



the partnership
for water sustainability in bc

Waterbucket eNews on February 13, 2024

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



**Living Water Smart
in British Columbia:**

**Instill a culture that
supports champions**

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 February 13, 2024 features the story behind the story of Ramin Seifi, former General Manager of engineering and planning with Langley Township. He is a visionary leadership and champion for implementing green infrastructure to achieve 'water balance'.

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 Kim Stephens

¹ <https://waterbucket.ca/wscblog/>

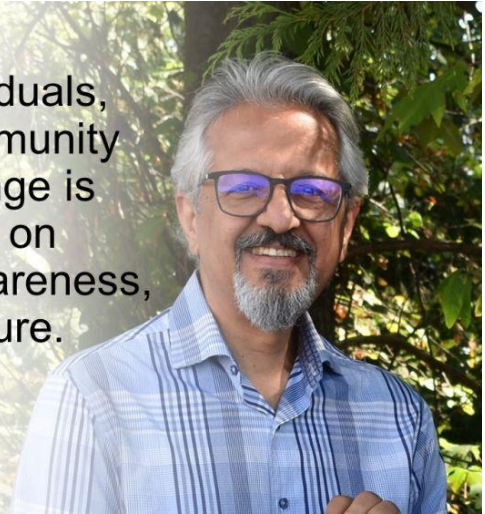
² https://waterbucket.ca/wcp/wp-content/uploads/sites/6/2017/11/livingwatersmart_book.pdf

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

One-Minute Takeaway

"It takes willpower to develop a culture," states Ramin Seifi, former General Manager of engineering and planning with Langley Township

"What we do as individuals, as engineers, as community builders to effect change is very much dependent on education, raising awareness, and developing a culture. And I think that is the story of Langley."



Green infrastructure in Langley

Ramin Seifi is a visionary leader. He joined Langley Township in 2000 and served until 2023. He carved out a one-of-a-kind role as general manager of a portfolio that combined planning and engineering. His dual role was an essential ingredient in enabling organizational integration, horizontally and vertically.

"Beginning in the early 2000s, the story in Langley was one of collaboration and support from all levels, including the politicians. And then, of not being afraid. Being courageous enough to try and see how you do. But more importantly than that, it was one that developed a culture. And it takes time, it takes effort, it takes perseverance. It takes willpower to develop a culture," states Ramin Seifi.

Resource protection – for groundwater supply and fisheries habitat – is the original driver for implementing 'green infrastructure' in Langley. For the past two decades, Township staff have learned and adapted.

Rain gardens are standard practice

Langley experience in the first two decades of this century showed what can be accomplished with a 'design with nature' approach to large-scale residential projects when Council, the community and staff are in alignment and embrace a 'green culture'.

Rain gardens are standard practice in the Township to achieve water balance. Moving ahead on a 'green' platform had gained momentum as standard practice evolved through 'learn by doing' experience. Successive councils found it easy to support the initiatives of staff.

Green Infrastructure Services is one of three departments that make up the interdisciplinary Development Services group. Departmental responsibilities include rain garden implementation through the development approval process.

Editor's Perspective by Kim A Stephens

"More than ever, we need STRONGER CHAMPIONS and people who believe in what they are doing at heart."

Ramin Seifi



Harmony and Integration

My sense is that the impact of what Ramin Seifi and his staff accomplished in Langley over 20-plus years is underappreciated. Few in the Metro Vancouver region even know about the history and legacy of Langley's green infrastructure innovation.



"In Langley, we believe there is a sea-change about to happen. The community is ready for green infrastructure."

Colin Wright, 2007

When the provincial government released [Stormwater Planning: A Guidebook for British Columbia](#) in 2002, Langley Township was one of the first municipalities to operationalize the Water Balance Methodology. Around that time, I met Ramin Seifi and was impressed by his commitment to doing it right.

Thanks to Ramin being a champion for the water balance approach, the Routley, Yorkson and Northeast Gordon Estates neighbourhoods were demonstration applications that informed evolution of the Water Balance Methodology in the first half of the 2000s.

When Langley was a host for [Showcasing Green Infrastructure Innovation in Metro Vancouver: The 2007 Series](#), Ramin Seifi and Colin Wright chose *Harmony and Integration* as their event theme.

"It was not a random decision. Harmony and integration capture our core values. What we are showcasing is the outcome of years of interdepartmental collaboration," stated Ramin at the event. "When we are in harmony with nature, things will go well," added Colin Wright.

Evolution from curb-and-gutter to blue links

Langley's approach to achieving water balance through green Infrastructure continued to evolve as successive neighbourhoods were built over the past two decades. In the beginning, the focus for Green Infrastructure was on what could be achieved within **greenways**.

Langley staff then turned their attention to **rain gardens**. Building on their history of successes, their next evolution was implementation of **blue links**, which is another name for rain gardens.

It made sense

"Replacement of curb-and-gutter with a blue link rain garden is a perfect illustration of integration in action. Everyone could see that it made sense. Because I could see the need from all angles, I said to staff 'just do it'. Integration helps everyone get it," reports Ramin Seifi.

The term 'blue link' describes the purpose of the current drainage standard in Langley. It replaced the traditional curb-and-gutter detail for all but arterial roadways. The blue link is symbolic of the transformational change which has taken root in the Township in the 21st century as designing with nature became the 'new normal'.



STORY BEHIND THE STORY:

Instill a culture that supports champions - *extracts from conversations with Ramin Seifi*

"A presentation many years ago by UBC professor Patrick Condon put me on the path to integration. Patrick's storytelling made me realize that everything we do has an effect somewhere else. What Patrick said in his presentation was eye-opening and oh so impactful," recalls Ramin Seifi.

"Patrick Condon was ahead of his time in connecting dots. To get audience attention, he framed it this way. Arctic warming and the melting sea ice, which the declining polar bear population relies on to survive, is directly linked with how we convey stormwater to our rivers and oceans and the use of curb and gutter in urbanization of our communities."

Patrick Condon is the James Taylor chair in Landscape and Livable Environments at the University of British Columbia's School of Architecture and Landscape Architecture and the founding chair of the UBC Urban Design program.

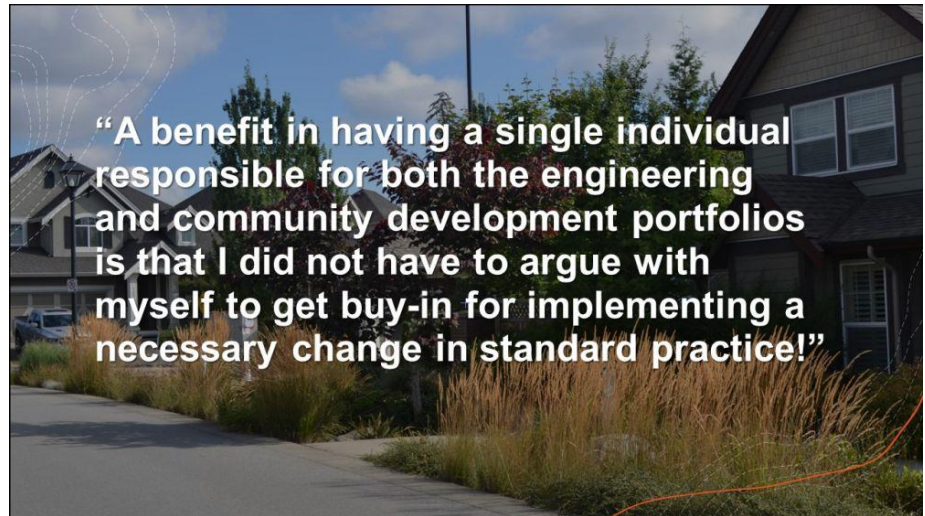
"Patrick Condon inspired me to think about HOW we could integrate departments and disciplines in order to have a holistic view of our community."



Integration of engineering and planning portfolios benefits community development

"When Colin Wright retired as general manager of engineering in 2011, our Chief Administrative Officer listened when I presented the case for me doing both jobs, engineering and community development."

"The Township needed more integration to respond to the demands on infrastructure and the risks to the environment resulting from rapid population growth. Achieving integration depended on the Township having a better structure."



Instill confidence to learn by trying

“When I reflect on my time with Langley Township, I hope my lasting contribution is the confidence that I instilled in people to not be afraid of trying something and being a champion for it. It is only through collaboration, from buy-in at all levels, that we can all be successful.”

“Instilling a culture takes years. We developed a culture that I hope future generations now take forward. It began humbly. It began with stormwater management and thinking about how we could retain water and allow it to infiltrate as opposed to getting rid of it quickly.”

“Create green corridors. Create sponges, sponge islands. Create areas where you can have vegetation and wildlife and rainwater management all happening at the same time.”

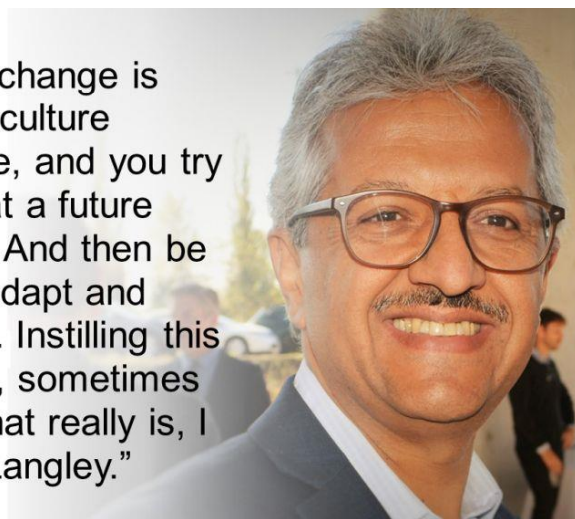


Instilling a culture takes years

“In my conversations with current and former senior level municipal staff around the Metro Vancouver region, there is a sense among them that the current generation of local government politicians appears more interested in appeasing a few people who are outspoken, as opposed to listening to the advice of their professional staff.”

“That is sad. That is why, more than ever, we need STRONGER CHAMPIONS and people who believe in what they are doing at heart.”

“How you adapt to change is that you develop a culture where you welcome, and you try and anticipate, what a future state might be like. And then be nimble enough to adapt and adjust yourself to it. Instilling this culture takes years, sometimes generations. And that really is, I hope, the story of Langley.”



Context for appendix on Green Infrastructure Innovation in Langley

In 2017, the Partnership published a Case Profile to celebrate green infrastructure innovation by the staff at Langley Township. The publication date coincided with the 10th anniversary of the Showcasing Green Infrastructure Innovation event hosted by Langley in 2007.

This provided a natural jumping off point for the storyline. The showcasing event was a defined moment in time. It therefore served as a relevant benchmark for judging progress after a decade of continuous green infrastructure innovation in Langley. The appendix provides valuable historical information and context.

The theme for the 2007 event was **Harmony and Integration**. A decade later, the question posed in the appendix was, *how does one instill a stewardship ethic in the corporate culture so that the legacy would be lasting?*

APPENDIX A

Green Infrastructure Innovation in Langley Township

extracted from the 5th in the *Watershed Blueprint
Case Profile Series*, published in October 2017



Celebration of Green Infrastructure Innovation

Harmony and Integration

Titled *Harmony and Integration*, the Langley event in October 2007 showcased what could be accomplished with large-scale projects when Council, the community and staff are in alignment and embrace a 'green culture'.

"As municipalities, we are the focal point. We have to show leadership on-the-ground if our society is to achieve sustainability."

"In Langley, we believe there is a sea-change about to happen. The community is ready for green infrastructure."

"When people ask what do I do, my answer is that I build cities. To do that, and do it well, we have to be in harmony with nature."

"When we are in harmony with nature, things will go well."

"This also applies to our corporate philosophy at Langley Township. We are working together and in harmony."

Colin Wright

Colin Wright (former General Manager, Engineering) and Ramin Seifi (then the Acting General Manager, Planning and Development Services) stood side-by-side to explain the significance and relevance of the *Harmony and Integration* theme. When Colin Wright retired, Ramin Seifi became **General Manager, Engineering and Community Development**. His combined portfolio personifies integration.



Ramin
Seifi

Colin
Wright

How to Move from Research to Implementation: "What we are showcasing today is the outcome of years of inter-departmental collaboration," stated Ramin Seifi in 2007, "It was not a random decision to choose **Harmony and Integration** as the theme for this Showcasing Innovation event. It captures our core values."

Ramin added that he is a living example of integration because he is an engineer who heads the planning department. He then elaborated on Langley's Sustainability Charter.

"After many years of what you would call research, we are now in the developmental phase. Although the Sustainability Charter is high level, it will guide us in terms of providing focus and monitoring progress. Each Charter goal has a supporting set of objectives complete with specific actions," explained Ramin Seifi.

To illustrate what this meant, he referred to the Environmental Goal and the related objectives for conserving water, reducing energy use, and improving rainwater (stormwater) runoff quality.

"We will be monitoring and measuring what matters. This will enable residents and Council to maintain their focus over time," concluded Ramin Seifi at the 2007 event.

2007 Showcasing Innovation in Langley

The showcasing concept was an outcome from a local government consultation workshop organized by the Green Infrastructure Partnership in May 2005.

Metro Vancouver municipalities said that they wanted to hear firsthand from those who are implementing green infrastructure, and they wanted to see what it looks like.

The series enabled local governments to tell their stories in a way that no other forum could provide. It encouraged a sense of pride.



First, the project preview



Then, the site visit

2007 Showcasing Program:

Case Study 1

Langley's GHG Strategy

Case Study 2

Protecting Langley's Groundwater

Case Study 3

Integrated Rainwater Management;

Harmony & Integration Case Study 4

Langley Environmental Partners Society (LEPS)



Integration of Perspectives: Planning, Engineering & Landscape Architecture

Three Groups in One Section

When interviewing Township staff, an obvious question is this: As staff come and go over time, how does the organization sustain the guiding philosophy, core values, and way of doing daily business that are embodied in the phrase *'harmony and integration'*? Expressed more succinctly, how does one instill a stewardship ethic in the corporate culture so that the legacy would be lasting?

The Township is progressing on an inter-generational journey. In 2007, Ramin Seifi and Colin Wright painted a bold vision of a sea-change that would lead to a green infrastructure future. A decade later, the evidence on the ground proves that the 'green' vision does indeed have substance. By **designing with nature**, the outcome would be *sustainable watershed systems*.



**Stephen
Richardson**
Director
Development Services

The Whole is Greater Than the Sum of its Parts: The Community Development Division includes the Development Services section. Stephen Richardson is the section Director. Reporting to Ramin Seifi, he has been with the Township since 2010. The instant Stephen read the 2007 collaboration quote by Ramin, he emphatically stated that:

"Inter-department collaboration has continued; and it has been strengthened through the decision to house three groups in one section. My section, Development Services, has three departments - Development Planning, Development Engineering and Green Infrastructure Services. **This integration allows us to cascade from watershed planning down to the site.**"

"Integration leads to efficiencies," stressed Stephen Richardson. To illustrate his point, he pointed to three piles of documentation around his office, one from each department.

"The purpose in having the three groups within one section is to integrate the pieces of any development proposal. So, in terms of the three professional disciplines represented by the departments, the whole is greater than the sum of its parts. This synergy allows us to catch the pieces that might otherwise be missed."



Dave Cocking

Manager, Green
Infrastructure Services
Department

TIME PROVIDES PERSPECTIVE

"When I started my career with the Township, we did not deal with complexity. We only dealt with subdivisions.

"As development became more complex, greenways and rain gardens came to the forefront.

"Development engineers now had a greater understanding of nature. No longer was it just greenways. It was also rainwater management.

"Today it is green space altogether such that Langley is a place where people want to live.

"The whole is greater than the sum of the parts. Site development is integrated. The components inform design. As a result, people gravitate to these places"

Integration: It's Embedded in the Culture

"We are nimble because we are integrated," stated Stephen Richardson with pride. "Langley Township is the fastest growing municipality in the Metro Vancouver region. Anticipating and responding to growth requires nimbleness on our part."

"Our integrated process results in a better community," continued Dave Cocking, Manager of the Green Infrastructure Services department and a career employee of the Township. "In turn, this attracts people who want to be here."

"Thus, Langley Township is clearly a *community of choice*," added Stephen Richardson.

What Integration Looks Like: During the interview, and to illustrate his concept of integration, Stephen Richardson pointed to the people walking back and forth past his office (which has a full width and floor to ceiling window view).

"Harmony and integration are embedded in the Township culture," he said. "Those individuals walking by my office are interacting with individuals in other groups. They are not exchanging written memos. The structure sets the framework for the culture, and this enables individuals to advance our core principles.

"The driver for integration is to protect and enhance environmental quality. Yes, we do walk the talk.

"As well, support for integration comes from Langley's elected representatives," emphasized Stephen Richardson. "In short, ***harmony and integration is what we do.***"

Whole-System Thinking: "The infrastructure we build today is integrated," explained Dave Cocking. "**We recognize that each part is a component of the whole.** We strive to make all the parts work together without compromising any component.

"Working together, we are solving community design issues. We have a shared goal – improve the community and provide amenities. This requires integrated thinking. Everyone contributes."

"Green infrastructure is an equal component," added Stephen Richardson. "This is how we think."

‘Convening for Action’ means...

“Use what we have learned so that we can take action and make a difference in our professional lives. That difference is to change the way we develop land.”

Context statement by Ray Fung, representing the Green Infrastructure Partnership, at the start of the 2007 Showcasing Innovation in Langley event

Integration: How it is Embedded

During the interviews with staff, their explanations of process made it clear that the Township is a living demonstration of adaptive management in action. The essence of the adaptive approach is to ‘learn by doing’ and to change direction when there is a better way.

The 2007 showcasing series focussed attention on the **BC process for ‘convening for action’**. Illustrated below, the 4-phase process is incremental. It requires time and commitment. The hardest gap to bridge is that between WHAT and SO WHAT. The Township has done that, and has gone full circle.

Convening for Action in Langley: “Technical teams input to long-range planning,” stated Stephen Richardson. “There is a constant feedback loop. We raise the bar each time through an iterative process. This strengthens standards of practice. The continual enhancements are reflected in our neighbourhood plans.

“The structure is set up to support good ideas of an integrated nature so that staff can flourish in the work environment. It is a team approach. Staff share and learn from each other.”

1. WHAT is the issue?

The form of land development impacts how water is used, how water runs off the land, and how water reaches streams

2. SO WHAT can be done?

Influence practitioners to ‘design with nature’



4. THEN WHAT?

Replicate and adapt in other neighbourhoods

3. NOW WHAT can we do?

Embrace share responsibility, learn by doing and establish precedents

Green Approaches to Neighbourhood Development

The New Normal

The 'blue link' in the photo below is the new drainage standard in Langley. It replaces the traditional curb-and-gutter detail for all but arterial roadways. The **blue link** is symbolic of the transformational change which has taken root in the Township over the past decade-and-a-half as **designing with nature** has become the 'new normal'.



Yolanda Leung

Landscape Design
Coordinator,
Green Infrastructure
Services Department

"There has been an evolution in our thinking and in our approach as successive neighbourhoods have been developed."

*"In the beginning, our focus for Green Infrastructure was on what we could achieve within **greenways**. Then our attention turned to **rain gardens**. Building on a history of successes, we are now implementing what the Township describes as **blue links**."*



Manage Neighbourhoods within a Drainage System Context

Green Infrastructure Services, as one of three departments within the Development Services section of the Community Development Division, is responsible for rain garden implementation through the development approval process.



Al Neufeld

Manager
Parks Administration,
Design & Development

“Green Infrastructure Services had its genesis in parks and open space design.

“Splitting the function and creating a dedicated group within Community Development meant we could focus on innovation regarding green approaches to neighbourhood development.”

Neighbourhood Technical Teams: Because Al Neufeld was involved in the early stages of rain garden implementation and establishment of the Green Infrastructure Services department, he has an informed perspective on how green infrastructure has evolved in Langley to become the Township’s standard practice:

“Langley is planning neighbourhoods based on catchment areas. This means managing each as a system,” emphasized Al Neufeld in an interview.

“Green Infrastructure Services promotes, encourages and provides for the translation of broad goals and objectives as outlined in the municipality’s Sustainability Charter, to practical applications as part of development proposals.

“Through the community and neighbourhood planning process, multidisciplinary teams collaborate in Neighbourhood Technical Teams to integrate the landscape architecture, planning and engineering perspectives. The site-specific designs are reviewed for coordination by all three departments within the Community Services section.”

Learn by Doing & Adapt: “To date (from May 2006 to October 2016), an estimated 3100 lineal metres of rain gardens have been handed over from developers for maintenance by the Township of Langley and by property owners that front rain gardens,” reported Yolanda Leung.

“Many more hundreds of metres of rain gardens are under design and under construction. We are learning by doing. In this way, we refine expectations for the finished product. The designs are more refined and the level of coordination for rain garden design and construction has improved.

“A driver for this ongoing evolution is the incorporation of habitat compensation for the fisheries resource.”

Representative Rain Gardens

68A Avenue
cul-de-sac



208A Street
near 69A Avenue



206 Street
near 69 Avenue



Whole-System, Water Balance Approach

Protecting Langley's Groundwater

The Township has a strategy to deal with a host of issues and challenges that impact on the sustainability of its groundwater supply, including:

- Increasing population and intensification of land use
- Growing demand on water resources
- Highly vulnerable aquifers
- Dropping groundwater levels
- Dropping baseflow levels
- A changing climate & a new normal of extremes

Demonstrate How to Implement

This part of the Langley storyline focusses on the overall context for integration of multidisciplinary perspectives and implementation of green approaches to neighbourhood development. Briefly:

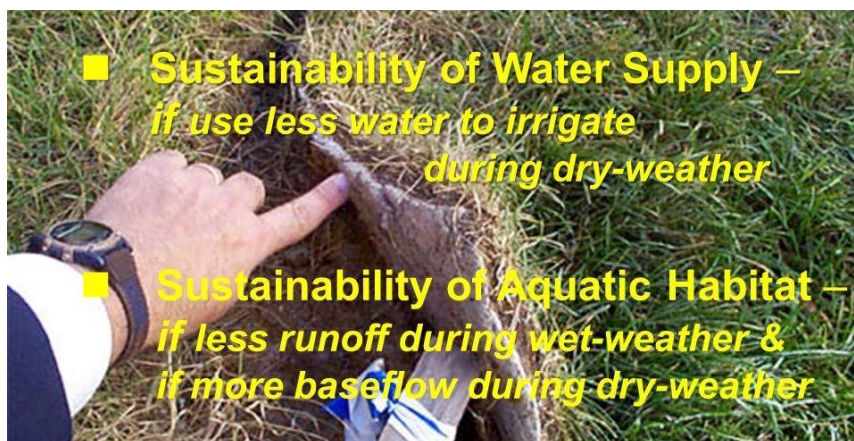
- In 2002, *Stormwater Planning: A Guidebook for British Columbia* established a new direction for drainage engineering. This is known as the Whole-System, Water Balance Approach.
- As the last 15 years show, it is a multi-year process to develop and evolve methodologies and tools, create educational resources, and establish on-the-ground precedents to support **the transition to science-based practice.**

Throughout this period, the Township has established important precedents that demonstrate how to implement the Whole-System, Water Balance Approach. Sharing this experience would inform implementation of science-based changes in practice in other parts of the Georgia Basin and beyond.

Function of Soil: The showcasing event featured Township innovation in green development and groundwater protection. The graphic below illustrates how soil connects the two. **A key message is that the Whole-System, Water Balance way-of-thinking encompasses both the drainage and water supply functions.**

Connect the Dots:

Soil depth is a water management tool. Soil is the interface between rainwater and drought management. Soil is a sponge that absorbs water when it rains. And when there is no rain, the soil sponge supports plant growth plus the horizontal movement of water via the interflow system to streams.





Jim Dumont

“Langley is unique in that DFO (Department of Fisheries & Oceans) approved the water balance strategy at a neighbourhood scale for each of Routley, Yorkson and Northeast Gordon.

“This meant that design standards were applied uniformly across each neighbourhood. This was a time-saver for everyone. The approach resulted in consistency of implementation.

“The online Water Balance Express, a tool for use by homeowners, is a natural progression of this experience. The tool would enable easier implementation of water balance requirements.”

Jim Dumont is the engineer of record for the Routley, Yorkson and Northeast Gordon water balance implementation plans

Leaders by Example

The Township was an early adopter of the Guidebook philosophy, and was one of the first municipalities to apply the **Water Balance Methodology**. The methodology provides the technical foundation for the Whole-System, Water Balance Approach. In 2005, the Township became a partner in the Water Balance Model initiative.

Three neighbourhoods in the Willoughby Development Area - Routley, Yorkson and Northeast Gordon Estates - established successive provincial precedents that informed the evolution of the Water Balance Methodology.

Green Infrastructure Precedents: Each neighbourhood features a different innovation in order to ‘design with nature’:

- **Routley:** A multi-purpose greenway and shallow infiltration systems on individual properties.
- **Yorkson:** A third-pipe system for roof drainage connects to a sand filtration treatment system, with provision for future deep-well injection for aquifer recharge.
- **North East Gordon Estates:** Truly ‘green’ streets!

These three neighbourhoods allowed the Township to *learn by doing and adapt*. Staff continue to build on this early experience.

Water Balance Methodology: As understanding has grown, the Water Balance Methodology has evolved; and this is reflected in the successive rainwater management plans for the Routley, Yorkson and Northeast Gordon neighbourhoods.

In 2003, Routley showed that something could be done to protect the fisheries resource. The Routley experience demonstrated how to reduce rainwater runoff volume. It pre-dated East Clayton in Surrey. **Routley was the first application of the Water Balance Methodology in its original form** as laid out in the Guidebook.

Yorkson was the first application of the Water Balance Methodology **as it evolved after 2003 to incorporate flow-duration**. This is important because the critical parameter for stream stability is the number of hours per year of erosion-causing streamflow rates. The flow-duration relationship is the cornerstone of the methodology.

Looking Ahead

Cathedral Thinking

The Township has created a working environment which has resulted in a *culture of doing* that supports champions and encourages innovation. “Our success belongs to everyone,” stated Yolanda Leung.

“The dual role played by Ramin Seifi is an essential ingredient in our success,” stressed Stephen Richardson. “As General Manager for both engineering and community development, Ramin enables organizational integration, horizontally and vertically.”

Stephen’s perspective is echoed by Kevin Larsen, Manager for Water Resources and Environment. He too reports directly to Ramin Seifi. “The dual portfolio is a good thing. This works better than having separate general managers.”

A Conversation with Ramin Seifi: “A presentation many years ago by UBC professor Patrick Condon put me on the path to integration. Patrick’s storytelling made me realize that everything we do has an effect somewhere else,” recalled Ramin Seifi.

“What Patrick Condon said in his presentation was eye-opening and oh so impactful. Patrick inspired me to think about HOW we could integrate departments and disciplines in order to have a holistic view of our community; and then, HOW to implement a vision that would be self-fulfilling and self-sustaining over time.”

Cathedral Thinking



We can learn from our ancestors.

The builders of great cathedrals in medieval times thought in terms of multiple generations carrying out their work, to complete a dream that would not be realised until long after the originator’s death.

The foundation for Cathedral Thinking:

A far-reaching vision, a well-thought-out blueprint, and a shared commitment to long-term implementation



Growth is a Driver for Integration:

“At an average rate of between 2.5% and 3% per year, the Township is the fastest growing municipality in the Metro Vancouver region. As currently projected, Langley’s population could potentially double within the next 30 years.”

“While exciting, this rapid rate of growth creates ongoing challenges in trying to mimic nature when we are developing new neighbourhoods.

*“We have learned from our past experiences, as we implement new measures, and the Township is still very much on the **Harmony & Integration** path.*

“It will take decades for this way of thinking to be instinctive and accepted by everyone in the community, not just the development industry and Township staff.”

Ramin Seifi
July 2017

Making the Case for Integration: Ramin Seifi is an integrator. He has been with the Township since 2000.

“When Colin Wright retired in 2011, our Chief Administrative Officer listened when I presented the case for doing both jobs. The Township needed more integration to respond to the demands on infrastructure and the risks to the environment resulting from rapid population growth. Achieving integration depended on the Township having a better structure,” explained Ramin Seifi.

“A benefit in having a single individual responsible for both the engineering and community development portfolios is that I do not have to argue with myself to get buy-in for implementing a necessary change in standard practice,” chuckled Ramin.

“Replacement of curb-and-gutter with a **blue link** rain garden is a perfect illustration of integration in action. Everyone could see that it made sense. Because I could see the need from all angles, I said to staff **‘just do it’**. Integration helps everyone get it.”



Going Beyond Staff: “The adaptive process for implementing green infrastructure is ongoing. Each time we learn. We strive to find better ways to mimic nature and protect the natural water balance in Langley’s watersheds,” continued Ramin Seifi.

“But the public does not see integration. This means the next step is to educate the community as a whole so that everyone understands the importance of green infrastructure and protecting the water cycle. Buy-in has to be from everyone.

“Time is of the essence to get buy-in, especially with the population currently projected to double. People are attracted to Langley because it is a *community of choice*. **Protecting the natural values that make Langley attractive underscores the importance of going beyond staff to inform and educate homeowners.** Achieving this outcome will require that we go door-to door.

“The Township’s Subdivision Control Bylaw has been updated over the past 10 years. The tree replacement requirement is a notable addition and illustrates the educational goal. We will be successful when homeowners understand the need for and the benefits of trees, and will therefore value them,” concluded Ramin Seifi.

Sustainable Watershed Systems, through Asset Management



Kevin Larsen, P.Eng.

Manager, Water
Resources & Environment
Engineering Division

“An example of whole-system thinking is our approach to detention ponds. We are not just detaining water. This is but one component. There are multiple aspects including environment, operational considerations, and community amenities.”

“Whole –system thinking is part of our culture,” stated Kevin Larsen. As Manager, Water Resources and Environment, his engineering responsibilities encompass all aspects of the water cycle vis-à-vis planning and constructing municipal infrastructure. His scope of work includes waterworks, sewerage and drainage. During the interview, he provided examples of whole-system thinking.

“Water Resources and Environment staff interact with the Green Infrastructure group on development applications. A major focus, however, is to ensure water supply for our growing population. The more that we can reduce water use during the summer when use increases by 50%, the more we can defer engineered infrastructure to be more sustainable and save considerable dollars.

“As for a changing climate, and considering the ‘new normal’ of alternating floods and droughts, the Water Resources and Environment department is in the front lines.”

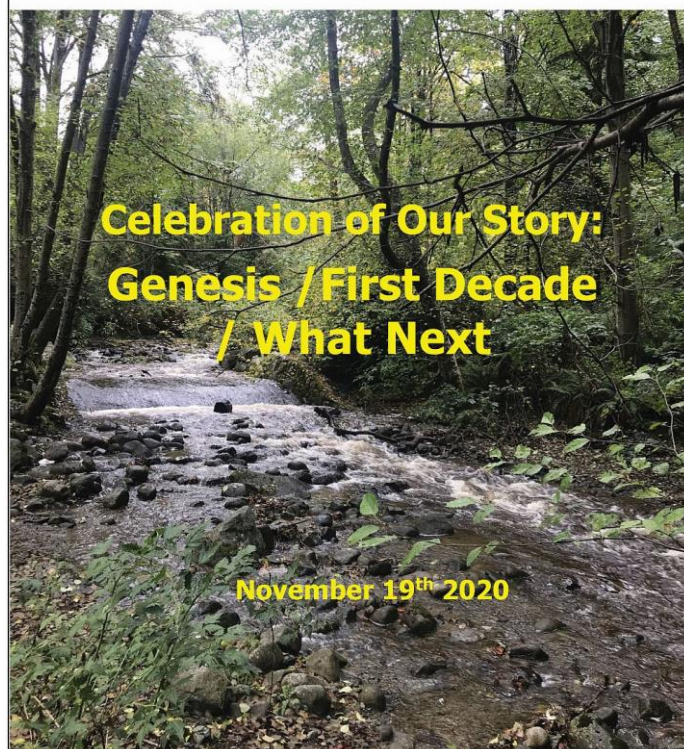
Watersheds as infrastructure assets: Asset management has traditionally been about hard engineered assets such as waterlines, sanitary and storm sewers. Kevin Larsen recognizes that watershed systems are also “infrastructure assets”.

“The Township is implementing a life-cycle approach to valuing and managing our hard engineered assets,” stated Kevin Larsen.

A future next step would be to extend the life-cycle approach to include valuation of the services provided by watershed systems. Given its record of water balance and green infrastructure innovation, Langley is poised to make the transition to integration of natural assets thinking and climate adaptation in Asset Management.



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.



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