



the partnership  
for water sustainability in bc

Waterbucket eNews on January 11, 2022

<https://waterbucket.ca/wscblog/>

The background of the lower half of the page is a vibrant, abstract painting. It features a large, bright red fish, possibly a salmon, swimming in a river. The water is depicted with various shades of green and blue, suggesting reflections and movement. The surrounding foliage is rendered in dark greens and blues, creating a sense of a lush, natural environment.

**Living Water Smart  
in British Columbia:  
*Blue Ecology is the  
Pathway to Reach  
Water Reconciliation***

## Note to Reader:

Waterbucket eNews<sup>1</sup> celebrates the leadership of individuals and organizations who are guided by the vision for [Living Water Smart in British Columbia](#)<sup>2</sup>.

The edition published on January 11, 2022 featured Michael Blackstock, Independent Indigenous Scholar, who developed [Blue Ecology](#)<sup>3</sup>, the “water-first” ecological approach to interweaving Indigenous Knowledge and Western Science.

The umbrella for Partnership initiatives and programs is the [Water Sustainability Action Plan for British Columbia](#)<sup>4</sup>. In turn, the Action Plan is nested within [Living Water Smart, British Columbia's Water Plan](#).



**Cover Image Credit:** the painting by Michael Blackstock, titled “Adams River Sockeye Run”, was used as the cover for the book titled “downstream: reimagining water”

<sup>1</sup> <https://waterbucket.ca/wscblog/>

<sup>2</sup> [https://waterbucket.ca/wcp/wp-content/uploads/sites/6/2017/11/livingwatersmart\\_book.pdf](https://waterbucket.ca/wcp/wp-content/uploads/sites/6/2017/11/livingwatersmart_book.pdf)

<sup>3</sup> <https://waterbucket.ca/wcp/category/blue-ecology-michael-blackstock/>

<sup>4</sup> <https://www.waterbucket.ca/cfa/sites/wbccfa/documents/media/81.pdf>

## Editor's Perspective

Beginning in 2018, the Partnership for Water Sustainability and the Nanaimo & Area Land Trust (NALT) have co-produced [Watershed Moments](#), the [Vancouver Island Water Stewardship in a Changing Climate Annual Symposia Series](#)<sup>5</sup>. To date, the series has comprised three events. The next full-scale symposium will be held either in late 2022 or mid-2023.

The Partnership and NALT designed **Watershed Moments 2021 / Blue Ecology Virtual Seminar** as a bridging event. It was postponed by two months, from November 18/21 to January 20/22, after Michael Blackstock underwent emergency surgery only days before the originally scheduled date for the livecast.

The spotlight is on Michael Blackstock, Independent Indigenous Scholar. His role is to prime seminar participants for their future attendance at **Watershed Moments 2022: A Symposium on Blue Ecology and Water Reconciliation**. Looking ahead, the symposium will showcase and celebrate “Blue Ecology in action” in the Cowichan region.



“Blue Ecology augments existing Western science hydrology rather than displacing this knowledge” –Michael Blackstock

### Three Objectives

Structured as a panel session, the bridging seminar has three objectives. First, it serves as the event of record for launching Michael Blackstock's [Blue Ecology Institute](#). The initiative is guided by a vision to build a bridge between two cultures through a water-first approach.

Secondly, the seminar introduces **Blue Ecology the idea** as a way of interweaving Indigenous and Western perspectives to achieve a vision for "water reconciliation" in British Columbia.

Thirdly, the seminar showcases watershed education initiatives for school children within three Vancouver Island regional districts. These initiatives have a unifying thread - each addresses the **“Nature-Deficit Disorder”**, a term which is now widely recognized and understood.

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<sup>5</sup> <https://waterbucket.ca/viw/category/vancouver-island-symposia-series/>

**Nature-Deficit Disorder** is the idea that human beings, especially children, are spending less time outdoors, and the belief that this change results in a wide range of behavioural problems. For this reason, a goal of watershed education initiatives for schools is to reconnect children with nature.



## Interweaving - It Costs You Nothing to Change Your Attitude

Blue Ecology has been a two-decade long journey of discovery for Michael Blackstock, highlighted by his appointment to a UNESCO Expert Panel for a 4-year term in 2008. His work on the Expert Panel resulted in an invitation to share his Blue Ecology message at an international symposium held in October 2008 by the International Association of Hydrological Sciences (IAHS).

In his peer-reviewed paper titled [Blue Ecology and climate change: interweaving cultural perspectives on water, an indigenous case study](#)<sup>6</sup>, Michael laid out the case for an attitude change and culture-shift related to water. In the decade-plus since, he has written and/or contributed to a series of books that further explore and build on this theme.

The Blue Ecology Seminar marks the start of the next leg of Michael's journey, now in collaboration with the Watershed Moments team, a grass-roots initiative that has members from 10 organizations. **The Watershed Moments mission is to advance mainstreaming of Blue Ecology.** Interweaving of Indigenous Knowledge and Western Science is the pathway to reach Water Reconciliation.

Handwritten signature of Kim A. Stephens in black ink.

*Kim A. Stephens, MEng, PEng,  
Executive Director  
Partnership for Water Sustainability in BC  
January 2022*



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<sup>6</sup> [https://waterbucket.ca/cfa/files/2017/09/Michael-Blackstock\\_Capri-paper\\_2009.pdf](https://waterbucket.ca/cfa/files/2017/09/Michael-Blackstock_Capri-paper_2009.pdf)

## Creating a Climate for Change (Reconnect Children with Nature)

This edition launched another year of Waterbucket eNews, published by the Partnership for Water Sustainability on Tuesdays from January through June, and from September through November. Beginning with this article about the [Blue Ecology Virtual Seminar](#), the unifying theme for the upcoming series of articles is **generational amnesia**.

As each new generation inherits the world, vital knowledge is forgotten. Generational amnesia has profound effects on the way that we see the world. The challenge is to overcome generational amnesia so that communities learn from past experience, apply this knowledge, and achieve better policy and financial outcomes.

Blue Ecology is the pathway to reach **"water reconciliation"**. The relevance is that we have landed at the crux of two of the most important issues facing Canadians – relationships with First Nations and relationships with water - in an era when we must also adapt to a changing climate. And the Partnership and partners just happen to be trying to piece them together as a seminar and eventually as a symposium!

What we are essentially talking about is going back to the headwaters of where we got our relationships with water and with one another wrong; and then starting back down the river of time – this time together – with a full understanding of the importance of embracing a **water-first** approach to planning human interventions in the environment.

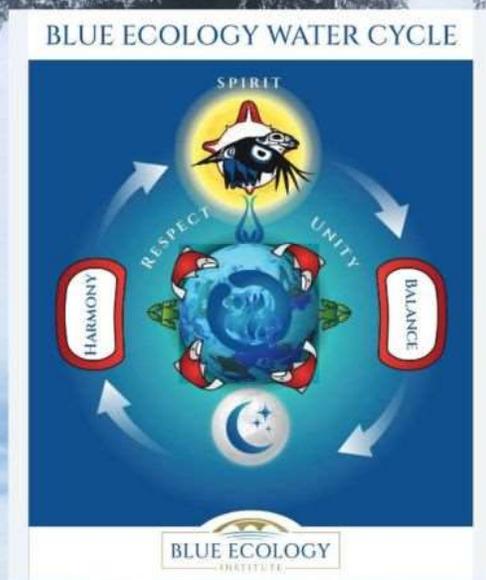




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*"Climate adaptation is about  
WATER, whereas climate  
mitigation is about CARBON"*



## **Watershed Moments 2021: Blue Ecology Virtual Seminar on "Creating a Climate for Change"**

*4<sup>th</sup> Annual Event for Watershed Moments, the Vancouver Island  
Symposia Series on Water Stewardship in a Changing Climate*

postponed to January 20<sup>th</sup> 2022 from 7PM until 9PM

**TO LEARN MORE: Visit** [www.watershed-moments.ca](http://www.watershed-moments.ca)

Register at: <https://www.civicinfo.bc.ca/event/2021/Blue-Ecology-Seminar>

## **Interweaving: A Call for an Attitude Change**

### ***Context by Michael Blackstock***

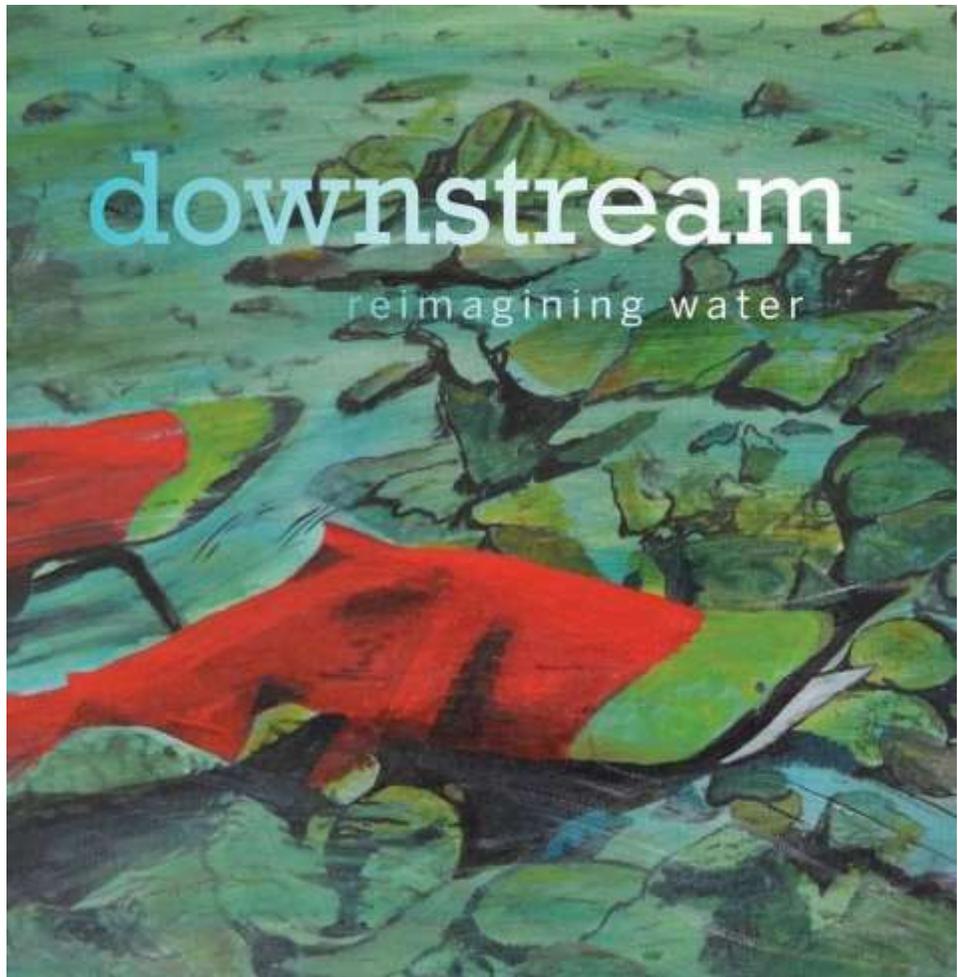
The book '*downstream: reimagining water*' is an anthology. It brings together the perspectives of artists, writers, scientists, scholars, environmentalists, and activists. It does this by exploring the key roles that culture, arts, and the humanities play in supporting healthy water-based ecology. Michael Blackstock is one of the contributors

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*The book's cover was painted by Michael Blackstock; the painting is entitled "Adams River Sockeye Run".*

*To learn more, visit <https://www.wlupress.wlu.ca/Books/D/downstream>*

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## Getting from Sovereign to Collaborative!

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*As Michael Blackstock explains:* My chapter is titled Interweaving Water. It outlines four steps toward transforming sovereign knowledge into collaborative knowledge: (1) humility, (2) transcending, (3) interweaving, and finally (4) transformation. I illustrate this process using the theory of Blue Ecology.

Our children's children will be faced with daunting, complex, and urgent environmental problems. The impending crisis requires us to begin to lay a foundation for our children's children to have a starting point, and some options to grasp in the urgent moment. We owe them hope.

### HUMILITY

I view Western science and Indigenous ways of knowing as sovereign entities. A great deal of energy goes into rationalizing, promoting, and protecting an epistemology. However, now we need to acknowledge that we don't have all the answers.

We can build a collaborative epistemological framework if we transcend sovereign contemporary narrative's boundaries, and literally mine each **epistemology** for gems that can be interwoven in a collaborative manner.

### TRANSCENDENCE

Curiosity about other cultures draws us into a better understanding, and allows us to contrast and compare two worlds. The product of curiosity is an analysis whereby comparison and contrast enable the interweaving process. Once I understood the strengths and contrasts of each perspective on water, I was ready for the interweaving process and published papers that showed how interweaving could happen.

### INTERWEAVING

Interweaving is about creating a new form of knowledge through collaboration by interweaving useful threads from each way of knowing into a more robust way. Interweaving is not integration, just as equality is not about assimilation and creativity is not empirical. Interweaving is collaborative and incremental rather than a revolutionary process. Collaborators identify packets of knowledge that would benefit from the interweaving process.

Blue Ecology is an ecological philosophy, which emerged from interweaving First Nations and Western thought. It is meant to be a companion because it augments existing Western science hydrology rather than displacing this knowledge.

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#### EDITOR'S NOTE 1:

*Epistemology is the branch of philosophy concerned with the theory of knowledge.*

*Epistemology studies the nature of knowledge, justification, and the rationality of belief.*

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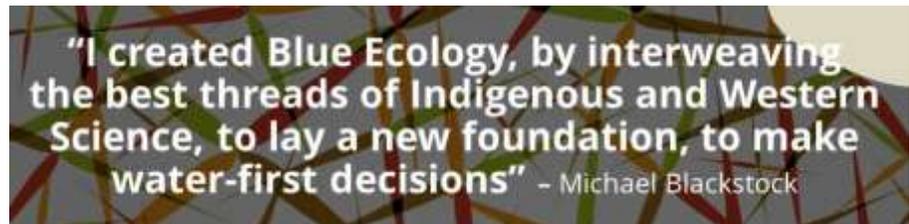
#### EDITOR'S NOTE 2:

*Blue Ecology aligns with the whole-system, water balance approach that the Partnership for Water Sustainability champions for restoration of hydrologic function and stream system integrity within the built environment.*

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## TRANSFORMATION

The main axiom of transformation is: It costs you nothing to change your attitude. A new collaborative knowledge attitude will open up new worlds of possibility. The Blue Ecology vision is collaborative, not competitive.



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## A New Way of Looking at Water

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Hope is not a passive desire but an active attitude.

I really see the value of each culture being genuinely curious about each other and willing to interweave to resolve disputes: This is my action.

Now is the time to act on the belief that if we interweave our strengths as traditional knowledge keepers, scientists, poets, artists, and architects in a collaborative manner, we can make a difference.

Blue Ecology is an incremental example of how we can interweave cultural perspectives on water, but that is just a starting point in this new era of interweaving.

The shared vision of the book contributors is that 'downstream: reimagining water' will contribute to the formation of an intergenerational, culturally inclusive, participatory water ethic.



# A New Way of Looking at Water

## Research Method: Interweaving

- *Collaborative process* where apparently contradictory ways of knowing water, such as Western Science and Indigenous Knowledge, are brought together as *coexisting threads* to produce a new cooperative theory called Blue Ecology.
- True Reconciliation is working in *tandem*

*Slide images are from a PowerPoint presentation by Michael Blackstock, 2021*

## Blue Ecology Vision

**Sustainable Survival: *survival with dignity***

### Vision:

An ecological philosophy, which emerged from interweaving Indigenous and Western thought, that acknowledges water's (i.e. fresh and salt) essential rhythmical life-spirit and central functional role in generating, sustaining, receiving and ultimately unifying life on Earth Mother.

### Water-First

The highest sustainability test is water-first: planned development (e.g. real estate, urban planning, forestry, agriculture, mining, oil and gas extraction) cannot impede the functional delivery of quality water to ecosystems in a healthy rhythm.

Blue Ecology is a *bridge* between two worlds

# Interweaving: A Call for an Attitude Change

## *A Message of Hope by Michael Blackstock*

*“My thesis, that water is a living entity, is provocative. So I was a bit nervous about presenting Blue Ecology in 2008 to the International Association of Hydrological Sciences. But I soon found the hydrologists to be very welcoming hosts. I spoke near end of the conference, after a series of papers warned of the impending effects of climate change.*

*“Sobering messages, one after the other, said the same thing – climate change is here, and it is affecting water in serious ways. My message was one of hope – hope derived from human cross-cultural collaboration. My hopeful message was warmly welcomed by the scientists. Unfortunately, the symposium accurately portended the amplifying negative impacts of climate change on the world’s hydrological cycle.”*

## **Mainstreaming Blue Ecology within British Columbia**

While international recognition gave Blue Ecology early credibility and profile, there was limited awareness within British Columbia of what Michael Blackstock had accomplished on the global stage.

Fast forward to November 2017. That is when the Partnership for Water Sustainability held the [Blue Ecology Workshop](#) to begin the process of mainstreaming Michael Blackstock’s work and ecological philosophical into the local government setting.

The 2017 workshop marks the start of the next leg of Michael's journey, now in collaboration with the Partnership and NALT. This brought Michael into the orbit of the Watershed Moments team, a grass-roots initiative that has members from 10 organizations.

The team draws on the knowledge and expertise of individuals with experience related to First Nations (Indigenous), the land and stream stewardship sector, and four layers of government – federal, provincial, regional district and municipal.

In 2021, the Watershed Moments team embraced the Blue Ecology idea, and committed to the vision for [Water Reconciliation](#) as an outcome.

In essence, Water Reconciliation means going back to the headwaters of where we got our relationships with water and with one another wrong; and then starting back down the river of time – this time together – with a full understanding of the importance of embracing a water-first approach to planning human interventions in the environment.

Recently, for example, BC Hydro's [Power Smart for School](#) program went live with a Blue Ecology module for Grade 11 students. This will help them learn how they might better care for water,

**To learn more about the work of Michael Blackstock, visit the [waterbucket.ca](#) website. Click on this link:**

<https://waterbucket.ca/wcp/category/blue-ecology-michael-blackstock/>

## What is Attitude?

*A collection of values, theories, philosophies, beliefs and principles that motivates and influences*

***It cost zero dollars to change your attitude***

*Slide images are from a PowerPoint presentation by Michael Blackstock, 2021*

## Climate Change Attitude Mitigate by rehydrating landscape

### Water's Rhythm and Movement



**Focus on  
carbon**

Nature cools and buffer climate from extremes. 95% of earth's heat balance is governed by water. 4% is by CO<sub>2</sub> (Walter Jehne, 2021)

## **Watershed Education Initiatives: *Reconnect Children with Nature***

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*Michael Blackstock is the lead member of a 4-person panel that will share their experiences in trail-blazing watershed education for youth.*

*He is joined by Linda Brooymans, Steph Cottell and Christina (Tina) Willard-Stepan.*

*The District of North Vancouver's Richard Boase returns as moderator extraordinaire. He is also a founding Director and Vice-President of the Partnership for Water Sustainability in British Columbia.*

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*"Being outside with children and watching them explore and grow in so many ways through that process of exploration is one of the most rewarding aspects of my job."*

*"I get to share so many momentous firsts: first time getting a good look at the spines on a stickleback, the first time seeing a mass of frog eggs, first time encountering a Toe-biter, first time measuring pH in a wetland or flow in a creek, first time hearing a pileated woodpecker call and being able to put that sound to the bird, first time tasting huckleberry. "*

*"With each and every one of those experiences I saw a burst of curiosity, pride, confidence and wonder, as well as a growing care and empathy for their local streams, wetlands and all the life that it supports."*



LINDA BROOYMANS

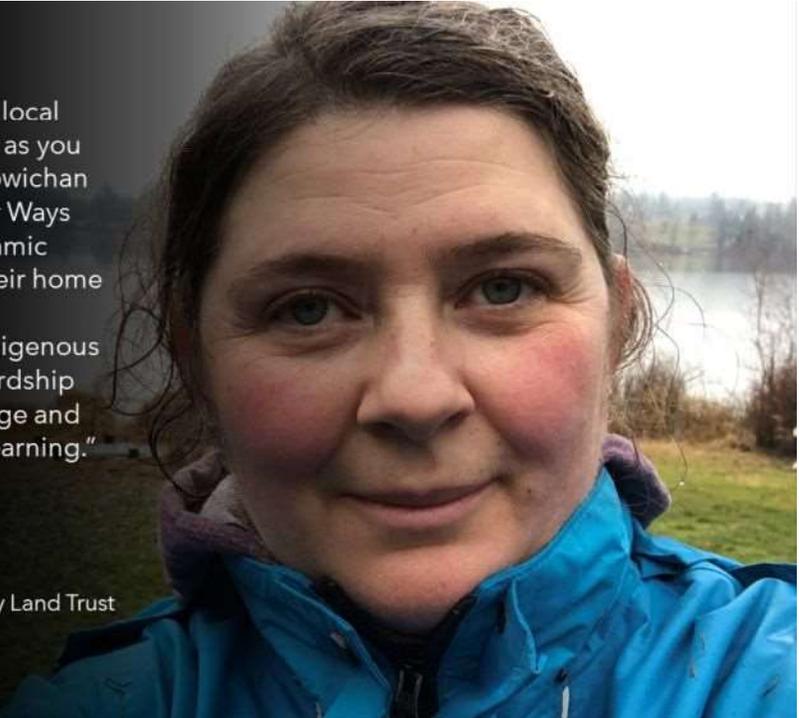
COORDINATOR, SCHOOL WATER STEWARDS PROJECT  
STEWARDSHIP MANAGER, NANAIMO & AREA LAND TRUST

## Watershed Education Initiatives: *Reconnect Children with Nature*

“Learning about and exploring the local watershed is about as place-based as you can get. Through our Friends of Cowichan Creek program and the Best Water Ways resources we aim to nurture a dynamic relationship between youth and their home watershed through learner inquiry, permissible integration of local Indigenous Knowledge, and community stewardship and restoration activities that engage and weave together their conceptual learning.”

**Stephanie Cottell**

MSc Education for Ecological Sustainability  
Executive Director, Cowichan Community Land Trust



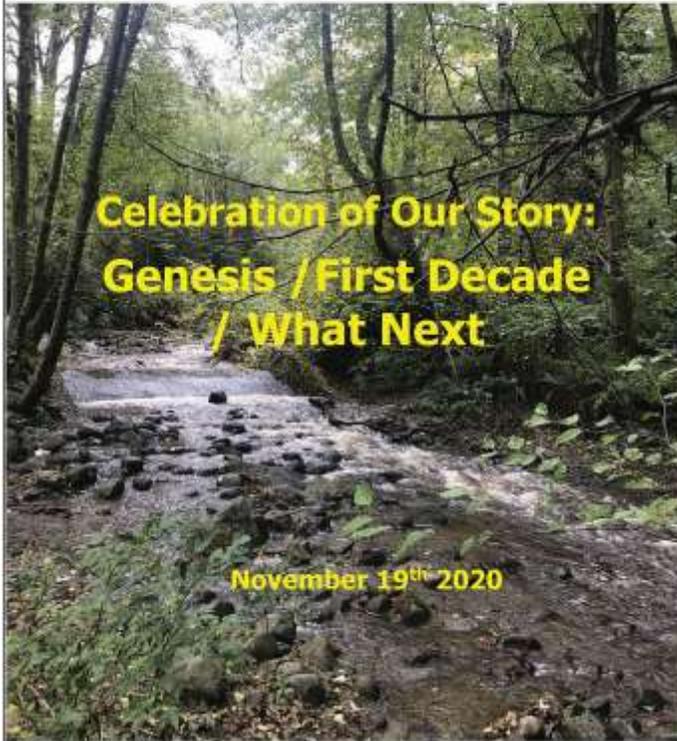
“Students and teachers are hungry for information that can help them make sense of the current environmental crisis. It is well-researched that hope, optimism and action can support us in addressing the changes that we face. With regards to watersheds, this means connecting learners to place and helping them understand what kind of difference they can personally make to help protect this precious resource.”

**Christina (Tina) Willard-Stepan, B.Ed.**  
Facilitator and Environmental Educator  
Comox Strathcona Waste Management  
Comox Valley Regional District, Connected by Water





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TO LEARN MORE, VISIT:  
<https://waterbucket.ca/about-us/>

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## About the Partnership for Water Sustainability in British Columbia

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Incorporation of the Partnership for Water Sustainability in British Columbia as a not-for-profit society on November 19, 2010 was a milestone moment. Incorporation signified a bold leap forward.

Over two decades, the Partnership had evolved from a technical committee in the 1990s, to a “water roundtable” in the first decade of the 2000s, and then to a legal entity. The Partnership has its roots in government – local, provincial, federal.

The Partnership has a primary goal, to **build bridges of understanding** and pass the baton from the past to the present and future. To achieve the goal, the Partnership is growing a network in the local government setting. This network embraces collaborative leadership and **inter-generational collaboration**.

The Partnership believes that when each generation is receptive to accepting the inter-generational baton and embracing the wisdom that goes with it, the decisions of successive generations will benefit from and build upon the experience of those who went before them.

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