



the partnership
for water sustainability in bc

Waterbucket eNews on October 7, 2025
<https://waterbucket.ca/wscblog/>

Living Water Smart in British Columbia:

**The Silent Death of Agriculture
in Metro Vancouver - *When
Farmland Protection Isn't Enough***

Note to Reader:

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

The edition published on October 7, 2025 featured Christina Gemino. Her stunning research draws attention to how non-sanctioned industrial use on agricultural land changes the land base forever, with consequential impacts for food security in British Columbia.

Christina Gemino worked part-time on the Agricultural Land Inventory program from 2022 through 2025 while attending Simon Fraser University. This experience lit a spark and inspired her master's research.

The umbrella for Partnership initiatives and programs is the [Water Sustainability Action Plan for British Columbia](#)³. In turn, the Action Plan is nested within [Living Water Smart, British Columbia's Water Plan](#).



Cover Image Credit: photo by Christina Gemino

¹ <https://waterbucket.ca/wscblog/>

² https://waterbucket.ca/wcp/wp-content/uploads/sites/6/2017/11/livingwatersmart_book.pdf

³ <https://www.waterbucket.ca/cfa/sites/wbccfa/documents/media/81.pdf>

One-Minute Takeaway

THESIS STATEMENT:
"The Silent Death of
Agriculture in Metro
Vancouver - When
Farmland Protection
Isn't Enough"

Master's research by
Christina Gemino,
School of Resource and
Environmental
Management at Simon
Fraser University

"My dad is a professor
and researcher. When I
told him my thesis title,
he said you cannot
make that your title.
That is too dramatic!"

"And in reply I said,
but the topic is
dramatic. It demands
a dramatic title."

Christina Gemino



The Silent Death of Agriculture in Metro Vancouver

The Agricultural Land Reserve (ALR) saved the land for farming but the land is not that secure. BC is slowly losing land for growing food. It is not just because land is coming out of the ALR. Within the ALR, farmland is being lost to non-agricultural uses.



When farmland protection isn't enough

Christina Gemino breaks new ground with [The Silent Death of Agriculture in Metro Vancouver](#).⁴ Using data from the provincial Agricultural Land Inventory (ALI) program, she draws attention to the consequential impacts of non-sanctioned (aka illegal) changes in how agricultural land is used and abused.

“The non-sanctioned expansion of industrial use on agricultural land was a factor that drove my research. This can mean a lot of things – from truck parking to non-farm storage. These uses can forever change the agricultural land base.”

Christina Gemino



“I did field and GIS work on the Province’s *Agricultural Land Inventory* program for three years as a student. The ALI was 100% the inspiration for my thesis.”

“The detail provided by the ALI program results in a powerful capability to understand exactly what is happening on the land.”

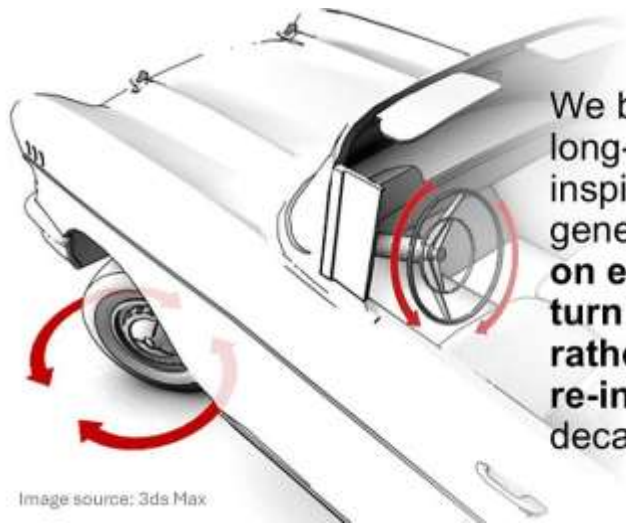


⁴ https://waterbucket.ca/aw/wp-content/uploads/sites/2/2025/07/Christina-Gemino-masters-thesis_Farmland-in-Metro-Vancouver-Is-Protection-Enough_2025.pdf



Editor's Perspective by Kim A Stephens

The Partnership for Water Sustainability embraces the idea of passing on the intergenerational baton. We seek out those with passion and commitment who are keen to accept the baton so that they can make a difference in their careers.



We believe the long-term key is to inspire younger generations to **build on experience and turn the wheel rather than re-inventing it every decade or two.**

Image source: 3ds Max

Motivated individuals like Christina Gemino are the hope of the future.

Christina's research and thesis statement show that she has the *right stuff* to be a change agent and, through her work within government, create a career legacy for the common good.

Kim Stephens, Executive Director
Partnership for Water Sustainability



What is neat about the story of Christina Gemino and her body of research is how she infuses her passion to paint a picture of land use within the Agricultural Land Reserve.





Agricultural Land Inventory program provides a powerful capability to understand what is happening on the land in British Columbia

Christina Germino worked part-time on the Agricultural Land Inventory program from 2022 through 2024 while attending Simon Fraser University. As you will read in the story behind the story, this experience lit a spark and inspired her master's research. In June 2025, Christina received her degree.

Tools to support a caretaker leadership vision for protecting soil and water

How many hectares of food lands do we have? How many do we need to irrigate for food security? And how many hectares are we losing within the Agricultural Land Reserve and without even knowing it? To provide reliable answers to those questions, the provincial government can draw upon two powerful tools.

Food security is at the intersection of land, water, agriculture, and climate

The combination of the Agriculture Water Demand Model and the Agricultural Land Inventory program is powerful because they give us accurate data about land use and water need in an era when climate change creates uncertainty and risks.



The ALI program is used by the Province for agricultural planning as well as fire and drought response. The data are very detailed and accurately capture farm structures, facilities, crops and irrigation areas.



Because the land use inventory program is so detailed, British Columbia has a powerful capability for understanding exactly what is happening on the land. This is complemented by a 500-metre gridded climate data set - **the only one** in North America - that provides daily data.

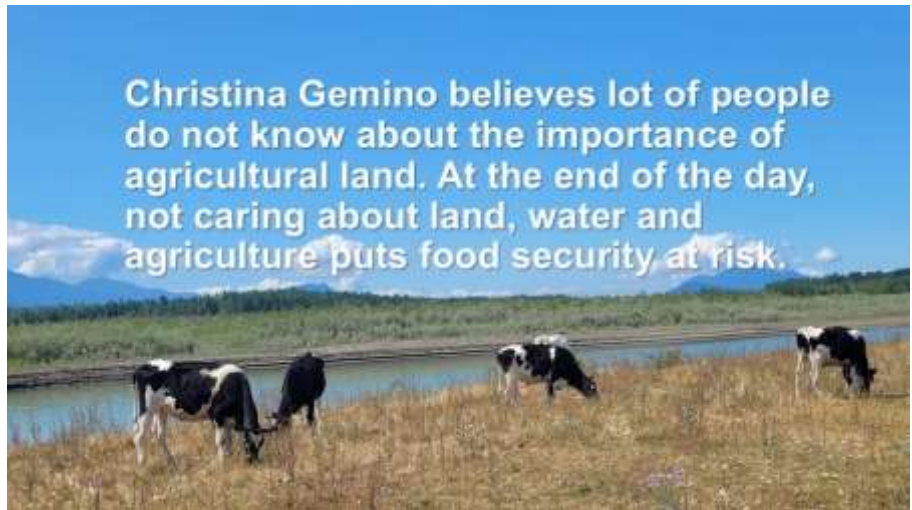
Image source: European Space Agency

When minds open and people care, attitudes shift

What we need most in BC is a mind-set change to affect an attitude shift. People need to care about what is done to land and water so that they can be protected for the benefit of everyone.



Michael Blackstock, founder of the Blue Ecology Institute, describes this as **Caretaker Leadership**. Without a shift in thinking, sustainable water management and land and food security may never be achieved.



STORY BEHIND THE STORY:

The Silent Death of Agriculture in Metro Vancouver: When Farmland Protection Isn't Enough

- a conversation with Christina Gemino

"Yes, the silent death of agriculture in Metro Vancouver is very powerful as a thesis title" was the first thing Christina Gemino said when we had a conversation about her thesis and said, that is a powerful title. Our conversation was the day after her university convocation.

"My dad is a professor and researcher. When I told him my title, he said you cannot make that your title. That is too dramatic! And in reply I said, but the topic is dramatic. It demands a dramatic title."



The story behind the story has three parts

The story behind the story is structured as three topics. Topic One describes the moment when Christina Gemino had her epiphany as a student when she had her initial exposure to the ALI program. In Topic Two, she synthesizes her research journey into a couple of key numbers. Topic Three is philosophical in nature. Now that she has a mission, Christina Gemino reflects on her hopes and aspirations.

TOPIC ONE: **How serendipity led Christina Gemino to the ALI program and inspired her**

"I worked on the Agricultural Land Inventory program for three years. My last year of undergraduate plus the two years of graduate studies. The job was part-time while I was going to school," explains Christina Gemino.



"It was funny how I even got hired. In 2021, I was working as a planning assistant co-op student in the Ministry of Agriculture building in Abbotsford. For the last two weeks of my co-op, my supervisor went on vacation."

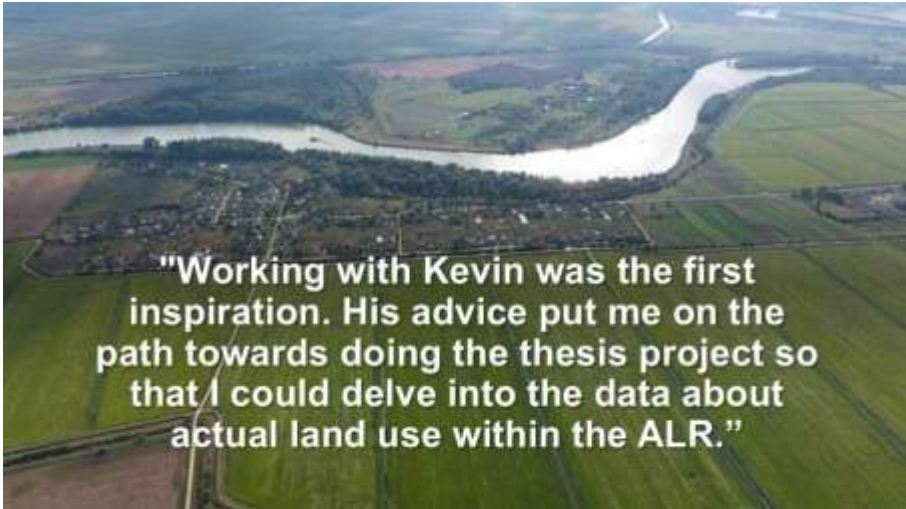
"He said you are going to go sit in the car with Kevin Eastwood and do ALI field work."

"The ALI was 100% the inspiration for my thesis. Specifically, it was one day when Kevin and I were doing field work in Chilliwack."

"What was most inspiring is that when I was telling Kevin that this stuff is so cool, he said:

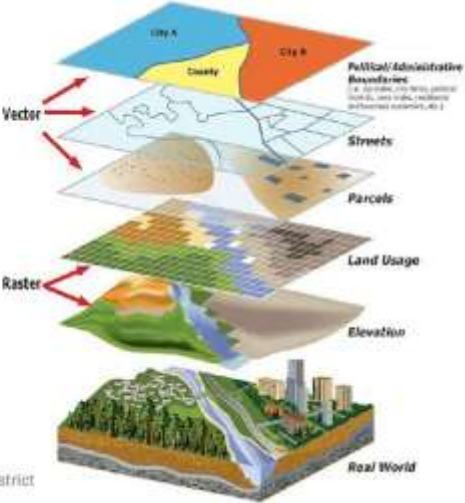
Yes, data acquisition and being in the field is fun, but what you should really be trying to do is to be the person who makes the decisions as to what to do with the data."





"The next semester, I took a Geographic Information Systems class. I had never done GIS in my life. I literally had no idea what to do, but GIS quickly became my passion."

Image source: Cowichan Valley Regional District



The seed for a career mission is planted

"When I was back at school that Fall, I emailed Kevin that I would love to work with him. In January 2022 I joined the team."





"I said this is really weird. And Kevin said it is not good. This showed the 2016 data we had was outdated. We were seeing a lot of non-farm use."



"Those observations propelled me to look into how fast we are moving away from farmland being productive for agricultural use."

"Kevin Eastwood implanted the idea in my mind to use the data for good other than continuing to just do GIS."



"I did not go into the ALI knowing that I would do my master's degree about what the numbers are telling us."

"People are just not making the connection. I just knew that I wanted to do something. And this is what happened!"

TOPIC TWO: **Tammara Soma - right professor in the right place at the right moment**

"I was in the Resource and Environmental Management program at SFU and I was doing a master's degree in planning. I did my thesis as part of the Food Systems Lab. It is headed by Dr. Tammara Soma," continues Christina Gemino.

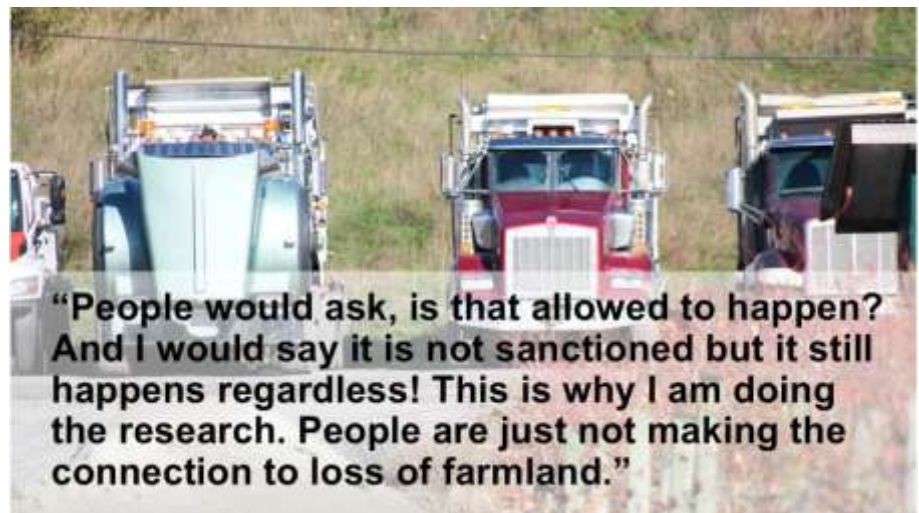
"Dr. Tammara Soma is a foods system scholar who is a registered professional planner. She has done a lot of work on food sustainability and looking at food waste. I had been in her classes before and was working on the ALI program at the time."



Dr. Tammara Soma, RPP MCIP


"When I told people, including my classmates, that I was researching agriculture, their reaction was...okay, snoozefest. They did not understand that there is a really big problem happening in Metro Vancouver."

"In the REM program we have to pitch our research. I would show pictures of areas where in the early 2000s we had farming and then by the 2020s it turned into industrial use. There were quite a few of these areas."



"People would ask, is that allowed to happen? And I would say it is not sanctioned but it still happens regardless! This is why I am doing the research. People are just not making the connection to loss of farmland."

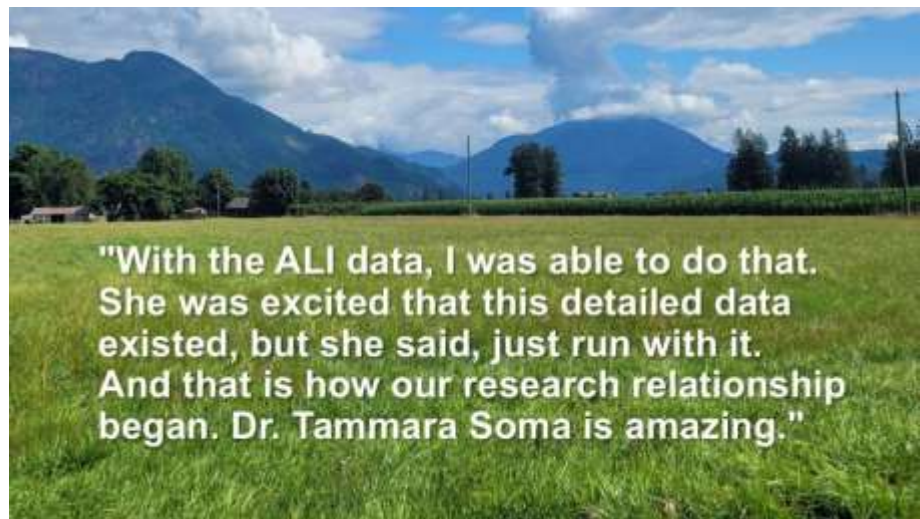
"They are saying we have so much land. What is the matter with one farm going out of production? But they don't see the big picture. They don't see the consequences of accumulating losses for the region's food security over time."



"So, I told Dr. Soma that I wanted to do this project. She had wanted to support more research that looked at farmland supply issues."

"I had a unique perspective because I was working on the ALI, so working with Dr. Soma worked out really well."

"Dr. Soma suggested reading the work of several scholars but we were excited to focus in on Metro Vancouver because it is a very unique situation. We have a lot of rural and also peri-urban land all together. And so I really wanted to look at it specifically."



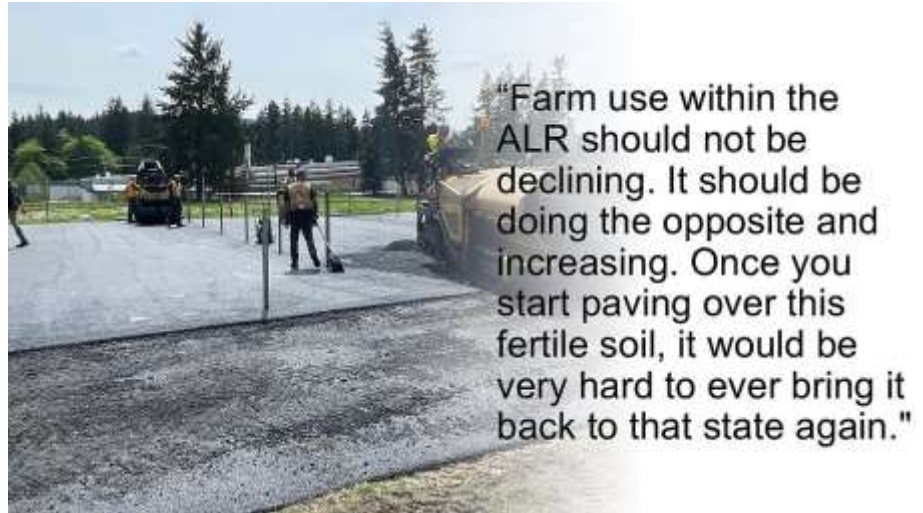
"With the ALI data, I was able to do that. She was excited that this detailed data existed, but she said, just run with it. And that is how our research relationship began. Dr. Tammara Soma is amazing."

DOWNLOAD A COPY OF CHRISTINA GEMINO'S THESIS: [The Silent Death of Agriculture in Metro Vancouver: When Farmland Protection Isn't Enough](https://waterbucket.ca/aw/wp-content/uploads/sites/2/2025/07/Christina-Gemino-masters-thesis_Farmland-in-Metro-Vancouver-Is-Protection-Enough_2025.pdf)⁵

⁵ https://waterbucket.ca/aw/wp-content/uploads/sites/2/2025/07/Christina-Gemino-masters-thesis_Farmland-in-Metro-Vancouver-Is-Protection-Enough_2025.pdf

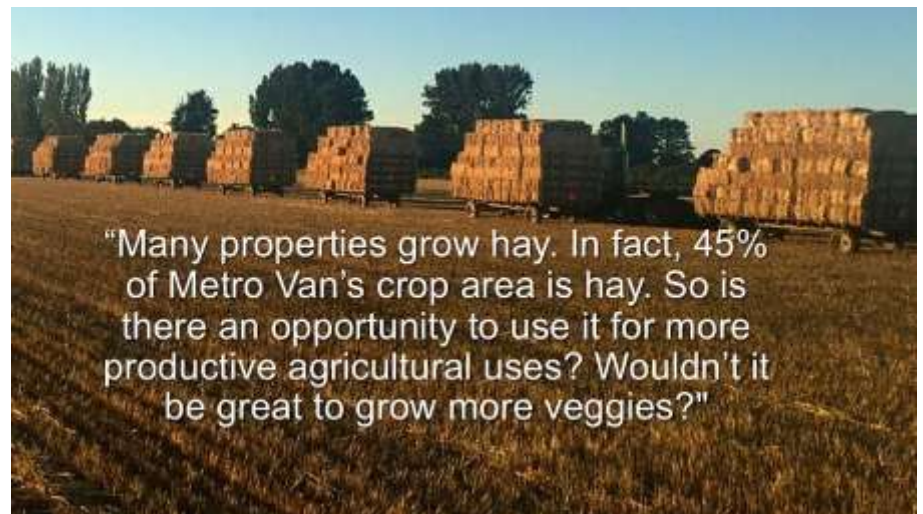
What the numbers tell us

"From 2016 until 2022, we lost 1.4% of actively farmed area. At first glance, 1.4% does not seem like a lot but in the context of BC's Agricultural Land Reserve, it is significant. The problem is that this number should be ZERO."



"But the piece of data that was most validating was the 121% increase in parcels with industrial use. These are new parcels with industrial use just from 2016 until 2022."

"In my opinion, that is pretty significant. It shows that there needs to be more enforcement on ALR land because there is no sign of industrial use stopping or slowing down. In fact, the opposite is becoming clear."



"We need to view agriculture as a public good. It is a finite resource. So we need to protect it. The issue is getting the information out there in a way that the community realizes that loss of farmland is more significant than they might think."

"At my graduation convocation, some of my classmates said, you have made me think about food security and planning and how planners need to think about food systems."

"I am happy that my research has resonated. It is important that everyone think about our need for a resilient food system."

TOPIC THREE: **Where will Christina Gemino's passion and mission take her?**

"The one thing people do not think about with farmland is that it is a finite resource. We do not have Class 1 to 4 land everywhere. Only 5% of BC land is suitable for farming. It is a really small amount. The fact that people do not realize that is my source of frustration," laments Christina Gemino.

"I have had really good opportunities to share my research...at SFU, and with the Langley Agricultural Advisory Committee and the ALI team. We are trying to get the word out there, but it is hard."

"Tammara Soma, Chris Bodnar and I are refining my research into a paper for an article in a planning journal."

"Right now, my research lives in the SFU library. But very few people read what is in there."

"Dr. Bodnar reviewed my research and added his valuable thoughts and insights."

Chris Bodnar is a professor at the University of the Fraser Valley. He is a farmer and an educator.



"Some of what I say in my presentations may be controversial. But I believe we cannot keep doing what we are doing. It is not working. We have to try doing something else. So I am okay with being controversial."

What is the future for agricultural land if it is not viewed as a public good when food security is at risk?

"One point from my paper that I really hope people would take away is about the economic viability of farming. People are struggling. They are not finding it viable to farm. And that is why I believe all this non-farm use is happening."

"It is hard to tell someone that you have to farm your land when they say it does not make money and I need an income to live. You cannot force someone to grow vegetables. They have to make that decision. But it is hard to encourage people to do that without a financial incentive and a mechanism."

"I would love to farm. I know lots of people my age who also would love to farm. But there is no way that we can. And I don't know how to fix the problem."



A call to action

"Agricultural land is a public good because it serves everybody, but it is not treated as such. And that makes it difficult. Food should not be political, but it is. So here we are... losing farmland every year to industrial, non-farm use. How do we get the fruit of the ALR?"

"You can build warehouses and industrial stuff pretty well anywhere you have a piece of property. You cannot build a farm by bringing in soil. That is what we have to protect. We have to find other places for this other stuff."

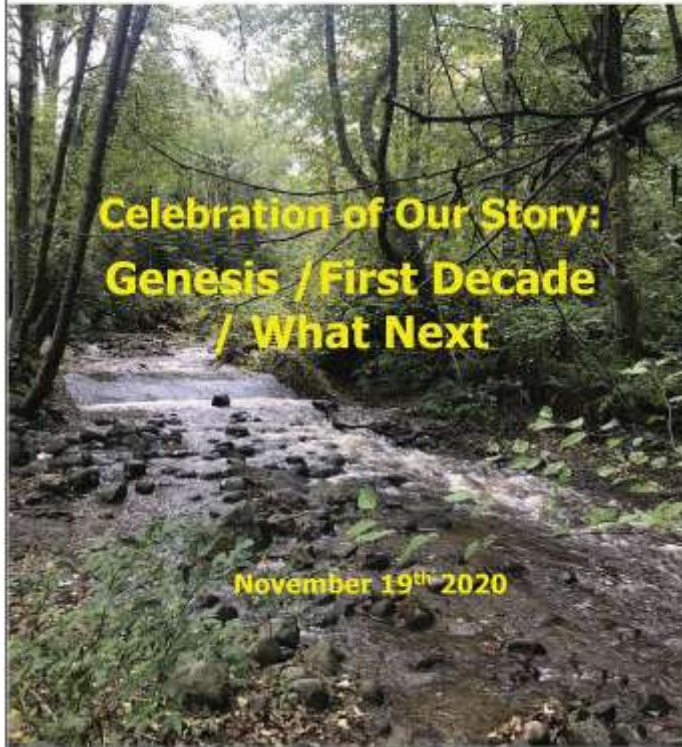
Christina Gemino



This page intentionally left blank



the partnership
for water sustainability in bc



TO LEARN MORE, VISIT:

<https://waterbucket.ca/about-us/>

About the Partnership for Water Sustainability in British Columbia

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.



the partnership
for water sustainability in bc