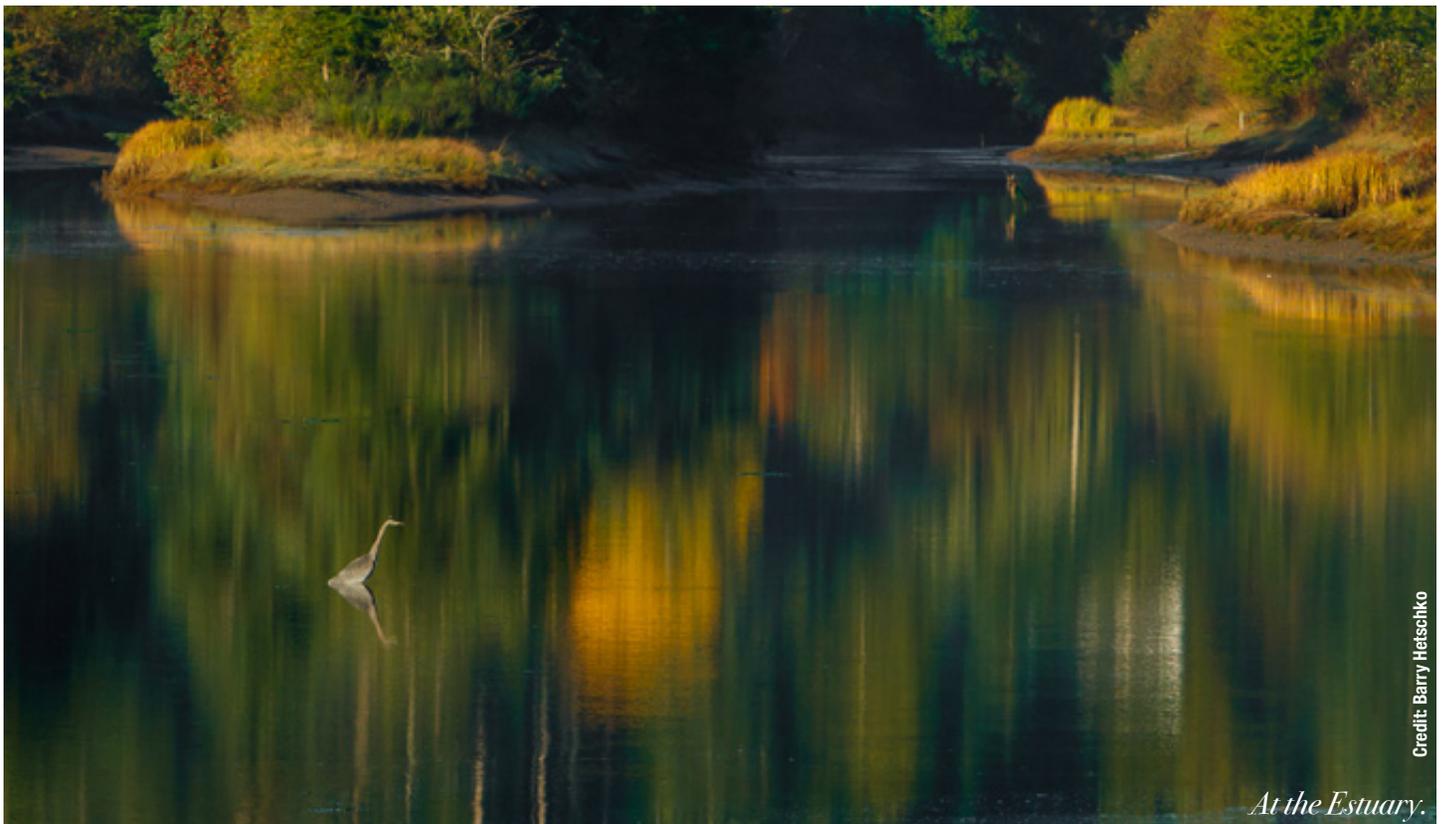
COWICHAN TRIBES INTERNAL OUTREACH WORKING GROUP SUMMARY OF FINDINGS

PRODUCTS & DELIVERABLES

The Cowichan Tribes Internal Outreach Working Group developed a *Cowichan Tribes Internal Outreach & Engagement Report* that identifies relevant traditional knowledge, use of information, and goals/objectives of Cowichan Tribes Members as they relate to the *Xwulqw'selu Sta'lo'*.

SUMMARY OF FINDINGS

- There is significant current use of the Koksilah Watershed for fishing, harvesting, and cultural/spiritual uses.
- Members are already experiencing difficulty harvesting adequate amounts of chum, coho, and trout from the Koksilah Watershed to meet subsistence needs.
- Members' access to the Koksilah Watershed for cultural/spiritual and subsistence uses has been significantly impeded through imposition of colonial private property regimes.
- Cowichan Tribes Members reported observing the following changes to the watershed:
 - Gravel build-up
 - River shrinking
 - Drastically decreased water levels
 - Warmer water
 - Increased flow levels causing flooding in winter
 - Changes to the banks of the river and loss of riparian vegetation from increased flows
 - Algae problems
 - Water quality degradation, pollution
 - Turbidity issues
 - Increased log jams, damage to banks from log jams
 - Drought
 - Loss of fish
- Members cited the following potential causes of the observed changes:
 - Climate change
 - Logging practices
 - Increased development (residential, commercial, agricultural)



- Pollution from agricultural practices
- Community members' vision of success in the watershed includes feeling safe using the watershed for cultural and other purposes, increased summer water levels, increased water quality, and a return of fish populations.
- The following Quw'utsun traditional teachings were identified as teachings that should be used to guide the water sustainability planning process for the *Xwulqw'selu Sta'lo'*:
 - *Nutsamat kws yaay'us tth qa'* - We come together as a whole to work together to be stronger as partners for the watershed.
 - *Hwialasmut tu tumuhw* – Take care of the Earth (this includes the watershed)
 - *Mukw' stem 'i 'utunu tumuhw, 'o' huliitun tst, mukw' stem 'i 'utunu tumuhw 'o' slhiilhukw 'ul.* – Everything on this Earth is what sustains us; everything on this Earth is connected together.
 - *Stl'atl'um stuhw 'ul' tun kwunmun* - Take only what you need.
 - *Stsielhstuhw tu mukw stem ('i 'u tuna tumhw)* - Respect for all things; Respect for all beings, Respect for what is around you.
 - *'Uw-wu ha'kwush 'uhw, 'i 'o' shtes ch 'ul'* - Leave it the way we found it.
 - *Hulituns-t tu qa'* - Water is life.

PUBLIC ENGAGEMENT & OUTREACH WORKING GROUP SUMMARY OF FINDINGS

CONSULTANT'S PRODUCTS & DELIVERABLES⁷

The Outreach Working Group retained MODUS to conduct community outreach and engagement and produce an External Engagement Summary Report. This work was driven by a commitment to early and transparent engagement with the community, decision makers, and water and land users about the Water Sustainability Plan scoping exercise.

Deliverables included an External Engagement Summary Report that:

- Builds understanding of the varied interests and uses in the watershed;
- Identifies perception of most urgent issues facing the watershed; and,
- Increases understanding of how interests might work together towards a shared vision.

Summary of Findings (see below)

⁷ See full report at https://6ddb7b34-9d35-46ef-9cda-04266d8c3f8a.filesusr.com/ugd/deeaf5_dede59f1c1144d85b02b05fb22cea1a0.pdf



EXTERNAL ENGAGEMENT SUMMARY REPORT



THE CONTEXT

In February 2020, Cowichan Tribes and the Province of BC's Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) entered into a Government-to-Government agreement to work in partnership to scope a **LONG-TERM SOLUTION FOR SUSTAINABILITY IN THE KOKSILAH RIVER**, Xwulqw'selu Sta'lo', Watershed (the Watershed).

The Partners are currently implementing three initiatives with the goal of determining a pathway to collaborative watershed management:

- a hydrological assessment of the Watershed,
- engagement with Cowichan Tribes members, and
- engagement with external community members and interest holders.

OBJECTIVES

The objectives of engaging with external community members and interest holders were to:



- understand the **VARIED INTERESTS** and uses in the Watershed,
- surface the most **URGENT ISSUES** facing the Watershed; and
- understand how the interest holders in the Watershed might **WORK TOGETHER** towards a **SHARED VISION**.



WHAT DID WE DO?

To meet these engagement objectives, the project team (MODUS Planning, Design and Engagement in collaboration with the Outreach Working Group) conducted:

- 13 interviews between September 8 -25, 2020; and
- A public online questionnaire, open from October 13 - November 3, 2020

WHAT DID WE HEAR?

INTERESTS in the watershed



Livelihood

Domestic Use



Recreational Activities

Cultural Activities



Main source of income



Emotional + Spiritual Connection

ISSUES + CONCERNS



Fluctuations in water surface levels and weather



Loss of mature trees and fish abundance

Excessive water extraction

VISIONS for the Watershed



Adequate, Long-term water supply



Healthy ecosystems balanced with human needs



COLLABORATION Principles



Inclusive of all perspectives



Trust + Transparency in process



Data-Driven



IMPACTS DUE TO CONCERNS

I will lose an important emotional + spiritual connection to the Koksilah



I will be unable to partake in recreational activities

I lose my main source of income



I will not have water for use in my residence

RECOMMENDATIONS



FOCUS ON THE WHOLE:

People care about the Watershed beyond just flow rates and water levels. Giving attention to the “whole system” through the development and implementation stages will be instrumental to addressing people’s core concerns.



ENCOURAGE LISTENING AND LEARNING ACROSS DIFFERENCES:

Different groups hold different values towards the Watershed and misinformation can exacerbate scapegoating and alienation if not carefully managed. Any future process must be sensitive to these differences to ensure openness and two-way dialogue is nurtured.



BE DATA-DRIVEN:

Data will be key to dispel misinformation or address incomplete information and build trust between interest groups and with the process.



EXPLORE THE APPLICATION OF VALUES:

If a process is to be inclusive of all interest holders and their values, there needs to be a greater understanding of what these different values mean in practice. Any future process will need to grapple with how differing values may conflict when decisions need to be made and explore what compromises are available.



BE TRANSPARENT AND INSTILL ACCOUNTABILITY:

Past inaction and perceived influence of industry in decision-making has eroded trust in government. Clear and consistent communications, openness in process and data, fair and equitable opportunities to participate, defining and committing to measurable outcomes, and responsive leadership are ways to ensure transparency and accountability in the process.



**XWULQW'SELU
(Koksilah) Water
Sustainability Plan
Scoping Project**

**STEERING COMMITTEE SUMMARY
AND RECOMMENDATION**



JULY 2021

