

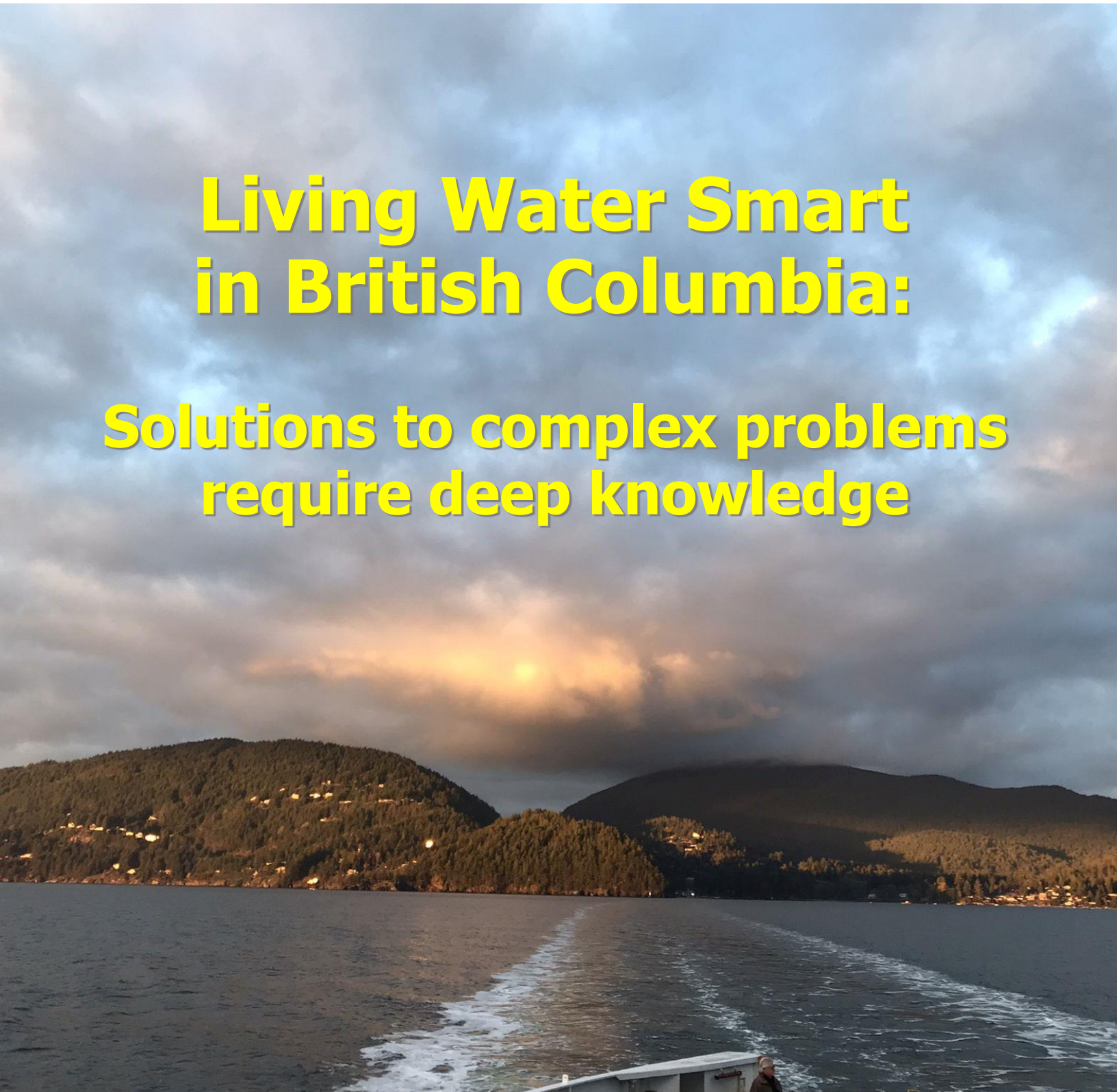


**the partnership
for water sustainability in bc**

Waterbucket eNews on January 16, 2024
<https://waterbucket.ca/wscblog/>

Living Water Smart in British Columbia:

Solutions to complex problems require deep knowledge



Note to Reader:

Waterbucket eNews¹ 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 January 16, 2024 kicked off the 2024 season of “stories behind the stories” of those who are leading changes in thinking and implementing in BC. Looking ahead, the unifying theme for featured success stories in 2024 is, *ask the right questions and LEARN to look back to see ahead*.

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 Heather Stephens

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>

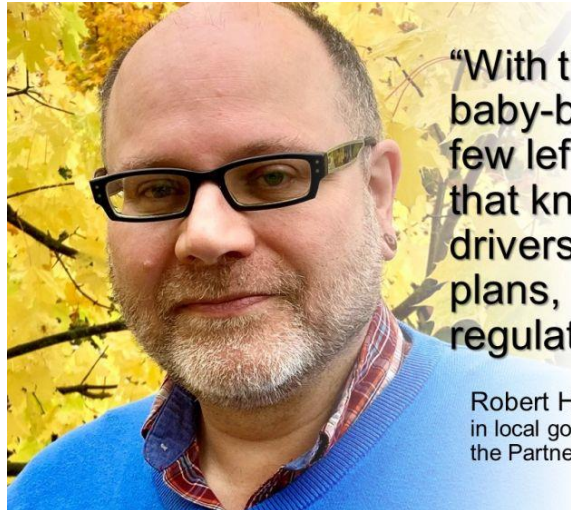
One-Minute Takeaway

"Superficial understanding does not yield solutions for complex problems."

Solutions to complex problems require deep knowledge

The Editor's Perspective introduces two big ideas. One is systems thinking and the other is the perspective captured by this soundbite: *What are the numbers telling you?* These ideas set the scene for reflections by Robert Hicks, a career engineer-planner in local government, in the story behind the story.

Robert Hicks is one of those rare individuals who is able to look back, understand the past and learn from it, and then project far ahead to assess policy implications. One of his strengths as an original thinker is his skill at providing historical context and perspective for "the big picture" of today



"With the exodus of baby-boomers, there are few left in the work force that know the history and drivers behind many plans, policies and regulations."

Robert Hicks, career engineer-planner in local government and ambassador of the Partnership for Water Sustainability

Context and Perspective for the 4-year Term for Local Governments

One year ago, Waterbucket eNews kicked off the 2023 season by welcoming newly elected municipal councillors and regional district directors. With a year of experience under their belts, they should now be increasingly effective in tackling the issues.

2024 is their "year for decisions" in their 4-term of office.

With what they learned in Year One, will local councils and regional boards throughout British Columbia rise to the moment in Year Two?

Will they adopt realistic and achievable plans that lead to affordable and climate-ready housing?

Will they grasp the full implications of why the decisions they make today ripple through time, for better or worse?

With those questions in mind, this season opener provides context and perspective for the issue of **organizational and intergenerational amnesia** caused by the breakdown in knowledge transfer. The ramifications of amnesia are cause for concern in an era when systems of all kinds are being subjected to repeated shocks that test their resiliency.

Editor's Perspective by Kim A Stephens

"The farther back you can
look, the farther forward
you are likely to see"

Sir Winston Churchill (1874-1965)
former Prime Minister of the United Kingdom



Year Two of the 4-year term for councils and boards is usually the window of opportunity for local government managers to bring forward big ideas and initiatives that play out over time. The window will close when many among the current group of elected representatives turn their minds to getting re-elected in 2026.

So, the stakes for communities are high in 2024 as councils and boards grapple with top-down decisions or directives by senior governments. In addition to feeling pressures due to inflation, population growth and unaffordable housing, councils and boards will need to give equal weight to what those two issues mean for the future resiliency of infrastructure and environment.

The spectre of unintended consequences elevates the inherent risks. Local governments cannot run a deficit and we are in an era where so many systems are stretched to the breaking point. Councils and boards will be challenged to "get it right" with their decisions. Not making the right calls inevitably plays out as measurable impacts on quality of life.

What systems thinking means

In a system, everything is connected. That is a key message in this essay. Think about what you have experienced vis-à-vis global supply chains and how problems cascade. And keep in mind that the systems perspective is not a new idea. John Muir, known as the father of the American national parks system, was an exponent of systems thinking in the late 1800s.

John Muir also co-founded the Sierra Club in 1892 and was its first president until his death in 1914.

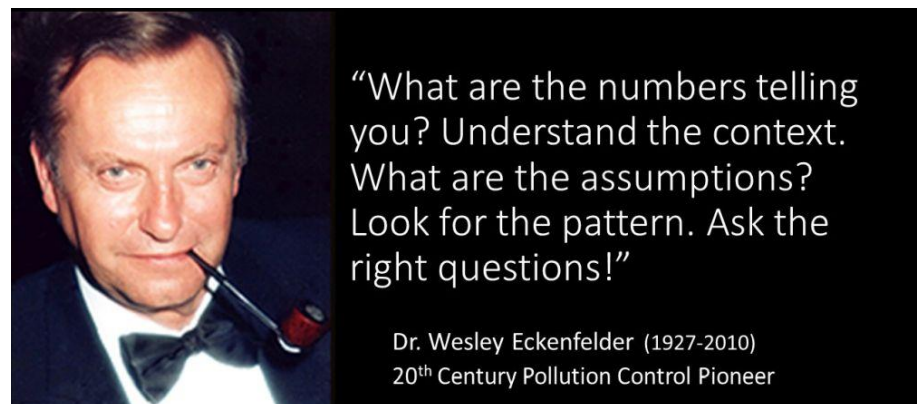


Housing supply, affordability, and home ownership. Health care. Crime. Sustainable and affordable funding for municipal infrastructure over generations. Water supply and food security. Agricultural land and food security. Weather extremes, creek system integrity, and risk management in the urban landscape. All are connected. All are at the forefront in this year for decisions.

What are the numbers telling you?

As I reflect on the planning and operational implications of these interconnected issues, I am reminded of what the late Dr. Wesley Eckenfelder, a legendary professor from Vanderbilt University, told my engineering class when he was a guest lecturer for a week-long course at UBC.

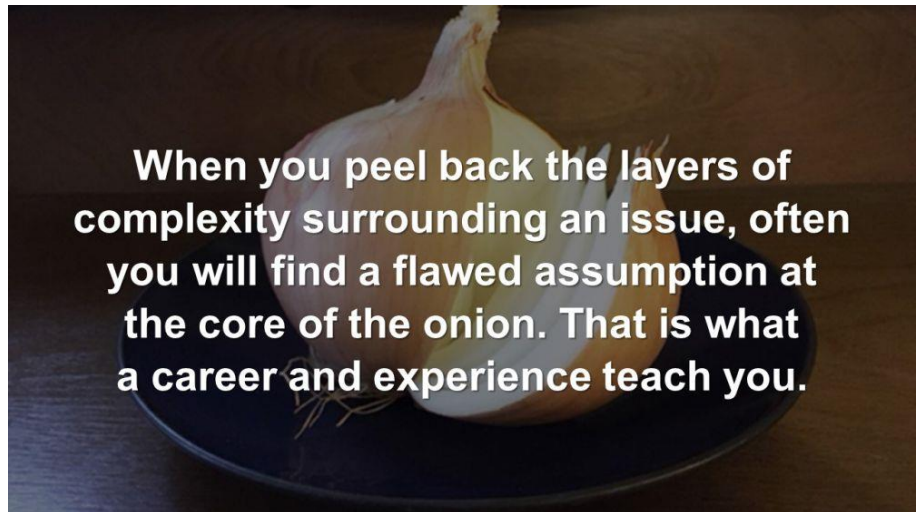
In December 1999, Wesley Eckenfelder was named as one of three "20th Century Pollution Control Pioneers" by Environmental Protection magazine. The other two are Rachael Carson who wrote *Silent Spring* and A. J. P. Martin who invented the Gas Chromatograph.



Wesley Eckenfelder's words of wisdom have influenced my career as a professional engineer involved in policy and planning. That memory surfaced during a recent conversation with Robert Hicks, a contemporary who was an engineer-planner with Metro Vancouver for 25 years.

Robert Hicks is respected by his peers for his knowledge and passion as a futurist. He has always been ahead of his time with his thinking. In our conversation, he quoted from an essay about **organizational amnesia**. He commented that we are living in an era when knowledge, experience and understanding are being lost at an alarming rate.

With this observation, Robert and I circled back to the Wesley Eckenfelder quote and the implications for decision-making. When a new generation of advisors lacks the deep background and experience to comprehend what numbers really mean, how can we expect elected representatives to make informed decisions?



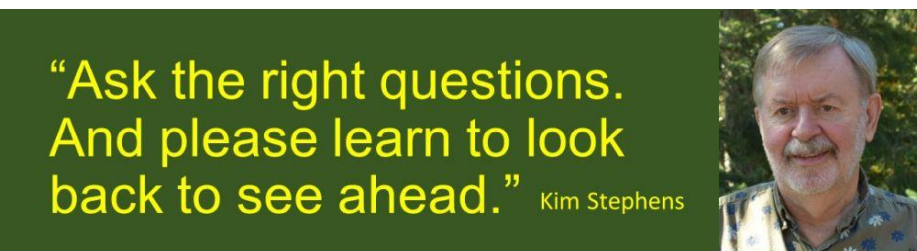
We have lost our feel for numbers

Consider the recent claim that Vancouver needs an additional 10,000 hotel rooms to accommodate tourists. Does the number even make sense when viewed in a system context? Where is the flaw in the logic? I urge readers to think the number through and draw your own conclusions.

In the story behind the story that follows, Robert Hicks' perspective on why knowledge-transfer in local government is broken got me thinking about how numbers are bandied about as gospel. And drive policy. Does anyone question the underlying assumptions and ask, what is wrong with this picture?

Organizational amnesia is real and has a downside. It is called unintended consequences. Robert Hicks reminds us that superficial understandings do not yield solutions to complex problems. One needs deep knowledge.

My boiled down observation is that we have lost our feel for what numbers mean in practice!



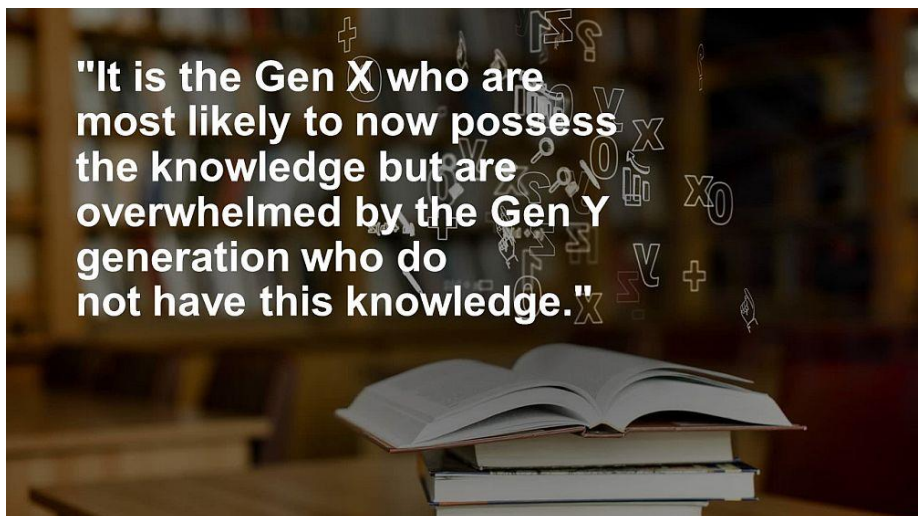
STORY BEHIND THE STORY:

Solutions to complex problems require deep knowledge - *musings by Robert Hicks*

"An underlying issue for local government is knowledge-transfer," Robert Hicks mused. "The baby boomers have more or less retired and now you are left with Gen X. But many Boomers continued in senior positions late into their careers, interrupting the chain of succession and knowledge transfer."

"What we are really saying is that, in the work force, a huge amount of experience has just gone out the door and very quickly. It is unbelievable. And the few people remaining with experience are not necessarily in a position where they can use that experience effectively."

"And those coming in, the Gen Y or even the millennials, may not have access to past experience. Is there someone to show them how the pieces fit together? Or since they do not own the past, maybe they just feel they can do better with a fresh start? Do they care?"

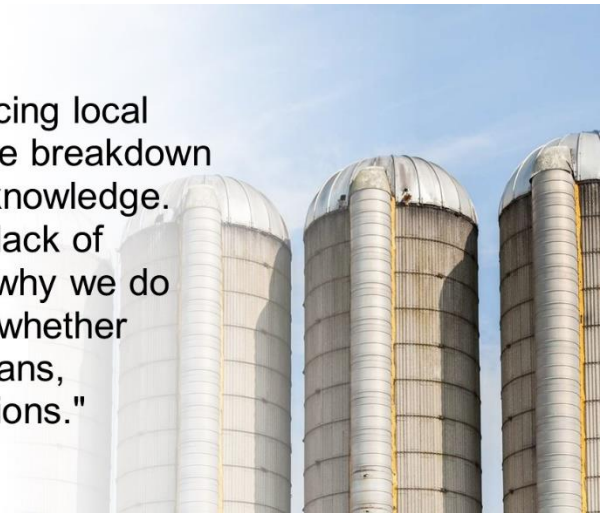


The elephant in the room is organizational and intergenerational amnesia

"Without deep knowledge and an understanding of history, proposed courses of action may be unimplementable," Robert Hicks continued. "The loss of big picture thinking is reflected in the way larger organizations are siloed. Their focus is on immediate mandates and on managing budgets and staffing."

"When you talk to the right people, they do see the big picture and how everything connects. And yet, when it comes into the actual realm of application, it is so much easier for them to apply something when it is chopped up and put into silos. And in the process, they lose sight of the big picture."

"The challenge facing local governments is the breakdown in the transfer of knowledge. And so there is a lack of understanding of why we do the things we do, whether those things be plans, policies or regulations."



Lack of exposure to foundational research

"To illustrate my observation with a personally relevant example, the 2000s stand out as a transformational and consequential period for rainwater management and green infrastructure in the Metro Vancouver region. But I also recognize that changes in policies, procedures or design approaches in the 2000s were the culmination of foundational research in the 1990s."

"Fast forward to the present. In general, what I am gleaning is that most post-2000 engineering graduates with an interest in green infrastructure would not have been exposed to that foundational research. Without that deep knowledge, would they understand what the real objectives are or why we are pursuing these solutions?"

Superficial understanding has unintended consequences

"It is not just green infrastructure. I am seeing other examples in local government that illustrate losing track of the purpose and not knowing what is realistic. This goes back to BIG PICTURE THINKING. If you just look at things in isolation, you might say it is no big deal. But when you look at things in context, it becomes a big deal because the question is, now how do you fit all of the pieces together?"

“How can you come up with a good integrated solution if you are just skimming the surface on high-level information?”



"In today's world, we must increasingly consider solutions in a whole-system context. That means you need broader perspectives. But at the same time, you need the depth behind it."

The honeymoon is over

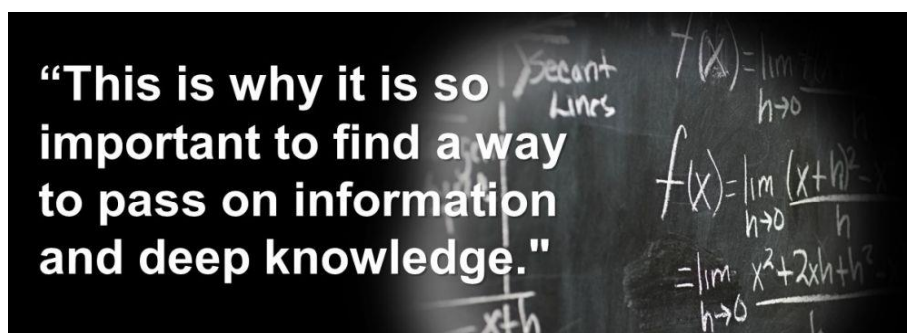
"Local governments are dealing with complex problems needing complex solutions. Superficial understandings do not get you to the solutions for complex problems. To get to that complexity, you have to know the background, you have to know the history, you must have DEEP KNOWLEDGE."

"We are at a stage where we have stretched systems to the point where we no longer have those big margins or safety factors that we had in the past. We are bumping up against an infrastructure shortage. The honeymoon is over. We have hit the wall with our existing infrastructure investments. Systems are maxed out to the breaking point."

The solution is to actively work to transfer knowledge through mentoring

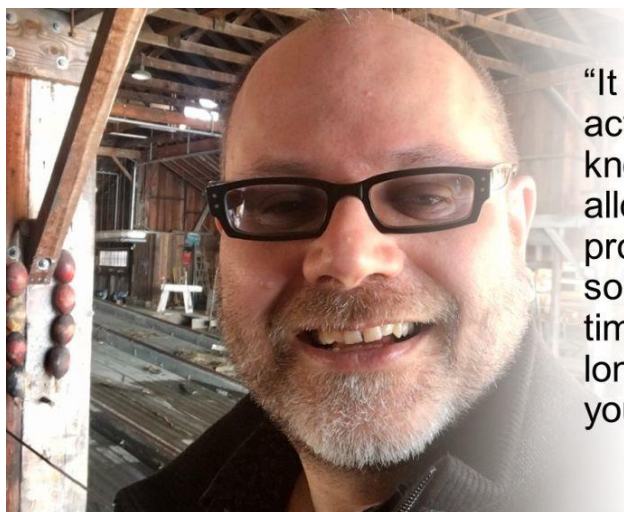
"The notion of a superficial understanding explains the challenge that I am seeing. There are post-2000 graduate engineers coming out of university who are familiar with green infrastructure ideas and concepts, but they do not know the details behind them: details that they did not have to know at university or in their previous jobs."

"Sure, they understand rainwater management ideas and concepts at a high level. But without the background and history, can they really appreciate the complexity of interactions in a whole-systems approach and why certain targets and approaches were selected while others were not?"



"With the exodus of baby-boomers, there are few left in the work force that know the history and drivers behind many plans, policies and regulations."

"Mentoring is necessary to pass on foundational knowledge and information. You do not necessarily have to be active in the workforce to be a mentor. But local governments must work at actively transferring that DEEP KNOWLEDGE," concluded Robert Hicks.

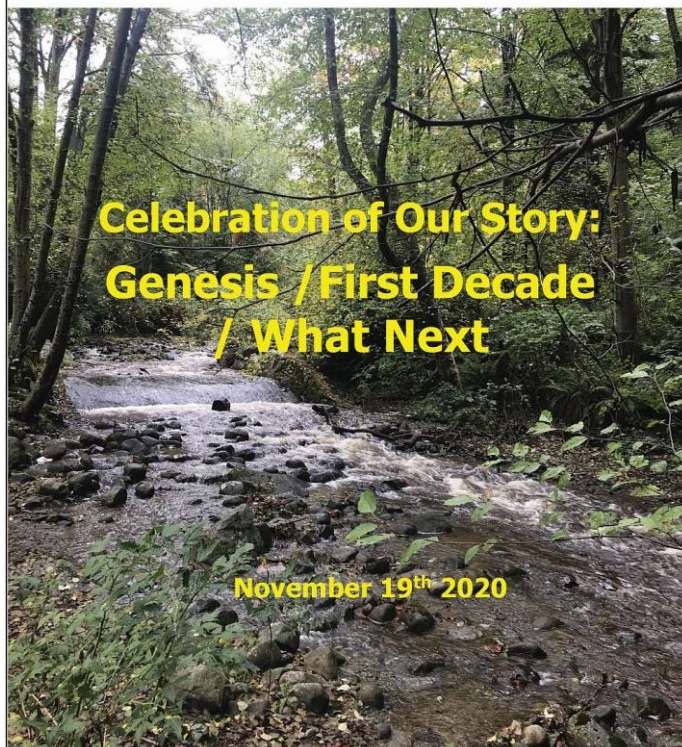


"It is mentoring and actively passing on knowledge that allows complex problems to be solved. It will take time. But with a long-term strategy, you will get there."

Robert Hicks



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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.



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