

the partnership for water sustainability in bc

Waterbucket eNews on April 23, 2024 https://waterbucket.ca/wscblog/

Living Water Smart in British Columbia:

A Balancing Act: H20 and Healthy Streams

Note to Reader:

Waterbucket eNews¹ celebrates the leadership of individuals and organizations who are guided by the vision for Living Water Smart in British Columbia².

The edition published on April 23, 2024 featured North Vancouver's Richard Boase, an environmental champion in word and deed. His 30-year career history in local government is defined by the partnerships he forged with academia through collaboration with UBC's Hans Schreier. This form of collaboration is an essential ingredient in the *intergenerational baton strategy*.

The umbrella for Partnership initiatives and programs is the Water Sustainability Action Plan for British Columbia³. In turn, the Action Plan is nested within Living Water Smart, British Columbia's Water Plan.



Cover Image Credit: photo taken by Andy White and provided by Richard Boase

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

"When I look back at our history, I think wow, how did we do so much applied research. We had a need and Hans Schreier had grad students who were interested in doing the research. Win-win." "Hans Schreier of UBC ignited my passion in the mid-1990s when the District worked with UBC on applied research. What we learned was transformational. We then turned our minds to the role of green infrastructure in protecting streams from urban impacts." Richard Boase



Blue Ecology is a framework for interweaving Western Science and Indigenous Knowledge. Water reconciliation is the goal. "We are telling the same story but just speaking two different languages," observes Paul Chapman, Chair of the Watershed Moments Team.

The team produced a 90minute video about Blue Ecology moderated by Richard Boase, released on World Rivers Day 2023, and broadcast multiple times throughout BC by Shaw Spotlight on their community channels.

A passion for applied research in pursuit of solutions

Richard Boase is an environmental champion in word and deed. His 30-year career history in local government is defined by the partnerships he forged with academia through collaboration with UBC's Hans Schreier.

Richard Boase has the courage of his convictions. He leads by example to demonstrate how to apply "science-based understanding". His vision is to protect, restore and enhance stream systems in the built environment.

With Richard Boase as the internal champion, the Partnership for Water Sustainability could always count on the District of North Vancouver to be a proving ground for innovative tools and approaches.

The session that changed everything for Richard Boase

"In the 1990s, the UBC research team led by Hans Schreier and Ken Hall dated all these sediment cores from Burnaby Lake and extracted sediments from certain years. They identified, for example, when lead stopped being used in gasoline," states Richard Boase.

"They also showed how pollutants in road runoff work their way through the drainage networks and into streams where they deposit. It was an inspiring moment for me. I saw a path forward for making a difference."

Editor's Perspective by Kim A Stephens

"To this day, I remember the session where Hans Schreier and his grad students presented their findings for Burnaby Lake sediment cores. That was the moment when I realized why we must do a better job of erosion and sediment control."

In the April 16th edition of Waterbucket eNews, we featured the Partnership's current collaboration with Vancouver Island University. Thanks to Richard Boase and his longstanding connection to Hans Schreier, the Partnership has an even longer relationship with the University of British Columbia.

Collaboration with academia is an essential ingredient in what we in the Partnership frame as our intergenerational baton strategy. Our goal is to identify, invest in, and mentor those in the next generation who want to accept the baton because they see the benefits of building on experience.

How we turn ideas into action

"At a critical moment, members of the Partnership team would have an idea around a research theme that supported our hypotheses," recalls Richard Boase. "And as often happened, I was the arm that had the energy and willingness to take on the research, apply new science in North Vancouver, and get the work done."

The Partnership brought funders and funding to the table, Hans Schreier provided the grad students and brought in other professors, and North Vancouver provided the case studies. This powerful combination allowed us to establish a series of precedents that stand out in a North American context.

One project that everyone involved in is especially proud of is the North Shore Tree Canopy Rainfall Interception Project. Richard Boase and Hans Schreier ran with the idea, expanded the partnership to include *the Canada Water Network*, involved community volunteers, and implemented a network of 60 tree canopy climate stations across three municipalities.

"The research quantified the proportion of rainfall intercepted by the tree canopy in an urban forest. This demonstrates the benefits of maintaining a tree canopy in the urban environment," explains Richard Boase.

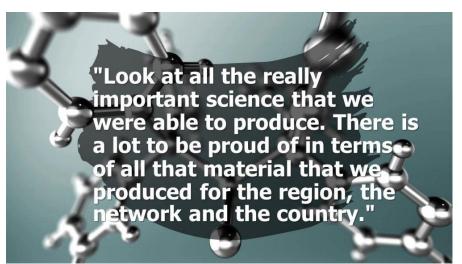
An inter-municipal coordinating team developed tree and site selection criteria and, with the assistance of UBC's Dr. Markus Weiler (opposite), implemented an innovative system for capturing rain that makes it through the tree canopy.



Pursuit of knowledge in a quest to improve the urban fabric

"In my moments of reflection, I am proud of my pursuit of knowledge. It was shortly after the Hans Schreier workshop in the mid-1990s that I embarked on applied research that has defined my career with the District," states Richard Boase.

"Hans inspired me. Because of that relationship, the District used grad students to carry out vital research. This research was in pursuit of making changes to the fabric of our urbanized areas. I was so encapsulated by what I saw around me, and the need for change, that my mind was always racing. And I needed to find ways to do research into what we were talking about."



STORY BEHIND THE STORY:

Balancing Act: H2O and Healthy Streams –

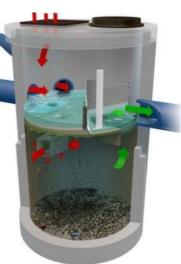
extracts from conversations with Richard Boase and Hans Schreier

The quest began with research into oil and grit interceptors

"Hans Schreier of UBC ignited my passion in the mid-1990s when he presented what his grad students had learned from sediment cores taken from Burnaby Lake. It was an aha moment for me," recalls Richard Boase.

"When I look back at our history of collaboration, I think wow, how did we do so much. It started with the performance assessment of oil and grit interceptors in the 1990s. And it continued over the next two decades."

"The research goal was to quantify the effectiveness of oil-grit separators. What we learned was transformational. We then turned our minds to the role of green infrastructure in protecting streams from urban impacts."



"Once I saw the need to focus on erosion and sediment control, Hans and I found grad students to do research for us. Their work was crucial. The findings clearly showed that the interceptors were not the silver bullet that the District had hung our hats on."

"We were installing them left and right all over the place. But they were just not doing the job. We showed that you must properly look after them. Otherwise, the unintended consequence is that you create another problem for yourself." "That relationship with Hans Schreier led to tree canopy and green infrastructure research. It was the same with the Hastings Creek Watershed Blueprint⁴. We had a need and Hans had grad students who were interested in doing the research. Win-win."

Hastings Creek Watershed Blueprint and the ISMP Course Correction

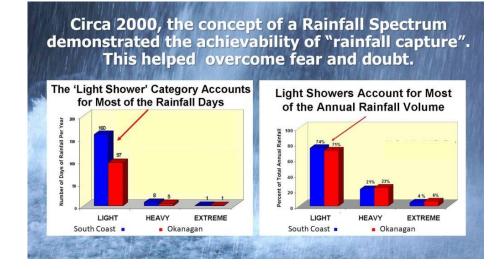
Hastings Creek showed what a "course correction" should look like so that a watershedbased plan would be implementable: What do we have, what do we want, how do we put his into action, and how do we stay on target?

We must do a better job of protecting streams

"It was about 1997 when the vision began to crystallize for me about the connection between green infrastructure and stream health. The next huge moment for me occurred a couple of years later at an intermunicipal regional meeting held at Metro Vancouver. Kim Stephens was dissecting the misapplication of hydrology in terms of urban design."

Simple is profound

"This was around the time when Kim developed the Water Balance Methodology⁵. He looked at rainfall differently. The thing that I will always remember is how a light went on when he showed a rainfall event distribution and compared Metro Vancouver to Kelowna."



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⁴ https://waterbucket.ca/cfa/files/2013/06/Hastings-Creek_Story-of-Watershed-Blueprint_May-2013_FINAL.pdf

⁵ https://waterbucket.ca/wp-content/uploads/2012/05/Primer-on-Water-Balance-Methodology-for-Protecting-Watershed-Health_February-2014.pdf

"It was the idea of a universal relationship that transcended geography. It was one of those moments when you realize that simple is profound."

"In that moment, it was clear to me why rainfall capture is achievable, and that green infrastructure is the solution, but you must understand the role of soil in the hydrologic cycle."

Richard Boase as "Bill Nye The Science Guy"

"In 2002, following release of Stormwater Planning: A Guidebook for British Columbia, the District of North Vancouver was a founding member of the inter-governmental partnership which developed the Water Balance as an extension of the Guidebook. I quickly volunteered to serve on the leadership team."



Rain boxes and marble racing

Richard Boase is known far and wide for his creativity in developing simple tools for explaining and demonstrating core concepts.

For years, the rain boxes and marble racers were mainstays of the Water Balance Model outreach and continuing education program (OCEP). The three rain boxes demonstrated how soil type and depth determine the rate at which water infiltrates into the ground.

The marble racers demonstrated how friction (simulated with nails) slows runoff:

Living Water Smart in British Columbia: *A Balancing Act: H2O and Healthy Streams*

Collaboration with Hans Schreier brought science into local government through applied research designed to make a difference

"After retiring from UBC in 2007, I volunteered my time and continued to teach courses until two years ago. So, all through those years, I still had access to students," states Hans Schreier, Professor Emeritus in the Faculty of Land and Water Systems at the University of British Columbia.

"Students are always looking for projects where they can make a difference. We have a problem in academia; we are not very good communicators of science. The idea was how can we bring more science into development to make a difference."

"I have always looked for people who are within the system but want to make a change. They are the leaders. And if we can contribute some science to these leaders, they can make the difference, not us. All we do is provide the data." Hans Schreier UBC Professor Emeritus

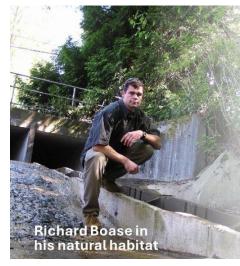
"And so, connecting with Richard Boase in the 1990s was really fundamental because he is on the inside. And he is an excellent and persuasive communicator. Richard identified projects where the students could benefit directly and make a difference. To me, that was the opportunity."

Right people, right place, right time: "Often, you meet people and things work out more or less, but the chemistry was right with Richard Boase. He had the right persuasion, the right personality, and he knew how to find those who were willing to do innovative things." The complete interview with Richard Boase about bringing science into local government follows in Appendix A. It is extracted from:

Chronicle of the Metro Vancouver region's Green Infrastructure Journey (1997-2023): Create Liveable Communities and Protect Stream Health

The Partnership will release this legacy resource later in 2024. There is so much oral history to be documented. It is a story that begins in 1997 with passage of the Fish Protection Act. However, the genesis is actually the 1970s. Thus, the story is truly intergenerational in nature. "And then, we have all these young, keen students. All I did was link them up with Richard. He would say, we have a problem and what can we do."

"Municipalities have limited access to science, and they do not have time to do the science. So, why not use the students? Not only is it a benefit to community leaders, but the students also benefit because they are doing something that makes a difference," concludes Hans Schreier.



"Over the years, we worked on a whole range of things which were innovative. Without the participation by someone like Richard Boase, I doubt we could have done it," says Hans Schreier



APPENDIX A

A window into the green infrastructure journey in the Metro Vancouver region:

The complete interview with Richard Boase provides valuable context for pursuit of solutions



A Passion for Applied Research Water Balance Outreach and Training Program North Shore Tree Canopy Rainfall Interception Project Hastings Creek Blueprint and ISMP Course Correction Applied Research in Pursuit of Solutions This page intentionally left blank

Richard Boase, Section Manager, Environmental Sustainability, District of North Vancouver (since 1993)

A Passion for Applied Research

Richard Boase joined the District of North Vancouver in 1993. His career is defined by the partnerships he forges with academia, and by his stalwart support of the Partnership for Water Sustainability. The District of North Vancouver could always be counted upon to be a proving ground for the application of innovative tools and approaches.

Table B5 describes seven provincially significant initiatives. RichardBoase and the District contributed to the success of each.

An environmental champion in word and deed, his career history is one of stepping up, having the courage of his convictions, and leading by example to demonstrate how to apply "science-based understanding" that would protect or enhance stream systems in the built environment.

An "aha moment" for Richard Boase

"In the 1990s, the UBC research team led by Hans Schreier dated all these sediment cores from Burnaby Lake and extracted sediments from certain years. They identified, for example, when lead stopped being used in gasoline. They also showed how pollutants in road runoff work their way through the drainage networks and into streams where they deposit. It was an inspiring moment for me. I saw a path forward for making a difference."

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We must do a better job of protecting streams

"Hans Schreier of UBC ignited my passion in the mid-1990s. To this day, I remember the session where he and his grad students presented their findings for Burnaby Lake sediment cores. That was the moment when I realized why we must do a better job of erosion and sediment control. The District worked with UBC to quantify the effectiveness of oil-grit separators. What we learned was transformational. We then turned our minds to the role of green infrastructure in protecting streams from urban impacts," recalls Richard Boase. **Figure B5** – Application of science-based understanding of the water balance and stream health in North Vancouver District

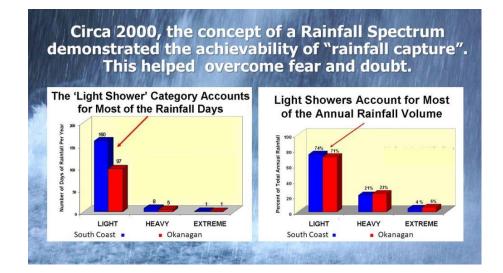
Year	Event	Context
2001	Stormwater Planning: A Guidebook for British Columbia	The Mackay Creek case study validated a performance target approach to "rainfall capture" in order to restore watershed "water balance" and stream health over time as housing is replaced and land is (re)developed.
2003	Water Balance Model Outreach &Training Program	Developed by government as an extension of the Guidebook, the web-based WBM quantifies the benefits of reducing runoff volume. Richard Boase co-led the team that delivered outreach and regional training workshops.
2005	North Shore Tree Canopy Rainfall Interception Project	The three municipalities, through a partnership with UBC and others, implemented a network of 60 tree canopy climate stations. The project quantified the proportion of rainfall intercepted by the tree canopy in an urban forest.
2011	Hastings Creek Watershed Blueprint and the ISMP Course Correction	Hastings Creek showed what a "course correction" should look like so that a watershed-based plan would be implementable: What do we have, what do we want, how do we put his into action, and how do we stay on target?
2011	Drainage Infrastructure Screening Tool	Hoskins Creek was the test case for developing a level-of- service methodology and building an online tool as an intermediate step when assessing pipe capacities. It is a single tool for land use densification and climate change.
2012	Water Balance Model Express for Homeowners	Hastings Creek was the prototype application for creating an interactive tool for use by homeowners. Click and drag components help users figure out how to slow, spread and sink rainwater that runs off from hard surfaces.
2018	EAP, a BC Strategy for Community Investment in Stream Systems	Kilmer Creek was project #4 in a 6-year program of applied research to test, refine and mainstream the methodology and metrics for funding "natural asset management" as a line item in a local government annual budget.

Water Balance Model Outreach and Training Program (beginning in 2003)

"It was about 1997 when the vision began to crystallize for me about the connection between green infrastructure and stream health. The next huge moment for me occurred a couple of years later at a SILG regional meeting held at Metro Vancouver. Kim Stephens was dissecting the misapplication of hydrology in terms of urban design," continues Richard Boase.

"This was around the time when Kim developed the Water Balance Methodology. He looked at rainfall differently. The thing that I will always remember is how a light went on when he showed a rainfall event distribution and compared Metro Vancouver to Kelowna. It was the idea of a universal relationship that transcended geography. It was one of those moments when you realize that <u>simple is profound</u>."

"In that moment, it was clear to me why rainfall capture is achievable, and that green infrastructure is the solution, but you must understand the role of soil in the hydrologic cycle."



Formation of the Inter-Governmental Partnership

"In 2002, following release of Stormwater Planning: A Guidebook for British Columbia, the District of North Vancouver was a founding member of the inter-governmental partnership which developed the Water Balance Model as an extension of the Guidebook. I quickly volunteered to serve on the leadership team."

Figure B-5 shows Richard Boase in action doing outreach and training.

British Columbia was the 1st jurisdiction in North America to adopt the 'Water Balance Methodology' which:

Translated Science-Based Understanding

Introduced the Rainfall Spectrum

Introduced "Retain, Detain, Convey" Strategy

Formalized Performance Target Approach

Established Adaptive Management Precedent

Initiated Paradigm-Shift to Rainwater Management

Figure B6 – Richard Boase as "Bill Nye The Science Guy"





RAIN BOXES AND MARBLE RACING:

Richard Boase is known far and wide for his creativity in developing simple tools for explaining and demonstrating core concepts. For years, the rain boxes and marble racers were mainstays of the Water Balance Model outreach and continuing education program (OCEP).

The three rain boxes demonstrated how soil type and depth determine the rate at which water infiltrates into the ground.

The marble racers demonstrated how friction (simulated with nails) slows runoff.



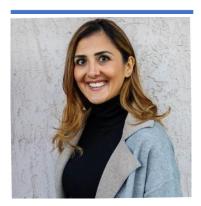
North Shore Tree Canopy Rainfall Interception Project (2005)

Under the leadership of Richard Boase, the District of North Vancouver in 2005 initiated a precedent-setting research initiative in partnership with the University of British Columbia and professors Hans Schreier and Markus Weiler (Chair of Forest Hydrology).

Rainfall interception in an urban environment

"The results showed that urban trees intercept and evapotranspire more rain than trees in forested environments. Together with the delay in runoff trees can act as an effective rainwater management tool on individual properties. We applied a unique methodology for measuring rain/throughfall using a system of PVC pipes hung beneath the canopy to capture the throughfall where it drained into a rain gauge attached to a data logger."

- Yeganeh Asadian



"One of our research interests is to determine the effectiveness of a single tree versus that for a cluster of trees. We will explore and quantify the variables influencing the interception process. We will also investigate the effects of tree density, tree structure and tree species on rainfall interception."

Dr. Markus Weiler, 2005

"We wanted to quantify the benefits of urban trees for rainfall interception. While there was considerable research for forest stands in the natural environment, very little had been done in an urban setting anywhere in North America," states Richard Boase.

Human-interest side of the story

"By the beginning of 2007, we had installed a network of 60 tree canopy climate stations across the North Shore. We had multiple partners, and at all levels of government. Community members also got involved by volunteering to have stations on their properties."

"When I think back, I am especially proud of how we involved the North Shore Association for the Mentally Handicapped in the project, They provide woodworking services. We went to them with a rather unique and weird-looking contraption that Markus Weiler had invented for the project, and they immediately said, 'Yes, we can help you make them'."

The researcher: "A grad student named Yeganeh Asadian carried out the research. Her master's thesis informed the development of the **Tree Canopy Module** in the Water Balance Model. Operationalized as of 2012, the module was funded by a federal-provincial climate action program."

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Figure B7 – Applied research in an urban setting



URNOLD Beaumont (left) and Jeff Keast put together one of the rain collectors the District of North Vancouver will use as part of a study to determine the role of trees in managing rain water. Participants from ARC Woodworking built the wooden L-abaped collectors that will be strapped to trees.

Project studies of the role of trees in managing rain water. Participants from ARC Woodworking built the wooden L-abaped collectors that will be strapped to trees.

Project studies studies of the rain point of the rain of the role of trees in the wooden L-abaped collectors that will be strapped to trees.

and leveloped in partnership with DBC, will set up 60 gauges on various species of the rain point of through the camp of the trees, comparing that against water of the role of the rain point of through the camp of the trees, comparing that against water of offset of water are activity in state restored of water are activity in terms of the trees of the rain point of through the camp of the trees, comparing that against water of offset of water are activity in state restored of water are activity in terms of the rain point of through the camp of the trees, comparing that against water of location provide the camp of the trees contraining the rain point of through the camp of the trees contraining the rain point of through the camp of the trees contraining the rain point of through the rain point of the rain point of through the rain point of the rain point of through the rain point of the rain point of through the rain point of through the rain point of through the "There is a human-interest angle to the story. The District partnered with the North Shore Mentally Handicapped Association to mass produce the wooden support structures for the tree canopy climate stations. It was really gratifying to see this partnership featured prominently in the North Shore News. We truly can say there was broad-based North Shore community participation when you consider this in combination with what was happening in, for example, the Clovelly-Caulfield neighbourhood of West Vancouver."

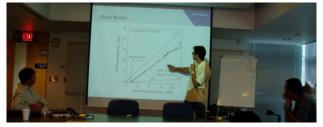
"The community volunteers are excited to play a part in this project. It will inform the neighbourhood planning process by bringing science into the discussion of the role that trees play in the urban environment," stated Paddy Sherman, Chair of the Clovelly-Caulfeild Neighbourhood Plan Working Group.

THE region's water systems have been working overtime this season, with stormy December rains pouring through pipes, the gushing into local streams. Now, due to an imitative by the District of North Vancouver — and some h work by a local woodworking show — a wo-vers study launched this month ex. Liese gages with measure mix amount of water that only through the cating by holing formulas to determine how many litres of treative unsheltered location by holing formulas to determine how many litres of treation of water are a strully retained to extern the structure of the structure



An inter-municipal coordinating team developed tree and site selection criteria and, with the assistance of Dr. Markus Weiler, implemented an innovative system for capturing rain that makes it through the tree canopy.





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Hastings Creek Blueprint and the ISMP Course Correction (2011)

"In June 2011, the District adopted its updated Official Community Plan. This designated the Lynn Valley area as one of two town centres. This decision was the driver for the District to create a prototype watershed plan for Hastings Creek, one that would address risks and better deliver on regulatory compliance," recalls Richard Boase.

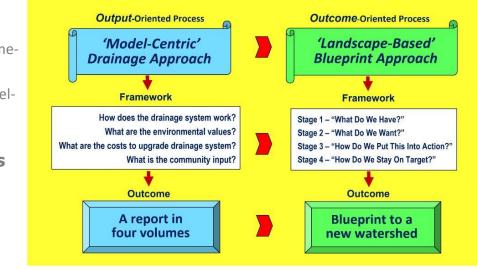
An asset management lens

"The financial burden of stabilizing streams was a motivator for the District to do business differently. Because my engineering colleague Ariel Estrada and I were dealing with the unintended and ongoing consequences of pipe-and-convey infrastructure (see **Figure B8**), we were early proponents of sustainable service delivery that **views the watershed through an asset management lens**."

How to work towards a solution with imperfect information: "As I reflect on why the Hastings Creek process is proving successful, it reinforces in my mind the value of *charrettes* to solve problems," stated Susan Head in a 2013 interview.



"You bring together the right people with the right knowledge. You share what you know. You identify what you do not know. You try things because it is all about getting the right puzzle pieces. You start to fit the pieces together and build integrated solutions. We have enough information to make decisions."



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Things changed with the Hastings Blueprint

"Richard Boase, Ariel Estrada and Karen Rendek drove our change in thinking. Their collaboration demonstrates what integration of environmental, engineering and planning perspectives looks like. In the process, we have demonstrated how to move back and forth between scales."

- Susan Haid, in 2013 (Manager of Sustainable Community Development)

Hastings Creek was a prototype plan for a paradigm-shift to outcomeoriented **Watershed Blueprints** from modelcentric **Integrated Stormwater Management Plans** (ISMPs). This prototype

demonstrated how to implement the *"ISMP course correction"* described in Part D.

Figure B8 – It started with a culvert project



A picture tells a story: In the absence of a life-cycle approach to asset management, local governments bear the entire financial burden to stabilize and restore watercourses impacted by increased runoff volume after land is developed or redeveloped.



Integration of engineering, planning and environmental perspectives

A decade ago, Richard Boase and Ariel Estrada were the Hasting Creek Watershed Blueprint co-champions. Their long-term working relationship built the foundation for an on-theground understanding of what is needed to restore watershed and stream health, what is possible and how to implement change.

"We started to collaborate on projects over a decade ago," recalled Ariel Estrada in a 2013 interview. "It all started with a simple culvert replacement project. We concluded that my technical engineering responsibilities and Richard's role in environmental protection needed to complement each other. We immediately started to learn from each other. We gained an appreciation for each other's challenges and have walked in each other's shoes ever since."

"We always look for ways to do a better job, apply technology effectively and efficiently, and save the District money. This is the philosophy that we have brought to the Hastings Creek Blueprint," stressed Richard Boase in that same interview.

"Our watershed-based approach captures the stewardship ethic which is deeply rooted in the North Vancouver community. In our jobs, Ariel and I deal with the unintended consequences of changes in land use. A key goal in problemsolving is striving to balance environmental protection and sustainability with community drainage and flood protection."

"Through an evolving process of integrating interdisciplinary perspectives, we are planning habitat and watershed enhancements that can be realized through the redevelopment process," concluded Ariel Estrada.

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Applied Research in Pursuit of Solutions

"When I look back, I realize that the Hastings Creek Blueprint was a highwater mark," says Richard Boase wistfully. "There was alignment and there was passion among District staff because of the interconnection of the Blueprint process with the Lynn Valley Town Centre process. And Hastings Creek was the testing ground for new online tools. It was an exciting period. We were making a difference."

"Our approach to the Hastings Blueprint captured the stewardship history and ethic which is deeply rooted in the North Vancouver community. The District is defined by the wilderness at the top, the water at the bottom, and the creek channels that connect the two. Our approach also recognized that we had to look for opportunities within an existing footprint."

"Council takes great pride in the direct line stewardship that Richard and others demonstrate in the capacity of their jobs. There are a number of our staff who go above and beyond in terms of bringing a stewardship approach to what they do in planning and engineering. Their commitment does reflect our community culture."

- (former) Mayor Richard Walton, 2013

"So many District staff were motivated by a commitment to community. And we were in tune with the community passion and stewardship ethic for the forested character of the mountainside. A decade ago, the future looked promising. We were poised for action. In the current era of the revolving door and organizational amnesia due to staff turnover, however, that sense of commitment seems to have gone missing."

Poised for action: "Integration of the Lynn Valley Town Centre and Hastings Creek Blueprint processes has yielded invaluable understanding. The Blueprint work has resulted in a balance of science-based understanding and practicality at the watershed scale," stated Gavin Joyce in a 2013 interview.

"We have a plan; there is agreement about the goals; we are developing tools for use by staff, developers and homeowners; and we have a schedule of opportunities. Everything that we need is in play."

Commitment to Community

"We are fortunate that District staff include longterm professionals like **Richard Boase and Ariel** Estrada who provide leadership. These individuals have a long*term corporate history* and memory. They have valuable local knowledge. They have lived through changes and events. This provides them with an informed perspective: they know what works and what does not."

> - Gavin Joyce, in 2013 (General Manager for Engineering and Parks)



Reflections on what might have been

"Despite everything that we know, a decade later the District is still struggling in terms of single-family redevelopment and the impacts on creek systems. All the innovative work that we did was not enough to generate a change in direction. The challenge is overcoming inertia. That is the frustrating part," concludes Richard Boase.

A quest to improve the urban fabric: "In my moments of reflection, however, I am proud of my pursuit of knowledge. It was shortly after the Hans Schreier workshop in the mid-1990s that I embarked on applied research that has defined my career with the District. Hans inspired me. Because of that relationship, the District used grad students to carry out vital research."

"This research was in pursuit of making changes to the fabric of our urbanized areas. I was so encapsulated by what I saw around me, and the need for change, that my mind was always racing. And I needed to find ways to do research into what we were talking about."

How the pursuit of solutions started

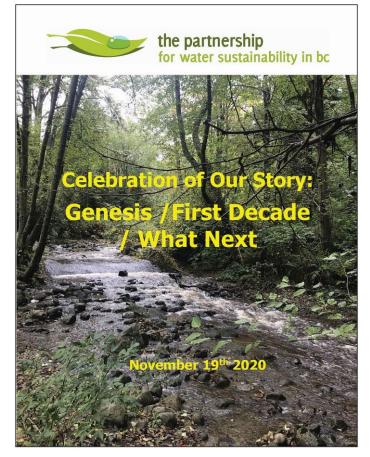
"When I look back at our history, I think wow, how did we do so much. It started with the performance assessment of oil and grit interceptors in the 1990s. And it continued over the next two decades."

"Once I saw the need to focus on erosion and sediment control, Hans and I found grad students to do research for us. That relationship led to tree canopy and green infrastructure research. It was the same with the Hastings Creek Watershed Blueprint. We had a need and Hans had grad students who were interested in doing the research. Win-win."

> "Look at all the really important science that we were able to produce and then show and reveal and explain to those who were interested in what we were doing. When I think about it, there is a lot to be proud of in terms of all that material that we produced for the region, the network and the country."

Research into oil and grit interceptors

"The research work by Hans Schreier's grad students was crucial. The findings clearly showed that the interceptors were not the silver bullet that the District had hung our hats on. We were installing them left and right all over the place. But they were just not doing the job. We showed that you must properly look after them. Otherwise, the unintended consequence is that you create another problem for yourself."



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-forprofit 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 intergenerational 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.

