

The Story of the 2009 Penticton Forum: Smart Planning & Living Water Smart

Making Green Choices to Create Liveable Communities & Protect Stream Health



The Story of the Penticton Forum Held at the 2009 BCWWA Annual Conference

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Preface

This consolidated document comprises the set of six stories that have been published on the Water Bucket website to foreshadow what participants can expect at the **Penticton Forum.** The following challenge provides context for advancing a 'regional team approach' on April 29, 2009:

☐ How do we align our efforts at three scales – provincial, regional and local – to do business differently, prepare communities for change, and choose to be water smart?

The Forum is an adjunct to the annual conference of the BC Water & Waste Association (BCWWA); and is co-hosted by three provincial Ministries (Environment, Community Development, and Agriculture & Lands), the Okanagan Basin Water Board, and the BCWWA Water Sustainability Committee.



The Forum Explained

- On March 6th: Story #1 titled Smart Planning & Living Water Smart: Approaches & Tools for Doing Business Differently in BC described the scope of each module in order to foreshadow what to expect.
- On March 13th: Story #2 titled Doing Business Differently - Convening for Action in the Georgia Basin elaborated on how a 'regional team approach' is being advanced on Vancouver Island and in Metro Vancouver to establish consistent expectations when making 'green choices'.
- On March 20th: Story #3 titled Doing Business Differently Convening for Action in the Okanagan explained what it means to have a clear vision, what is possible when the vision is shared, and how 'convening for action' is taking place in the Okanagan.
- On March 27th: Story #4 titled Creating Our Future: Sustainability by Design & The Natural City Vision foreshadowed the 'bookend roles' that Patrick Condon and Vic Derman will play in setting the context and providing a blueprint for action, respectively.
- On April 3rd: Story #5 titled Creating Our Future: Today's Expectations are Tomorrow's Standards for Living Water Smart provided an overview of the provincial policy framework that enables local governments to design their communities in harmony with water.
- On April 17th: Storey #6 titled Town Hall Sharing: How Will Embracing the Living Water Smart Vision Help Your Community Do Business Differently? foreshadowed how audience interaction will be achieved, and how we can build commitment and motivate British Columbians to want to change.



Smart Planning & Living Water Smart: Approaches & Tools for Doing Business Differently in BC

Penticton Forum showcases partnerships on April 29, 2009



Penticton Forum showcases partnerships on April 29, 2009

Water Bucket Web Story #1 posted March 2009

Convening for Action in British Columbia

How do we align our efforts at three scales – provincial, regional and local – to do business differently, prepare communities for change, and choose to be water smart?

Think and Act Like a Region

The foregoing challenge statement provides context for advancing a 'regional team approach' at the 2009 Annual Conference of the British Columbia Water & Waste Association (BCWWA) on April 29, 2009 in Penticton. The conference theme is:



The Water Sustainability Committee of the BCWWA, three provincial Ministries (Environment, Community Development, and Agriculture & Lands), and the Okanagan Basin Water Board are hosting a forum to showcase how partnerships, collaboration, innovation and integration are helping local governments in three regions make the best choices for sustainable, healthy and vibrant communities.

The 'Penticton Forum' is titled Smart Planning & Living Water Smart: Approaches and Tools for Doing Business Differently in BC. This choice of title reflects and integrates current provincial initiatives.

Forum Program – An Overview

"The Province's Living Water Smart and Green Communities initiatives provide a framework and direction for **convening for action** in the Okanagan, on Vancouver Island and in Metro Vancouver," states **Glen Brown**. He is an Executive Director with the Ministry of Community



Development; and is Chair of the Water Sustainability Committee. "Each regional initiative is developing a vision and road map for achieving settlement in balance with ecology."

"The forum program is organized as four modules, and is built around two themes that are intertwined, namely: 'creating our future' and 'doing business differently'. While each module is stand-alone, they are linked. First, we will define the challenge. Then we will tell the stories of what is already taking place on-theground in the Okanagan and Georgia basins. We will conclude by presenting a blueprint for action."

Smart Planning & Living Water Smart:
Approaches and Tools for Doing Business Differently in BC

- A. Creating Our Future: What Do We Want British Columbia to Look Like?
- B. Doing Business Differently: Convening for Action in the Okanagan
- C. Doing Business Differently:

 Convening for Action in the Georgia Basin
- D. Creating Our Future: The Natural City Vision

Penticton Forum showcases partnerships on April 29, 2009

Water Bucket Web Story #1 posted March 2009

2. Creating Our Future: What Do We Want British Columbia to Look Like?

Module A is the story of the provincial policy framework that is now in place; and how this framework both enables and facilitates 'doing business differently' to create a lasting legacy province-wide. Doing business differently means 'making green choices' and 'living water smart' in order to change the way land is developed and water is used. The two go hand-in-hand.

Creating a lasting legacy means bringing together those who plan and regulate (*local government*), those who build (*developers*), those who provide the legislative framework (*the Province*), those who do research (*universities and colleges*), and those who advocate conservation of resources (*the stewardship sector*).

Living Water Smart

"By living water smart, communities will be more prepared for climate change and their quality of life will be enhanced," states **Lynn Kriwoken**,

Director, Innovation and Planning in the Water Stewardship Division of the Ministry of Environment, and the Province's lead person for delivery of Living Water Smart, BC's Water Plan.



LIVING WATER SMART



B.C.'s Plan to protect and preserve water resources through planning, regulatory change, education, and incentives such as economic instruments and rewards.

Making Green Choices

"A key message in Living Water Smart is that green development makes sense," emphasizes

Lynn Kriwoken. "New thinking about development leads to new benefits. These include more green spaces, more water and fish in the streams, improved community vitality, reduced demand for water, and reduced expenditure on infrastructure."



Patrick Condon, a recognized North American pioneer in applying sustainability principles to achieve smarter and cheaper urban design, will



be provocative in issuing a challenge to act now while there is still time. A decade ago he captured attention with this analogy: the site is to the health of a region what the cell is to the health of the human body.

"This analogy establishes context for explaining the Province's position that 'today's expectations are tomorrow's standards', and how we are leveraging infrastructure funding to encourage changes in behaviour," states **Glen Brown**.

"The Ministry of Community Development has an increasing role in ensuring that local governments are advancing and changing the ways they plan

and design their communities for the better," adds Karen Rothe, the Ministry's Manager for Metro Vancouver and Fraser Valley Growth Strategies. "We are slowly raising the bar for local government; and we are



recognizing the efforts of local governments in achieving design with nature outcomes."

Penticton Forum showcases partnerships on April 29, 2009

Water Bucket Web Story #1 posted March 2009

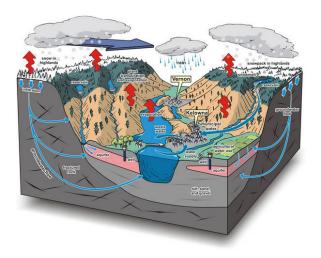
3. Doing Business Differently: Convening for Action in the Okanagan

Module B is the story of steady progress over time to transform the way water is viewed and managed in the Okanagan.

"The 1974 Okanagan Basin Study marks the start of a multi-decade process that ultimately resulted in the Okanagan Sustainable Water Strategy (completed in 2008) and the ongoing Okanagan



Water Supply and Demand Project (initiated in 2005). These efforts, grounded in action, connect the dots between urban, agricultural, and environmental water needs," states Anna Warwick Sears, Executive Director of the Okanagan Basin Water Board.



Tools to Facilitate Conservation

In the intervening period, the 1987 drought was the catalyst for undertaking a comprehensive assessment of the potential for domestic and irrigation water conservation in the Okanagan. Released in 1990, the **Okanagan Demand-Side Management Study** received international recognition; and was the genesis for a sustained commitment by the BC Ministry of Agriculture that has culminated in the recent development of cutting-edge web tools that facilitate efficient irrigation water use.



"Over 85% of the total water supplied to the agricultural and urban sectors in the Okanagan is used for outdoor purposes. This factor has been the driver for development of the **Irrigation**



Water Demand Model and Irrigation Scheduling Calculator. These online tools are designed to tell a compelling story that will influence behaviour at the individual property level, and hence eliminate wasteful water use," explains Ted van der Gulik, Senior Engineer

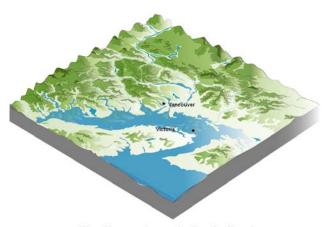
with the Ministry of Agricultural & Lands, and Chair of the Water Balance Model Inter-Governmental Partnership.

Penticton Forum showcases partnerships on April 29, 2009

Water Bucket Web Story #1 posted March 2009

4. Doing Business Differently: Convening for Action in the Georgia Basin

Module C is the story of a Vancouver Island pilot program that is in the process of being adapted to the Metro Vancouver region.



The Upper Georgia Basin Region

Learning Lunch Seminar Series

"Drawing on the experience of engineering and planning managers in local governments, the 2008 Vancouver Island Learning Lunch Series employed provincial guidance

WHAT is an example of water-centric in your company ty?

documents, onthe-ground
examples,
walkabouts, and
town hall sharing
sessions to
stimulate
discussion of
HOW to achieve

water sustainability by implementing green infrastructure policies and practices," reports **Kim Stephens**, Program Coordinator for the **Water Sustainability Action Plan for BC** and seminar team leader.

"Our immediate objective is to foster 'green choices' that will ripple through time, and will be cumulative in creating liveable communities and protecting stream health. We are NOT saying that every community must follow the same formula; what we are saying is that everyone needs to agree on universal values and thereafter each community can reach its goal in its own way."



Penticton Forum showcases partnerships on April 29, 2009

Water Bucket Web Story #1 posted March 2009

Regional Team Approach

Living Water Smart and the Green Communities project provided context that helped frame the learning outcomes for the pilot series in the Cowichan and Comox valleys, respectively.

"The Learning Lunch Seminar Series helped local government representatives conceptualize why a consistent approach to rainwater management and green infrastructure is needed and what it means regionally," continues **Derek Richmond, Manager of Engineering, City of Courtenay**,



and the driving force behind the Comox Valley series.

"This grassroots approach to 'informing and educating' provided a beginning, and expertise

around an issue. This combination started conversations and generated energy and passion to do business differently,"

"Outcomes include inter-departmental collaboration, inter-municipal sharing, and regional alignment. A key message is to view 'planning' not as land-zoning function but as a multi-faceted and iterative process that embraces the concept of truly integrated water-centric planning," concludes Derek Richmond.



Water Balance Model Forums

An outcome of the Cowichan Valley series was the Vancouver Island Water Balance Model Forum, held in October 2008 and hosted by the Cowichan Valley Regional District. "Building on the Vancouver Island experience, the City of Surrey will host the first Metro Vancouver Water Balance Model Forum on March 12, 2009," states Kim Stephens.

Cowichan Valley Forum:

Willing development proponents and their planning/design consultants collaborated with the Water Balance Model team to develop three case study applications that were shared at the Cowichan Valley Forum.











Penticton Forum showcases partnerships on April 29, 2009

Water Bucket Web Story #1 posted March 2009

5. Creating Our Future: The Natural City Vision

Module D is the story of **The Natural City** as told by Vic Derman.



The Natural City is the desired outcome of a layered design process, one that aims to shape and ensure the future wellbeing of an urban region by viewing development and redevelopment opportunities through three lenses: Regional Growth Strategy; Climate Change; and Quality of Life and Place.

3 Lenses to Shape our Region's Future:

The RGS

Climate Change

Quality of Life and Place

Vic Derman's key message is that Quality of Life and Place BC's is competitive advantage; thus, it is in our best interests to create a legacy for future generations whereby settlement is in balance with ecology. He has defined a set of ten principles that provide a planning framework for The Natural City. One of these is a 'design with nature' way-ofthinking and acting.

Vic Derman is a visionary elected representative from Vancouver Island; and is well-versed in a water-centric way of thinking. In his blueprint for action, Vic Derman describes how conventional approaches to urban design could be readily modified to meet the goals of the *The Natural City*.





Doing Business Differently:

Convening for Action in the Georgia Basin

Penticton Forum showcases regional team approach on April 29, 2009



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

Convening for Action in British Columbia

How do we align our efforts at three scales provincial, regional and local - to do business differently, prepare communities for change, and choose to be water smart?

Think and Act Like a Region

Province's **Living** Water and Green Communities initiatives provide a framework and direction for convening for action in the Okanagan, on Vancouver Island and in Metro Vancouver. Each regional initiative is developing a vision and road map for doing business differently in order to change the way that land is developed and water is used.

Three provincial Ministries (Environment, Community Development, and Agriculture & Lands), the Okanagan Basin Water Board, and the Water Sustainability Committee of BC Water & Waste Association (BCWWA) are hosting a forum in Penticton on April 29 as an adjunct to the BCWWA Annual Conference.



1. Forum Program -An Overview

"The forum program is organized as four modules, and is built around two themes that are intertwined, namely: 'creating our future' and 'doing business differently'. While each module is stand-alone, they are linked," states Glen Brown. He is an Executive Director with the Ministry of Community Development; and is Chair of the Water Sustainability Committee.



"First, we will define the challenge. Then we will tell the stories of what is already taking place onthe-ground in the Okanagan and Georgia basins. We will conclude by presenting a blueprint for action."

"Regional leaders will elaborate on new approaches and tools that are changing the way land is developed so that we can achieve water sustainability."

The Story of the Penticton Forum

"This is the second in a series of stories leading up to the Forum, explains Kim Stephens, Program Coordinator for the Water Sustainability Action Plan for British Columbia. "Their purpose progressively connect the dots foreshadow what participants can expect on April 29th."



"This Story #2 describes how a regional team approach is being advanced on Vancouver Island and in Metro Vancouver to establish consistent expectations when making green choices."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

2. Doing Business Differently in the Georgia Basin

Released in 2004, the *Water Sustainability Action Plan for British Columbia* is sponsored by the Province and supports the *Living Water Smart* and *Green Communities* initiatives. Action Plan elements are being delivered by BCWWA through partnerships and regional pilot programs. Over the past three years, Action Plan efforts have been concentrated in the Georgia Basin – that is, on Vancouver Island and in Metro Vancouver.



Tools and Education

"The Water Sustainability Action Plan comprises inter-connected program elements that give local governments and practitioners the tools and experience to better manage land and water resources," explains Kim Stephens. "Examples of tools developed under the umbrella of the Action Plan include the Water Balance Model and the Water Bucket Website."

"Through outreach and education, the guiding vision is to influence land and water practitioners to learn about and use practices that better balance the necessary relationships of settlement activity and ecological assets in local and regional landscapes. The pilot 2008 Vancouver Island Learning Lunch Seminar Series is an example of a precedent-setting approach to informing and educating local government and private sector practitioners."

Convening for Action

In Module C, the trio of Robert Hicks, Michael Tanner and Derek Richmond will combine to tell the story of *Convening for Action in the Georgia Basin* and set the scene for a town hall sharing session: What is your green infrastructure story?

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Robert Hicks, a Senior Engineer with Metro Vancouver, will start by explaining the genesis for the Water Balance Model in 2001. "In a nutshell, the region needed a tool that would enable regulators and designers to quantify and evaluate how we can reduce our hydrologic footprint. Furthermore, the tool needed to be interactive and able to quickly generate scenario comparisons."

Then **Michael Tanner**, Chair of the Water Bucket Website Partnership, will briefly elaborate on the communications strategy that is keyed to news releases complete with embedded links to web stories. "This approach is proving very effective in raising awareness of the Water Balance Model and informing practitioners about the purpose and scope of the Learning Lunch Series."

Derek Richmond, Manager of Engineering with the City of Courtenay, will conclude the presentation segment by describing how "the Learning Lunch Series has helped Vancouver Island local governments advance a regional team approach to rainwater management and green infrastructure."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

3. Genesis of the Water Balance Model

"The genesis of the water balance methodology development was **UniverCity**, the sustainable community being built adjacent to Simon Fraser University atop Burnaby Mountain in Metro Vancouver," states **Kim Stephens**.

"In the year 2000, translating high expectations for this 'green' development into practical design guidelines meant revisiting accepted drainage engineering practice; this need for innovation eventually led to development of the web-based Water Balance Model."

The Early History

"In 2001 the **Stormwater Interagency Liaison Group** (SILG), a technical committee of the Greater Vancouver Regional District, recognized



the value of the water balance approach and funded the development of a working model to assess the affordability and feasibility of site design solutions for achieving performance targets," continues **Robert Hicks**.

"The results of this applied research were then incorporated as Chapters 6, 7 and 8 in **Stormwater Planning: A Guidebook for British Columbia**, released by the Province in June 2002. This guidance document, founded on BC case study experience, formalized a science-based understanding to set performance targets for reducing rainwater runoff volumes."

"In July 2002 the Inter-Governmental Partnership was formed to develop the Water Balance Model as an extension of the Guidebook. The IGP began as a subgroup of SILG and quickly expanded to become a provincial group with municipal representation from four regions: Greater Vancouver, the Fraser Valley, Vancouver Island and the Okanagan Valley."

Innovation & Success on the Ground

"British Columbia is recognized internationally as a leader in implementing a natural systems approach to rainwater management in the urban environment. In many ways, that recognition is an outcome of the trail-blazing efforts of SILG at the beginning of this decade," states **Ted van der Gulik, IGP Chair**.



after receiving the Premier's Award for Innovation & Excellence for the 'new' Water Balance Model

"The efforts of SILG in championing research and innovation made possible to develop the tools and promote the applications that helped overcome and fear doubt in

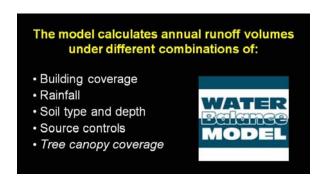
Metro Vancouver, and begin doing business differently. This enabled landmark projects such as UniverCity and the **East Clayton Sustainable Community** to get off the ground."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

4. Water Balance Model & Beyond the Guidebook

"The Vancouver Island Learning Lunch Series provided a timely opportunity to introduce Vancouver Island municipalities to the latest version of the web-based Water Balance Model," states Kim Stephens.



Performance Targets

"In 2003, we developed the first-generation Water Balance Model as an extension of the Stormwater Planning Guidebook to promote rainwater management and 'green' development practices at the site scale," reports **Ted van der Gulik**, **Chair of the BC Inter-Governmental Partnership**.



"As of 2008, the Water Balance Model web interface has been integrated with the QUALHYMO hydrologic which engine was developed for the Ontario Ministry of Environment in the 1980s. Because the 'new' Water Balance Model has considerably enhanced

simulation capabilities, this now enables local governments to establish science-based watershed targets for rainwater runoff capture."

The New Business As Usual

"The new Water Balance Model underpins **Beyond the Guidebook: The New Business As Usual**," adds **Kim Stephens**. "The integrated tool is unique, bridges engineering and planning, and links the site to the stream and watershed."

"The Beyond the Guidebook methodology enables us to correlate green infrastructure effectiveness in protecting stream health."

"We are using the slogan **The New Business As Usual** to convey the message that, for change to really occur, practices that until now have been viewed as the exception must become the norm

moving forward. We have to build regulatory models and develop models of practice and expertise to support *The New Business As Usual*," stated **Dale Wall**, **Deputy Minister**



when he announced the change-over to the new Water Balance Model at the Gaining Ground Summit.



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

5. Premier's Award for Innovation and Excellence

"The Premier's Awards are an annual opportunity to publicly recognize the extraordinary



accomplishments of the men and women who have chosen public service as their career," said Premier Gordon Campbell on February 5, 2009 at

an awards ceremony where the Water Balance Model received the *Premier's Award for Innovation and Excellence*.

The Story of the Water Balance Model

The Premier's Office has produced a 2-minute video that features Ted van der Gulik and Kim Stephens telling the story of what the tool means for British Columbia.

"The Water Balance Model is a means to an end," states **Ted van der Gulik**. "The challenge that we have been posing since 2002 is this: What do we want this province to look like in 50 years and beyond?"

"The Water Balance Model is a tool that will help us create our future," adds **Kim Stephens**. "To get to the big picture, it starts with the smallest pieces. The Water Balance Model links the site to the stream to the watershed."



Premier Gordon Campbell with the award-winning Water Balance Model

One-on-One with the Premier

At the conclusion of the awards ceremony, the Premier sought out Ted van der Gulik. This created an opportunity for an extended conversation.

"As we talked, it became clear to me that WATER is high on the Premier's agenda. He has a strong grasp of water-related issues and the long-term implications if we do not start doing business differently in BC. In a nutshell, he gets it."

"The Premier expressed his personal commitment to making a difference because we have an obligation and a responsibility to act on behalf



of our children and our grand-children so that we leave them with a legacy."

"On the matter of the Living Water Smart initiative, I came away from our conversation with a strong conviction that Premier Campbell means what he says,

and says what he means about the province-wide importance of implementing BC's Water Plan. High-level recognition of the Water Balance Model is reassuring... because the model is a key tool underpinning Living Water Smart," concludes **Ted van der Gulik**.

"During the current climate of financial uncertainty, it becomes that much more important to stay on

mission vis-à-vis rainwater management and areen infrastructure solutions that protect quality of life," adds Kim Stephens. "In terms of the longterm vision for BC, and as the Premier emphasized in his speech from the heart, now is the time to be preparing for economic recovery that is truly based on making green choices."



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

6. Water Bucket Website

"Launched in 2005, the waterbucket.ca website is the key to the communications strategy for the Water Sustainability Action Plan," states **Michael**



Tanner, Chair of the Water Bucket Partnership. "The website is designed to provide the complete story on integrated land and water management – why, what, where and how."



Water Bucket Vision

"The vision for the website has been to provide a resource rich, highly interactive 'destination location' for information and communication related to water sustainability in British Columbia. By providing universal access to information we believe we will see improved standards in all aspects of land development and water resource management."

Communities-of-Interest

"The website comprises a family of 'communitiesof-interest', or COIs, that provide a ready-made platform for advancing a 'design with nature' approach to community development. COIs that correspond to elements of the Water Sustainability Action Plan include:

- Convening for Action
- Water-Centric Planning
- Green Infrastructure
- Rainwater Management

These COIs provide local governments with a sustainability lens through which they can view their plans and planning activities. Our long-term vision is that *communities-of-interest* will evolve into *communities-of-practice*."

Informing and Educating

"The Water Bucket is designed in a magazine style to appeal to specific target audiences. The menu dropdowns within each COI create the 'storyline' and supporting themes. Because we have the Water Bucket, we can record our history even as we are creating it," explains Mike Tanner.

"Over the past two years, Vancouver Island has been the Action Plan pilot region for a bottom-up approach to informing and educating municipal planners, engineers and others. The experience gained through this process has demonstrated the valuable role that Water Bucket plays in delivering information and sharing lessons learned."

"We have found it extremely effective to publish news-style stories that create interest in Action Plan programs and events. Our experience is that the use of photos and images is engaging; and attributing quotes to individuals in a conversational style has more impact than dry technical writing."

"Water Bucket stories establish expectations about program curricula and event outcomes. To get the word out, we work with our partners to craft email-type news releases that are complete with embedded links. We are finding that these news releases are taking on a life of their own," concludes Michael Tanner.



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

7. What is a Regional Team Approach?

Vancouver Island is the pilot region for a precedentsetting approach to regional team-building. "Through programs such as the Vancouver Island Learning Lunch Seminar Series, we are informing and educating those who influence or impact how land is developed and water is used," reports Kim Stephens.

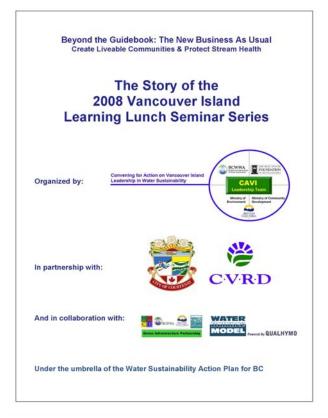


Partnerships and Collaboration

"A regional team approach is founded on broad and inclusive partnerships and collaboration that reach for the common goal of sustainability. In short, we have set our sights on the *common good* and challenge the old barriers of jurisdictional interests. To achieve the *common good*, this requires bringing together:

- Local government those who plan and regulate land use;
- ✓ Developers those who build;
- ✓ The Province those who provide the legislative framework;
- Universities and colleges those who provide research; and
- ✓ The stewardship sector those who
 advocate conservation of resources."

"To get to the big picture, it starts with the smallest pieces. Hence, the Convening for Action team is advancing a regional team approach that aligns local actions with provincial policy goals, in particular those defined in the Living Water Smart guidance document," concludes Kim Stephens.



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

8. Vancouver Island Learning Lunch Seminar Series

The Learning Lunch Seminar Series refers to and uses a number of currently available guidance documents and/or tools, in particular Beyond the Guidebook: Context for Rainwater Management and Green Infrastructure in British Columbia.

Beyond the Guidebook builds on the science-based foundation provided by **Stormwater Planning: A Guidebook for British Columbia**, published in 2002, and incorporates lessons learned over the past six years in moving from planning to action.

When it was published in 2002, the Guidebook ...

- Provided
 - Direction
 - Science-based principles and objectives
 - Guidance on how to do integrated planning
- · Introduced these core concepts:
- Rainfall spectrum
- The "retain, detain, convey" integrated strategy
- Water balance methodology
- Performance targets
- A "learn by doing" framework

Guidebook Legacy

"After six years, one of the lessons learned is the



need for a program that will ensure province-wide consistency in understanding of approaches and desired outcomes," observes **Peter Law (Ministry of Environment)**, Chair of the Stormwater Guidebook Steering Committee.

"Hence, a premise underpinning the Learning Lunch Seminar Series is that this consistency is best achieved by taking a continuing education program into the places where local government practitioners work."

Seminar Genesis and Design

"When we came up with the Learning Lunch idea, our objectives and expectations were quite modest," reports **John Finnie**, General Manager of Water & Wastewater Services, Regional District of Nanaimo (and Chair of CAVI – Convening for Action on Vancouver Island.



"We wanted to explore a collaborative approach that we believed would help local governments make informed land development decisions that meet multiple objectives."

"Initially we were thinking in terms of a small group setting...perhaps 12 to 15 people drawn from the various departments within a willing local government. We wanted to bring together engineers, planners, building inspectors and bylaw enforcement officers; and we wanted the focus to be on aligning efforts to implement effective green infrastructure."

"The idea resonated, so much so that the original inter-departmental concept quickly mushroomed into an inter-governmental concept. The Cowichan Valley Regional District and City of Courtenay both volunteered to host a regional seminar series, in part because of the opportunity to play a leadership role provincially."

"Each series comprised a set of three seminars. By spreading the curriculum over three sessions, this enables participants to take in new information, reflect on it, blend it with their own experience, test it, and eventually apply it in making decisions. In terms of the actual curriculum design, it was a matter of drawing upon a number of provincial guidance documents and making them interesting and relevant to a mixed audience."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

Overview of Series Outcomes

The Learning Lunch Seminar Series helped local government representatives conceptualize why a consistent approach to rainwater management and green infrastructure is needed and what it means regionally.

Cowichan Valley Series:

For Kate Miller, Manager Regional Environmental Policy Division at the Cowichan Valley Regional



District, the series provided an opportunity to develop a policy framework for the valley. "It meant that we could foster an informed dialogue that would ultimately lead to adoption of a set of tools for implementing green infrastructure region-wide."

As an outcome of the series, Cowichan Valley local governments proceeded with the Cowichan Valley Water Balance Model Forum in October 2008. Three willing development proponents and their planning/design consultants were invited to develop case study applications of the Water Balance Model, a web-based tool for evaluating how to achieve runoff-based performance targets.

"The case studies were shared at the Forum in order to help build a common understanding. This educational approach is helping Cowichan Valley local governments identify and empower a core group of local champions who will then have the expertise to apply and advance the water balance approach to land development."









Comox Valley Series:

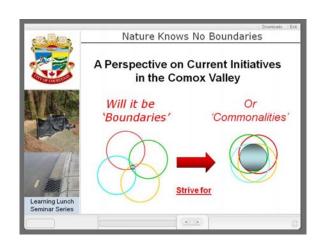
"Our challenge is to work around and with boundaries," says **Derek Richmond**, **Manager of Engineering** for the City of Courtenay.



"Ideally, we would like to shift the paradigm from boundaries to areas of commonality." For Derek Richmond, the series has provided the springboard for bottom-up regional

action in the Comox Valley to communicate, cooperate, collaborate and coordinate.

An example is the Millard/Piercy Gaps Analysis Project, which has evolved from a simple regulatory gaps analysis to a regional pilot that will inform watershed-based land use planning across jurisdictions. "The current process has the Comox Valley Land Trust collaborating with regional and municipal planners, engineers and elected representatives to develop a new way of doing business in the Comox Valley."



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

9. Convening for Action in Metro Vancouver

How do we simultaneously work together as staff within a municipality and as a region AND externally with developers and other private sector players, to ensure we implement sustainable approaches to development?







Water Balance Model Forum

The above challenge statement provided context for advancing a 'regional team approach' at the **Metro Vancouver Water Balance Model Forum** on March 12, 2009. Hosted by the City of Surrey, this learning event was co-sponsored by the **Inter-Governmental Partnership** and the **Green Infrastructure Partnership**.

The Forum was designed to start a dialogue between policy-makers and project implementers. To that end, the Forum program was built around the *HOW question* as it pertains to green infrastructure: HOW will the City of Surrey ensure it gets built right; HOW will a consistent regional approach be achieved in Metro Vancouver?

Living Water Smart & Making Green Choices to Create Liveable Communities & Protect Stream Health

- Morning Session:
 - Green Infrastructure in the City of Surrey: "Getting it built right"
- Afternoon Session:
 - Alignment of Regional Actions with Provincial Goals and Objectives

Alignment with Provincial Goals

"The Surrey Forum was designed to achieve multiple objectives in accordance with the policy framework developed by the Province in Living Water Smart, BC's Water Plan, states Ted van der Gulik, IGP Chair. "In particular, we explored



ways that regulators and designers can apply the Water Balance Model to facilitate implementation of green infrastructure solutions that achieve two objectives: create liveable communities and protect stream health."

"Our vision is that the Forum will be the catalyst for additional regional forums that would be organized in collaboration with Metro Vancouver's Stormwater Interagency Liaison Group. One of our goals is to implement an educational program that would be modelled on the Vancouver Island Learning Lunch Seminar Series."

Creating Our Future

"We see the Forum as providing an opportunity to generate positive energy in the region. In particular, the Forum will inform the actions identified in the rainwater/stormwater component

of Metro Vancouver's updated Liquid Waste Management Plan," states Ray Fung, Chair of the Green Infrastructure Partnership. "We believe this is where the opportunity for implementing a regional team approach resides."



"Once we know what we want our watersheds and neighbourhoods to look like, the next step is to decide what the tools are that will get us there," concludes Vincent Lalonde, General Manager (Engineering) with the City of Surrey. "All of us



....whether we are regulators, developers or designersneed to understand and care about the goal if we are to create the future that we all want."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #2 posted March 2009

10. Rewarding Good Behaviour

"Living Water Smart is a provincial strategy; we must look at it as a shared responsibility," sums up **Glen Brown**, **Executive Director**, Local Government



Infrastructure and Finance Division of the Ministry of Community Development.

"Actually, it is not one strategy; the Province has a number of strategies, including the Green Communities Project and the

Climate Action Plan. The Province is looking at raising the bar as far as what we are trying to accomplish with standards, provincial legislation and infrastructure grant programs."

LIVING WATER SMART

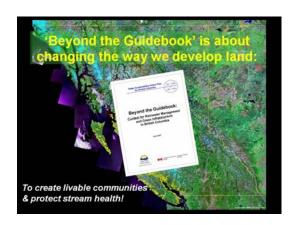


B.C.'s Plan to protect and preserve water resources through planning, regulatory change, education, and incentives such as economic instruments and rewards.

How We Develop Land

"We really have to look at how we develop land. Ultimately this requires leadership and champions on the ground. The message is that the Province is rewarding good behaviour."

"Beyond the Guidebook is an on-the-ground application of Living Water Smart. It helps focus the attention of local governments and the development community on what is an achievable outcome that makes sense, and results in net environmental benefits at a watershed scale."





Doing Business Differently:

Convening for Action in the Okanagan

Penticton Forum showcases regional team approach on April 29, 2009



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

Convening for Action in British Columbia

How do we align our efforts at three scales – provincial, regional and local – to do business differently, prepare communities for change, and choose to be water smart?

Three provincial Ministries (Environment, Community Development, and Agriculture & Lands), the Okanagan Basin Water Board, and the Water Sustainability Committee of the BC Water & Waste Association (BCWWA) are hosting a forum in Penticton on April 29 as an adjunct to the BCWWA Annual Conference.



Regional Initiatives

The Province's Living Water Smart and Green Communities initiatives provide a framework and direction for convening for action in the Okanagan, on Vancouver Island and in Metro Vancouver. Each regional initiative is developing a vision and road map for doing business differently in order to change the way that land is developed and water is used.

Forum Program – An Overview

"This is the third in a series of stories leading up to the Forum, explains **Kim Stephens**, Program Coordinator for the **Water Sustainability Action Plan for British Columbia**. "Their purpose is to progressively connect the dots and foreshadow

what participants can expect on April 29th."

"This Story #3 explains what it means to have a clear vision, what is possible when the vision is shared, and how 'convening for action' is taking place in the Okanagan."



New Approaches and Tools

"The forum program is organized as four modules, and is built around two themes that are intertwined, namely: 'creating our future' and 'doing business differently'. While each module is stand-alone, they are linked," states **Glen Brown**. He is an Executive Director with the Ministry of Community Development; and is Chair of the Water Sustainability Committee.



"First, we will define the challenge. Then we will tell the stories of what is already taking place on-the-ground in the Okanagan and Georgia basins. We will conclude by presenting a blueprint for action."

"Regional leaders will elaborate on new approaches and tools that are changing the way land is developed so that we can achieve water sustainability."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

2. Doing Business Differently in the Okanagan

Completed in late 2008, the Okanagan Sustainable Water Strategy seeks to ensure



water resources are managed in a broader sustainability framework – working towards a future for the Okanagan where water quality or quantity does not compromise human health and wellbeing, the environment, or the economy.

"The Sustainable Water Strategy is designed to

build on the 1974 Okanagan Basin Study, a joint Federal/Provincial initiative to develop a comprehensive plan for the development and management of water resources in the Basin. The 1974 study is the only Basin-wide study completed to date for the Okanagan," states Anna Warwick Sears, Executive Director of the Okanagan Basin Water Board.

Framework for Grounded Action

"A subsequent Basin-wide study of surface water and groundwater resources – the **Okanagan Water Supply and Demand Project** – was

initiated in 2004 and is expected to be completed in late 2009. Once complete, it will be complementary to the Sustainable Water Strategy. The Strategy articulates the vision and provides direction whereas the Supply and Demand Project



provides the data needed to develop and implement strong water management practices."

"The Sustainable Water Strategy is grounded in action. Twelve high-level **Guiding Principles** for water management and policy provide a framework for the Strategy. The key action items in the Strategy were developed respecting these Guiding Principles."

Convening for Action

In Module B, Anna Warwick Sears and Ted van der Gulik will tell the story of *Convening for Action in the Okanagan* and thereby set the scene for a town hall sharing session: *What does 'Living Water Smart' Now Mean to You?*

Smart Planning & Living Water Smart: Approaches and Tools for Doing Business Differently in BC

- A. Creating Our Future:
 What Do We Want British Columbia to Look Like?
- B. Doing Business Differently: Convening for Action in the Okanagan
- C. Doing Business Differently: Convening for Action in the Georgia Basin
- D. Creating Our Future: The Natural City Vision

Anna Warwick Sears will start by providing an Okanagan context for implementing **Living Water Smart**, **BCs Water Plan**. She will connect the dots between Living Water Smart and the Okanagan Sustainable Water Strategy.

Then **Ted van der Gulik**, **Senior Engineer** with the Ministry of Agricultural & Lands, will demonstrate two online tools that are intended to influence behaviour at the individual property level: **Irrigation Water Demand Model** and **Irrigation Scheduling Calculator**.

LIVING WATER SMART



B.C.'s Plan to protect and preserve water resources through planning, regulatory change, education, and incentives such as economic instruments and rewards.

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

3. Convening for Action Explained

"The Penticton Forum is organized under the umbrella of the Water Sustainability Action Plan. This is a partnership umbrella for an array of onthe-ground initiatives that promote a 'water-centric' approach to community planning and development," explains **Kim Stephens**. "The Action Plan program elements that give local governments and practitioners the tools and experience that will enable them to better manage land and water resources."

A Made in BC Approach

"The BCWWA Water Sustainability Committee is the managing partner and is responsible for Action Plan program delivery," states **Raymond Fung**, **Past-Chair**. "Convening for Action is our mantra.



When we gather, it is for a purpose. There must be an action item or an outcome. Our aim is to move from talk to action by developing tools, building capacity, and providing training."

"Since 2004, Convening for Action in British Columbia has evolved into a 'made in BC' approach and process for moving from awareness to action. The Convening for Action vision is that water sustainability in British Columbia will be achieved through implementation of green infrastructure policies, practices and standards."

When 'convening for action', we create a picture of the future that we want:

- Vision: What British Columbia will look like in 50 years
 ~WHAT~
- Goal: Implement the New Business As Usual

~SO WHAT~

 Strategy: What we are going to do better or differently to get from here to there ~NOW WHAT~

Okanagan Genesis

"Convening for Action in British Columbia was formally launched at the Okanagan Conference on the Future for Water, held in Kelowna in February 2005. Our participation in this regional event provided the first opportunity to publicly unveil the What-SoWhat-NowWhat mind-map. It also enabled us to present the vision for Water OUT = Water IN," reports Kim Stephens.

"The Kelowna Conference was followed by the Penticton Water OUT = Water IN Workshop in April 2005, the first event to be organized under the Convening for Action banner. The workshop was an important first step in



changing the way practitioners approach water supply planning. We introduced a number of key concepts that we continue to build upon."

It Started in the South Okanagan:

"Commencing in October 2005, the Action Plan

partnered with the Regional District of Okanagan-Similkameen to undertake the first Convening for Action pilot at a subregional scale. The South Okanagan Regional Growth Strategy established a provincial precedent in that the strategy is water-centric.



The innovation is the toolkit that follows policy, and which leads to benchmarking and monitoring / measuring what matters."

"Commencing in September 2006, we then applied the experience gained and the lessons learned in the South Okanagan to successfully implement **Convening for Action on Vancouver Island**. Branded as CAVI, this 3-year pilot program is facilitating change at a regional scale."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

4. What 'Convening for Action in the Okanagan' Means

"In the Okanagan, we are 'convening for action' at four levels to facilitate valley-wide change," states Anna Warwick Sears. She identifies these levels as follows:

- 1. Inter-jurisdictional elected officials convening as Okanagan Basin Water Board (OBWB) directors
- 2. Key partner positions that have been added to the Board
- 3. The Okanagan Water Stewardship Council
- 4. The way the OBWB does business

"The Convening for Action concept can be expanded to encompass all our activities," continues Anna



Warwick Sears. "The Okanagan Basin Water Board is the hub for people to convene around when the topic is water. Our mandate is to communicate and coordinate. In the are process, we tapping into a huge reservoir of volunteers. This is what creates the energy, the will and the momentum to business differently in the valley."

"The OBWB does not

have regulatory authority, but has taxation powers to support its activities, the only example of its kind in the province. Because everyone in the watershed contributes, we focus on projects where everybody benefits."

Okanagan Basin Water Board

The Okanagan Basin Water Board (OBWB) was established in 1969 to provide leadership for defining and solving water resource problems in the valley.

"The OBWB is a unique form of inter-regional government," explains Anna Warwick Sears. "The OBWB was designated to implement the recommendations of the 1974 Okanagan Basin Study, and to take on a range of responsibilities for Basin water management."



"Our jurisdiction is defined by the geographic borders of the Okanagan Basin rather than political boundaries. In 2006, the OBWB took on a Water Management Initiative and a more active leadership role in the valley. This brought the OBWB closer to its original 1969 mandate."

Board of Directors:

Nine of the twelve Directors are elected officials appointed by the three Okanagan regional districts, and (since 2006) the Okanagan Nation Alliance, the Water Supply Association of BC, and the Okanagan Water Stewardship Council each appoint an additional Director.

"From the 'convening for action' perspective, the OBWB provides a forum for the member local governments to address regional service delivery matters and issues: and to collaborate with key stakeholders in determining how best to do business differently in order to create our future."



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

Okanagan Water Stewardship Council

"The Okanagan Water Stewardship Council was established in 2006 as part of the Water Management Initiative, but authority to convene an advisory Liaison Committee dates back to the 1970s," states the **Hon. Tom Siddon, Chair**. "The

goal of forming the Council was to capitalize on local water expertise and improve long-term decision making. The Council is a broad-based body of water stakeholder groups and technical experts that provides independent advice and policy recommendations to support sustainable water management."



"The Council's Vision is that the Basin will have clean and healthy water in sufficient abundance to support the Okanagan's natural ecosystems, agricultural lands and high quality of life for perpetuity," adds **Ted van der Gulik, Vice-Chair**.

"Accurate, up-to-date water information and scientific knowledge will support regional community and Water will planning. be managed in a spirit of cooperation, and a valley-wide ethic of conservation will create a lasting legacy of sustainable water resources for future generations."



Okanagan Sustainable Water Strategy:

The Okanagan Sustainable Water Strategy was developed by the Council. "This document sets out a long range vision and twelve Guiding Principles to manage water, in both quantity and quality, for decades to come," continues **Dr. Tom Siddon**. "The Council has devoted several thousands of hours over the past thirty months in preparation of this important work. Our findings, conclusions, and recommended Actions are based on a remarkable degree of consensus among all participants."

Guiding Values when Convening for Action:

Five guiding values provide a framework within which the Okanagan Water Stewardship Council evaluates specific water management policies or proposals, and when convening for action:

Okanagan Water Stewardship Council Guiding Values

- 1. Think Regionally and Think Long-Term
- 2. Protect Nature for the Benefit of All
- 3. Anticipate Change Plan Accordingly
- 4. Balance Multiple Priorities
- 5. Practice Clear and Open Communication

"The Council, comprised of more than two dozen water management experts, representatives of user groups, and concerned community leaders, has tendrils that extend throughout the Okanagan Valley community," observes **Anna Warwick Sears**. "Council products include a shared understanding of issues and concerns. This understanding is then fed back to the Water Board."

Collaborative Governance

"When you think about it, the story of *Convening* for Action in the Okanagan is really about putting collaborative governance to work. At all levels of

convening, we are actively and proactively undertaking collaboration for action," reflects Anna Warwick Sears. "In short, 'convening for action' equals the synergy that results when the whole is greater than the sum of the parts."



"The shared problems in the Okanagan are not radical. They are fundamental things that everyone agrees on, in particular protecting quality of life. The way the OBWB does business is collaborative. Through our grant programs, we are able to maximize partnerships; and in turn increase the convening of the community by bringing together the resources to make things happen."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

5. Shift from Supply-Side to Demand-Side Management

"I was raised in the Okanagan on an orchard and as a youngster I remember the summers being very hot and dry. As a young boy my job was to change the sprinklers every evening and I remember marvelling how irrigation could convert the dry landscape into lush green orchards,"

recalls Ted van der Gulik. "The valley was very rural and except for a few small cities it seemed that orchards, vinevards and the lakes defined the valley, much like what citizens want to define the valley today. as



world seemed a much simpler place then, where climate change was a storm passing through and competition for water was getting your favourite spot on the beach."

"But times change and the burgeoning development taking place in the valley, both for urban growth and agricultural production requires that we assess how we are going to manage water. A water strategy needs to take into account ecological, domestic and agricultural needs and consider the impacts of a changing climate on the region's hydrology. The Okanagan Sustainable Water Strategy starts the process and has been developed with input from many professionals. To achieve fruition, the plan will need a coordinated effort from law makers and practitioners and buy in from residents to ensure that changes are made on the ground."

"It is important to remember that the Okanagan Valley is a headwater region and all we have to work with is the moisture that falls from the sky, which makes this strategy imperative. We cannot get water from anywhere else."

Legacy of the 1987 Drought

"In 1987, a drought resulted in an unprecedented province-wide test of the capacities of water supply sources to provide for existing regional populations. This raised concerns regarding the possible consequences of continued growth in the Okanagan, Greater Vancouver and elsewhere," continues **Ted van der Gulik**. "The 1987 drought followed a relatively benign period of almost half a century, and is one of the most extreme on record."

"The legacy of the 1987 drought was to trigger two landmark water resource studies in 1988, one for Greater Vancouver and the other for the Okanagan. These focused attention on the need for a water conservation strategy for British Columbia. The urgency of this need was further underscored by the severity of conditions in 1992."

"In 1988, my Ministry and the Association of BC Irrigation Districts commissioned a comprehensive study that assessed the potential for water conservation in the Okanagan Valley. The study was finalized in early 1990, with the objective that it would be the catalyst for moving from a supply-side to demand-side management way of doing business. For the last two decades we have been systematically building on that foundation to change the way we supply and use water."



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

Okanagan Agricultural Strategy

"The 1990 report was the genesis for development of an **Okanagan Agricultural Strategy** that took shape over the following 15 years," explains Ted van der Gulik. "Over 85% of the total Okanagan water supply is used for outdoor purposes in the



urban and agricultural sectors. Because agricultural irrigation accounts for more than 70% of total water use, it holds the key to a water balance strategy which revolves around how water is applied to the land."

"Over the years, two questions have shaped my thinking and my Ministry's approach to developing practical tools. First, how will we preserve water for agriculture while meeting other needs; and secondly, how can agriculture become more water efficient? To answer these questions, we need to be able to monitor water use and report out."

Universal Metering of Water Use:

"The 1990 study led to the *Okanagan Valley Meter Demonstration Program*. This helped to create early momentum for universal water metering and a change in Okanagan water use practices. By 2004, the **National Water Supply Expansion Program for Agriculture** provided a source of funding for implementation of universal agricultural metering with willing Okanagan municipalities and irrigation districts."



Water Requirements Reporting:

The Ministry of Agriculture has collaborated with Okanagan communities to implement a GIS-based land-use information system:

- The strategy is founded on a water balance way-of-thinking.
- The outcome is a database that covers the entire Okanagan Basin.
- The goal is to know what is happening on the ground, property-by-property.
- The system means farmers can make informed decisions on how to manage their irrigation systems properly to save water.
- The result is a planning tool that benefits both the agricultural and urban sectors.

"The pilot for this program was the Southeast Kelowna Irrigation District (SEKID), the first Okanagan jurisdiction to implement universal agricultural metering after experiencing repeated water shortages during the period 1987 though 1992," continues **Ted van der Gulik**.

"The combination of universal metering plus a land use database means a comprehensive *Water Requirements Report* can be generated for each property. This compares property-specific needs with actual metered use and water use on other properties that have the same soil conditions, crop types and irrigation systems."



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

6. Online Tools Facilitate Efficient Water Use

At the Penticton Forum in April 2009, the unifying theme for the presentation by Ted van der Gulik will be "this is how we can and will use webbased tools to generate answers that will help us influence behaviour on the ground." The desired outcome is agricultural water use efficiency.

Irrigation Scheduling Calculator

"The first web-based tool that we developed to change the way we apply water to the land was the Landscape Irrigation Scheduling Calculator." states Ted van der Gulik. "The first-



generation version was completed in 2005. This tool helps turf designers and managers determine when and how much to irrigate. The Calculator is integrated with climate information. It can also be used by residential homeowners to achieve more efficient outdoor water use."

"The calculator will provide the irrigator with the number of days to water, the irrigation run time for each day and the maximum run time per cycle."

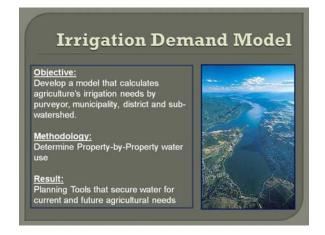
"The Calculator has undergone a major upgrade, and now has the same type of web interface as the **Water Balance Model**. It has both landscape and agricultural applications. At the Penticton Forum, I will be doing a live online demonstration."



Irrigation Water Demand Model

"A key message is that the Okanagan does not have as much water as in the past, and this is happening more often than not," states **Ted van der Gulik**. "Warming trends means there is less snowpack in the uplands to re-fill water storage reservoirs; at the same time, the annual rainfall is decreasing. Another key message is that the combination of uncertainty and risk due to climate change is driving the need to use water more wisely and efficiently."

"Yet agriculture will need more water in future, mainly because of a longer growing season due to a warmer climate. It was for this reason that in 2005 the Ministry launched its water balance approach to the Agricultural Component of the Okanagan Water Supply and Demand Project."



"The Irrigation Demand Model utilizes GIS and a 500 m x 500 m climate grid – 32,000 grid cells in total. The model calculates daily water use on a polygon basis and adds up polygons to determine water demand for each property. Climate Change scenarios enable the model to calculate present and future water demands in each grid."

"The Okanagan Irrigation Management Tool links the Demand Model and meter information to provide farmers with an online tool that they can access to compare actual versus theoretical water use. This provides them with an informed basis for improving their water management practices."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

7. Moving Forward

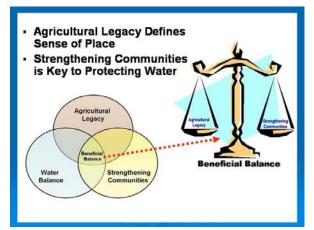
"Looking back, the lasting significance of our Convening for Action presentation at the 2005 Kelowna Conference is that it crystallized two core principles that represented a major evolution in thinking:

- Improve water use efficiency in the agricultural sector to adapt to climate variability and/or expand irrigated farmland.
- Improve water use efficiency in the nonagricultural sector to support population growth in the urban centres.

"Until 2005, it was widely assumed that agricultural water savings could simply be used to support population growth. But what was the incentive for the farmer to reduce water use? There is a strong reluctance in the agricultural sector to conserve if the water savings are to be allocated to other water users. By reaching consensus on the two core principles, this has provided a pathway forward. These principles were subsequently adapted and incorporated in the **South Okanagan Regional Growth Strategy**," reports **Ted van der Gulik**.

Achieving the 'Beneficial Balance'

The South Okanagan pilot produced the graphic below to help Okanagan communities visualize how to address challenging priorities for land and water. The three circles represent core concepts that emerged from the discussion of settlement, economic growth and water supply pressures.



One-on-One with the Premier

Ted van der Gulik is also Chair of the Inter-Governmental Partnership that developed and maintains the Water Balance Model. In February 2009, this web-based tool received the *Premier's Award for Innovation and Excellence*. At the conclusion of the awards ceremony, the Premier and Ted van der Gulik had a lengthy conversation.

Living Water Smart:

"As we talked, it became clear to me that WATER is high on the Premier's agenda. He has a strong grasp of water-related issues and the long-term implications if we do not start doing business differently in BC. In a nutshell, he gets it."

"The Premier clearly understands that the Okanagan is the 'canary in the coal mine' from a water resource management perspective. The



Okanagan is the region of BC most likely to be impacted by climate change. This is due to the changing hydrology, from snowpack-based to rainfall-based.

"The Premier expressed his personal commitment to making a difference because we have an obligation and a

responsibility to act on behalf of our children and our grand-children so that we achieve the *beneficial balance* and leave them with a legacy."

"On the matter of the Living Water Smart initiative, I came away from our conversation with a strong conviction that Premier Campbell means what he says about the province-wide importance of implementing BC's Water Plan," concludes **Ted van der Gulik**.

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #3 about the Penticton Forum posted March 2009

imagine our farms and ranches



Have enough water to irrigate their crops and only use efficient irrigation methods

Grow Crops suited to our soils and climate

Preserve the top soil to absorb and retain water and, where possible, use reclaimed water

Have healthy streams flowing through them with their valuable stream banks (riparian zones) TESTOTED with the help of the local community

Keep farm animals out of waterways

Use fertilizers, pesticides, and compost properly to take care of our SOIlS and Water

Capture and clean the $\Gamma U\Pi$ Off from farmyards before it reaches the creek



- reproduced from Living Water Smart, page 29



Creating Our Future: Sustainability by Design & The Natural City Vision

Penticton Forum showcases regional team approach on April 29, 2009



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

Convening for Action in British Columbia

How do we align our efforts at three scales – provincial, regional and local – to do business differently, prepare communities for change, and choose to be water smart?

"This is the fourth in a weekly series of stories leading up to the Penticton Forum on April 29,"

explains Kim Stephens. Program Coordinator for the Water Sustainability Action Plan for British Columbia. "Their purpose is to progressively connect the dots and foreshadow participants from the Okanagan, Metro Vancouver, Vancouver Island and elsewhere can expect when they convene for action."



"This Story #4 foreshadows the 'book-end' roles that **Patrick Condon** and **Vic Derman** will play in setting the context and providing a blueprint for action, respectively."

The Forum is an adjunct to the annual conference of the BC Water & Waste Association (BCWWA); and is co-hosted by three provincial Ministries (Environment, Community Development, and Agriculture & Lands), the Okanagan Basin Water Board, and the BCWWA Water Sustainability Committee.



1. Forum Program – An Overview

The Province's Living Water Smart and Green Communities initiatives provide a framework and direction for convening for action in the Okanagan, on Vancouver Island and in Metro Vancouver. Each regional initiative is developing a vision and road map for doing business differently in order to change the way that land is developed and water is used.

New Approaches and Tools

"The forum program is organized as four modules, and is built around approaches and tools for

achieving truly green development. While each module is stand-alone, they are linked," states **Glen Brown**. He is an Executive Director with the Ministry of Community Development; and is Chair of the Water Sustainability Committee.



"Our vision is that the Penticton Forum will be a transformational event that inspires people to do better. We are showcasing how partnerships, collaboration, innovation and integration are helping local governments in three regions make the best choices for living water smart."

Smart Planning & Living Water Smart:
Approaches and Tools for Doing Business Differently in BC

- A. Creating Our Future: What Do We Want British Columbia to Look Like?
- B. Doing Business Differently: Convening for Action in the Okanagan
- C. Doing Business Differently: Convening for Action in the Georgia Basin
- D. Creating Our Future: The Natural City Vision

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

2. Making Green Choices

"A key message in Living Water Smart is that green development makes sense," emphasizes

Lynn Kriwoken, Director, Innovation and Planning in the Water Stewardship Division of the Ministry of Environment. Lynn Kriwoken is the Province's lead person for delivery of the Living Water Smart program.



"New thinking about development leads to new benefits. These include more green spaces, more water and fish in the streams, improved community vitality, reduced demand for water, and reduced expenditure on infrastructure."

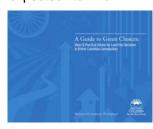
A Guide to Green Choices

"To help local governments continue the extensive work they are already doing in fostering green communities, the Ministry of Community Development has developed A Guide to Green

Choices to provide practical advice and ideas in making land use decisions," states Karen Rothe, the Ministry's Manager for Metro Vancouver and Fraser Valley Growth Strategies.



"Released in September 2008, this Guide is expected to work in tandem with many other



provincial programs and projects already underway, including Living Water Smart, the BC Climate Action Plan and the Water Sustainability Action Plan."

"The Ministry of Community Development is about innovation and integration, and making it real. The other piece of importance to the Ministry is providing communities with the tools to ensure the right development in the right place at the right time," concludes Karen Rothe.

Community Development

"The Forum program is designed such that Module Nos. 1 and 4 are planning-centric because the focus is on how we design communities; whereas Nos. 2 and 3 are engineering-centric to the extent that the emphasis is on tools and their application to change the way land is developed and water is used," states **Kim Stephens**.

Two Sustainability Champions:

"Because the conference theme is **Working Together** – **Encompassing Communities**, we have invited two respected and visionary British Columbians to share their *sustainable community development* stories with Forum participants."

"We anticipate that the audience will be inspired when they hear about the on-the-ground initiatives that **Patrick Condon** and **Vic Derman** are spearheading," continues Kim Stephens.

"Patrick is a well-grounded academic who is the driving force behind the **Design Centre for Sustainability** at the University of BC; he will be provocative in kicking-off the Forum with a call to action. Vic will close the Forum with a politician's pragmatic perspective on how to adapt the existing regulatory process to achieve a paradigm-shift in urban design. He calls this **The Natural City**."



Patrick Condon (University of British Columbia) "Sustainability by Design"



Vic Derman (District of Saanich Councillor) "The Natural City"

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

3. Creating Our Future: Sustainability by Design

"Patrick Condon is a recognized North American pioneer in applying sustainability principles to achieve smarter and cheaper urban design," states Kim Stephens. "Patrick was instrumental in establishing the highly successful Smart Growth on the Ground charrettes with Smart Growth BC. A decade ago he captured attention with this analogy: the site is to the health of a region what the cell is to the health of the human body."



Province's Perspective

"This analogy establishes context for explaining the Province's position that 'today's expectations are tomorrow's standards', and how we are leveraging infrastructure funding to encourage changes in behaviour," states **Glen Brown**.

"The Ministry of Community Development has an increasing role in ensuring that local governments are advancing and changing the ways they plan and design their communities for the better. We are slowly raising the bar to achieve design with nature outcomes," adds Karen Rothe.

About Patrick Condon

Professor Patrick Condon has over 25 years experience in sustainable urban design; first as a professional city planner and then as a teacher. He started his academic career in 1985 at the University of Minnesota, moving to the University of British Columbia in 1992, acting first as the Director of the Landscape Architecture program



and later as the James Taylor Chair in Landcape and Livable Environments.

Patrick Condon is now a senior researcher with the UBC Design Centre for Sustainability, an urban design think tank that

evolved from the original efforts of the Chair and now employs over a dozen researchers.

Design Charrettes:

As James Tailor Chair, he pioneered multi-party sustainable community design workshops now generally known as *charrettes*, starting in 1995 with the seminal **Sustainable Urban Landscapes Surrey Design Charrette**.

Since that time Patrick Condon has worked to advance sustainable urban design in dozens of major charrettes, and scores of publications. He has lectured widely in both Canada and abroad, and is the author of several books, most recently **Design Charrettes for Sustainable Communities**, Island Press.

He is currently focused on the **Sustainability by Design** project, a vision for a sustainable Metro Vancouver region with a population of 4 million.

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

What Would a Sustainable Metro Vancouver Look Like In 2050?

"How will Metro Vancouver accommodate a doubling of the population to 4 million? How will housing, jobs, and transportation be designed, delivered, and distributed? And how are we to do this and still have our aggregate contribution to global warming decline, even as our population doubles? The **Sustainability by Design** project attempts to answer these questions by drawing a literal picture of what a sustainable region might look like," states **Patrick Condon**.

"The goal of this project is: to galvanize support for a sustainable region – among citizens, elected officials, government staff, the NGO sector, real estate professionals, and the broader population of community advocates."

"We seek to satisfy the need for a clear picture, currently absent in the minds of our citizens and decision makers, of what a sustainable region of 4 million might actually look like. Without an image of what it looks like, it is not surprising that citizens and decision makers don't know how to build it."



Sustainability by Design Purpose:

"The SxD purpose is *synthesis*," continues **Patrick Condon**. "This means we will take what we know and bring it together to create a realistic vision for Metro Vancouver in 2050."

"The SxD special skill, challenge and mission is to understand what all the lenses might look like....and make it real. This will make it immensely powerful and concrete."

"By showing people what a sustainable region would look like, we can then understand how we can get from today to tomorrow."

2006 Regional Design Charrette:

"In 2006, Metro Vancouver hosted the United Nations World Urban Forum. This provided us with an opportunity to establish a unique precedent by undertaking a regional charrette," continues Patrick Condon. "We wanted to show where each and every one of a million new units of housing would go, right down to details of building footprint and set back conditions. The regional charrette provided the test of our working hypothesis – that the site is to the region what the cell is to the body."

"We cut up the region into 5 kilometre by 5 kilometre squares, with the resulting grid of squares overlaying the region without reference to municipal or any other kind of boundary. This allowed us to work with manageable pieces and to treat the region as it should be treated: as cultural, economic, and ecological systems extending across the region, with municipal lines exerting little apparent influence on its function."

"We invited 200 skilled practitioners to do the work pro bono all in one day; and they did it! The regional charrette served as a first iteration field test for the SxD project. This has given us the confidence to the move to the next phase, namely the Sustainable Metro Vancouver Region 2050 Design Charrette," concludes Patrick Condon.

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

Sustainable Metro Vancouver Region 2050 Design Charrette

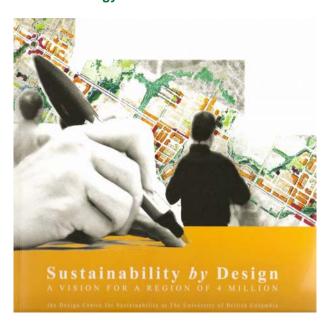
According to Patrick Condon, the **2050 Design Charrette** is an ambitious undertaking. "SxD will use design as a collaborative decision making tool

to generate a 40-year sustainable plan for Metro Vancouver. In addition to a Research Roundtable, the process involves multistakeholder Design Workshops and a Regional Design Charrette."



"Results will include a set of design indicators and sustainability targets, a deeper knowledge base of the constraints to sustainable regional growth, and a 'big map' visual representation of what a sustainable Vancouver region could look like in the year 2050."

"Beyond being a purely academic exercise, Metro Vancouver staff will be participating in the SxD process and will consider the project outcomes as they continue to develop the new **Regional Growth Strategy**."



Research Roundtable Overview:

"The Research Roundtable, as a portion of the larger SxD project, aims to draw together leading local scholars, on-the-ground practitioners from all levels of government, the development community, private firms, infrastructure service providers and non-government organizations to discuss cutting-edge research and real-world problems on a number of key themes that are critical to achieving a sustainable Vancouver region," elaborates **Patrick Condon**.

"Following the core interests of the Design Centre for Sustainability, the Research Roundtable will remain focused on the design of the urban fabric at a regional scale and developing design-based indicators to test the anticipated success of proposed design strategies."

Research Roundtable Themes:

The Sustainable Metro Vancouver Region 2050 Design Charrette will explore regional growth strategies under the six Research Roundtable themes:

- Food:
- Energy;
- Mobility;
- Water:
- Natural Habitat; and
- Economy.

"The underlying goal is to reduce the lag time between research, formulating policy, taking action, and evaluating the results," concludes Patrick Condon.



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

4. Creating Our Future: The Natural City Vision

The Natural City is a transformational document for local government created by Vic Derman. Well-versed in a water-centric way-of-thinking, he is a visionary elected representative from Vancouver Island. A

retired educator, he was one of the founders of The Land Conservancy of British Columbia, and has been on District of Saanich Council since 2002.



Vic Derman chaired the organizing committee and was the driving force behind the highly successful 2006 Water in the City Conference, held in Victoria. He is a Director of the Capital Regional District; and is Vice-Chair of the Capital Region Water Commission.



A Call to Action

In his blueprint for action, Vic Derman points the way to a more sustainable future. "The Natural City challenges traditional approaches and sets the goal of creating a region that is environmentally sustainable, socially equitable and economically sound," he states. Vic Derman calls the project "THE NATURAL CITY" to reflect the dramatic shift in direction it demands.

In the opening paragraph of his treatise, Vic Derman writes that: "Past practices have produced a myriad of outcomes such as loss of open space, environmental degradation and choking congestion that are unsustainable and inconsistent with citizen's hopes and expectations."

He then introduces three lenses to change course and shape the future of an urban region, namely:

- Regional Growth Strategy
- Climate Change
- Quality of Life and Place

"The three 'lenses' are offered as a way to scrutinize and direct the choices we make."

"Collectively, the three lenses bring our future into focus. The picture define they is one of environmental, social and economic sustainability. It portrays a new approach that cannot be accomplished with tinkering and incremental change. Instead, bold and visionary action will be needed."

3 Lenses to Shape our Region's Future:

The RGS

Climate Change

Quality of Life and Place

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

About the Three Lenses

Living Water Smart creates a watercentric vision that responds to this challenge: What we want British Columbia to look like in 50 years and beyond. Achieving the vision depends on the cumulative decisions that British Columbians make now and over time.

The Natural City provides a roadmap for creating the desired future as envisioned in Living Water Smart.

The Natural City is the desired outcome of a layered design process, one that aims to shape and ensure the future wellbeing of an urban region by viewing development and redevelopment opportunities through the three lenses.

Vic Derman's key message is that **Quality of Life and Place** is BC's competitive advantage; thus, it is in our best interests to create a legacy for future generations whereby settlement is in balance with ecology.

Why not build: The World's Most Attractive, Livable and, above all else, Sustainable Medium Sized Urban Area PERIOD! Call it: "THE NATURAL CITY"

Lens #1 - Regional Growth Strategy:

The first lens is the Regional Growth Study (RGS). According to Vic Derman, it has offered a call for local sustainability for some time but leaders have not always listened. Now, he says, we must ask without fail:

"IS THIS CONSISTENT WITH THE FUTURE THE RGS ENVISIONS?"

Lens #2 - Climate Change:

This 'new' issue is the most critical problem of our time and is arguably the greatest threat humanity has faced," writes Vic Derman. "Its potential consequences range from severe to apocalyptic and add a particularly urgent reason to rethink our direction. Everything we do must help to address climate change and address the question:

"DOES THIS HELP TO MEET THE CHALLENGE CLIMATE CHANGE PRESENTS?"

Lens #3 – Quality of Life and Place:

"The third lens centres around our economic future, continues Vic Derman. "It makes the argument that we are in a growing competition for wealth, talent and skill with urban communities around the globe. It also asks: "What advantages do we have in this intensifying competition?" and comes to the conclusion that quality of life and quality of place provide our outstanding edge."

"We must hold on to that 'economic ace' and build on it. Create the world's most attractive, liveable, equitable and sustainable medium sized urban area and we can: guarantee our economic future, contribute to climate change solutions and deal with local sustainability. The synergies are tremendous. Invariably, we must ask:

"WILL THIS ACTION MAINTAIN AND ENHANCE THE QUALITY OF THIS PLACE?"

"The Natural City document offers: additional principles for sustainable development, a list of attributes for our future region and a "turned upside down" design process to help reach our goals. It offers prospects of critical and spectacular results and a vision of hope and promise for a future that begs to be embraced!"

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

Design with Nature

Vic Derman defines a set of ten principles that provide a planning framework for The Natural City. One of these is a 'design with nature' wayof-thinking and acting.

"Integration with nature and minimal interference with the natural environment are at the core of The Natural City," writes Vic Derman. "The urban area must exist with harmoniously the surrounding environment. Key systems should mimic natural processes and integrate with them to the highest degree possible."



Climate Change Adaptation:

The 'design with nature' paradigm captures the essence of climate change adaptation.

"Adaptation is about responding to the changes that will inevitably occur. Adaptation is at the community level and is therefore about collaboration. If we can show how to get the water part right, then other parts are more likely to follow," states Lynn Kriwoken, Ministry of Environment.



A Design Process to Achieve the Vision

Vic Derman advocates application of a layered design demonstrates how conventional approaches to urban design could be modified to meet the goals of **The Natural City**. This process does not differ greatly from traditional approaches with one exception, he emphasizes.

"The usual approach is to acquire land, decide what

will be placed on it, then go about making it sustainable as possible," writes Vic Derman. "The layered approach effectively turns this upside down. Rather than being 'fitted into the project' after key decisions have been made. elements such sustainability, amenity and social equity become the drivers of development outcomes."



"By putting them first, the layered approach has the potential to drive a paradigm-shift in urban design. Like all dramatic shifts, it will meet with resistance and will require strong leadership and commitment to succeed."

"Accomplishing The Natural City will not be easy but the rewards will be worth the effort," concludes Vic Derman. "Getting even close to The Natural City would: fulfill the vision of the Regional Growth Strategy, help meet the challenge of climate change and all but guarantee our future economic success. Can we afford to do anything else?"

The Natural City - A Design Process

- Base Layer Ecological Functionality
- Layer 2 Amenity Layer
- Layer 3 Sustainability Layer
- Layer 4 Social Sustainability Layer
- Layer 5 Development Layer

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #4 about the Penticton Forum posted March 2009

5. What Do We Want British Columbia to Look Like?

"Sustainability by Design and The Natural City are different, yet they are the same," reflects **Kim Stephens**. "Both are underpinned by the premise that we **can** *create our future*; and that to get there, we will need to *do business differently*. These are the intertwined themes for the Penticton Forum."

"Sustainability by Design and The Natural City both draw a picture of 'what this place could look like' if we think and act like a region. Both reflect a philosophy that to get to the big picture, it starts with the smallest pieces."

"A difference between Sustainability by Design

and The Natural City is that the latter is grounded in the hands-on experience of Vic Derman: he is a municipal decision-maker; he knows the regulatory system; and he understands where the process needs to be adapted in order to achieve the desired outcome."



"In summary, the combination of Vic Derman and Patrick Condon is a powerful one.....because their experience and skills are complementary," concludes Kim Stephens.

Living Water Smart

"A provincial policy framework is now in place that enables municipalities to 'do business differently' in order to design their communities to live in harmony with water," states **Lynn Kriwoken**. "By



living water smart, communities will be more prepared for climate change and their quality of life will be enhanced. If we can show how to get the water part right, then other parts are more likely to follow."

Rewarding Good Behaviour

"Living Water Smart, BC's Water Plan is a provincial strategy; we must look at it as a shared responsibility," sums up Glen Brown. "Actually, it



is not one strategy; the Province has a number of strategies, including the Green Communities Project and the Climate Action Plan. The Province is looking at raising the bar as far as what we are trying to accomplish with standards, provincial

legislation and infrastructure grant programs."

LIVING WATER SMART



B.C.'s Plan to protect and preserve water resources through planning, regulatory change, education, and incentives such as economic instruments and rewards.





Creating Our Future: Today's Expectations are Tomorrow's Standards for Living Water Smart

Penticton Forum showcases regional team approach on April 29, 2009



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #5 about the Penticton Forum posted April 2009

Convening for Action in British Columbia

How do we align our efforts at three scales – provincial, regional and local – to do business differently, prepare communities for change, and choose to be water smart?

"This is the fifth in a weekly series of stories leading up to the Penticton Forum on April 29," states **Kim Stephens**, Program Coordinator for the **Water Sustainability Action Plan for British**



Columbia. "Their purpose is to progressively connect the dots and foreshadow what participants from the Okanagan, Metro Vancouver, Vancouver Island and elsewhere can expect when they convene for action."

"This Story #5 provides an overview of the provincial policy framework that enables local governments to design their communities in harmony with water."

The Forum is an adjunct to the annual conference of the BC Water & Waste Association (BCWWA); and is co-hosted by three provincial Ministries (Environment, Community Development, and Agriculture & Lands), the Okanagan Basin Water Board, and the BCWWA Water Sustainability Committee.



Forum Program – An Overview

"The Province's Living Water Smart and Green Communities initiatives provide a framework and direction for convening for action in the Okanagan, on Vancouver Island and in Metro Vancouver," states Glen Brown. He is an Executive Director with the Ministry of Community



Development; and is Chair of the Water Sustainability Committee. "Each regional initiative is developing a vision and road map for doing business differently in order to change the way that land is developed and water is used."

Vision for Living Water Smart

"The forum program is organized as four modules, and is built around approaches and tools for achieving truly green development. While each module is stand-alone, they are linked."

"Our vision is that the Penticton Forum will be a transformational event that inspires people to do better. We are showcasing how **partnerships**, **collaboration**, **innovation** and **integration** are helping local governments in three regions make the best choices for living water smart."

Smart Planning & Living Water Smart: Approaches and Tools for Doing Business Differently in BC

- A. Creating Our Future: What Do We Want British Columbia to Look Like?
- B. Doing Business Differently: Convening for Action in the Okanagan
- C. Doing Business Differently: Convening for Action in the Georgia Basin
- D. Creating Our Future: The Natural City Vision

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #5 about the Penticton Forum posted April 2009

2. Living Water Smart, BC's Water Plan

"A provincial policy framework is now in place that enables municipalities to 'do business differently' in order to design their communities to live in

harmony with water," states Lynn Kriwoken, Director, Innovation and Planning in the Water Stewardship Division of the Ministry of Environment, and the Province's lead person for delivery of Living Water Smart, BC's Water Plan.



LIVING WATER SMART



B.C.'s Plan to protect and preserve water resources through planning, regulatory change, education, and incentives such as economic instruments and rewards.

Climate Change Adaptation

"By living water smart, communities will be more prepared for climate change and their quality of life will be enhanced. If we can show how to get the water part right, then other parts are more likely to follow."

The 'design with nature' paradigm captures the essence of climate change adaptation. "Adaptation is about responding to the changes that will inevitably occur. Adaptation is at the community level and is therefore about collaboration."

Making Green Choices

"A key message in Living Water Smart is that green development makes sense," emphasizes Lynn Kriwoken. "New thinking about development leads to new benefits. These include more green spaces, more water and fish in the streams, improved community vitality, reduced demand for water, and reduced expenditure on infrastructure."

Provincial Plans & Strategies:

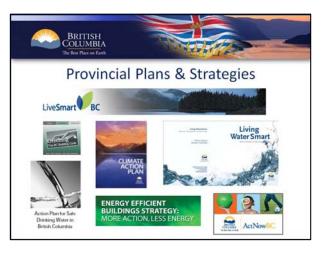
"Living Water Smart is a provincial strategy; we must look at it as a shared responsibility," adds **Glen Brown**. "Actually, it is not one strategy; the



Province has a number of strategies, including the Green Communities Project and the Climate Action Plan. These are the visionary documents that shape the

Ministry of Community Development's grant programs; they provide us with direction as to where the Province wants to go."

"The Province is looking at raising the bar as far as what we are trying to accomplish with standards, provincial legislation and infrastructure grant programs."



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #5 about the Penticton Forum posted April 2009

3. Expectations & Tools for Living Water Smart

More than 40 actions and/or targets are identified in Living Water Smart. Seven are particularly relevant to the Penticton Forum and the desired transformational outcome. These are listed below and are cross-referenced to the three subject areas in the Living Water Smart vision document:

- Doing Business Differently: By 2012, all land and water managers will know what makes a stream healthy, and therefore be able to help land and water users factor in new approaches to securing stream health and the full range of stream benefits (page 43)
- Doing Business Differently: By 2020, overall water use in British Columbia will be 33% more efficient (page 53)
- Doing Business Differently: By 2012, government will require all large water users to measure and report their water use (page 53)
- Preparing Communities for Change: By 2012, new approaches to water management will address the impacts from a changing water cycle, increased drought and risk, and other impacts on water caused by climate change (page 61)
- Preparing Communities for Change: Adapting to climate change and reducing our impact on the environment will be a condition for receiving provincial infrastructure funding (page 63)
- Choosing To Be Water Smart: By 2020, 50% of new municipal water needs will be acquired through conservation (page 75)
- Choosing To Be Water Smart: By 2010, government will mandate purple pipes in new construction for water collection and re-use (page 77)

These actions and targets serve to establish expectations vis-à-vis how land will be developed (or redeveloped) and water will be used.

Tools that Help Achieve Targets

A number of provincial tools have either been developed or are under development to facilitate doing business differently and preparing communities for change, including:

- Water Bucket Website
- Water Balance Model
- Okanagan Irrigation Management Tool
- Irrigation Water Demand Model
- Irrigation Scheduling Calculator
- Water Conservation Calculator

"All tools except the Water Conservation Calculator were profiled in the second and third stories of this series. These tools support new approaches to water management, and will collectively facilitate informed decision-making with respect to climate change adaptation," observes **Kim Stephens** in commenting on how they can be applied on-the-ground by land and water practitioners.

Water Conservation Calculator will be Launched at Penticton Forum

"The Penticton Forum will be the venue for the formal launch of the web-based **Water Conservation Calculator,**" announces Glen Brown. "This tool has been developed by the Ministry of Community Development to support



Development to support the infrastructure grant application process. The Water Conservation Calculator, the Irrigation Scheduling Calculator, and the Water Balance Model are all based on the same web-interface platform."

Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #5 about the Penticton Forum posted April 2009

About the Water Conservation Calculator

"The Water Conservation Calculator is a decision support tool for water purveyors and small local



governments. The webbased calculator can assist in presenting a conservation case to Council and other decision makers," states Liam Edwards, A/Director in

Infrastructure and Engineering Division at the Ministry of Community Development. calculator has evolved from a spreadsheet-tool that the Ministry first pilot-tested with a number of local governments in 2006."

According to Liam Edwards, the key functions the calculator will provide are:

- assistance in decision making around new infrastructure (can illustrate the possibility of capital deferment);
- assistance in more accurately targeting conservation efforts, thereby increasing the cost effectiveness of conservation campaigns:
- providing useful information about the current state of the water service provider's system;
- offering a 'snap shot' of future demands and the positive impacts of conservation on those demands; and
- providing tools and capacity to take positive conservation action.

"Water conservation should be seen as alternative or supplemental to planned infrastructure projects. Conservation is a resource in its own right. It provides safe, clean water that is less costly, and less impactful on the environment than traditional development or upgrade projects. A properly designed conservation program has the ability to extend the life of infrastructure, reduce repair, treatment and power costs, reduce power expenses, and defer or eliminate the need for major capital costs," concludes Liam Edwards.

A Look Beyond

"The vision of the Inter-Governmental Partnership that developed the Water Balance Model is that one day it will be integrated with the Water Conservation Calculator. This would then provide local governments with a web-based, public domain tool that would link the water use and rainwater runoff sides of the water balance equation to land use," predicts Kim Stephens.

"The inspiration for this vision occurred in 2006 when Liam Edwards demonstrated his original

spreadsheet-tool at а meeting with the Town of Oliver. To provide a focus. Tom Szalay, the Town Administrator, had created a simple spreadsheet to compare total water supply need as a function of



development form and density."

"Tom's spreadsheet gave us the idea for adding a front-end land use capability. This would give local governments additional options in assessing how to meet the Living Water Smart targets, in particular the goal that 50% of new municipal water needs will be acquired through conservation, re-use and increased efficiency."

"The point of integration between the Water Balance Model and the Water Conservation Calculator is outdoor water use, which is largely a function of soil type and depth."



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #5 about the Penticton Forum posted April 2009

4. Expectations & Programs for Green Communities

The Green Communities Project encompasses a number of plans and strategies that complement and/or support Living Water Smart. Examples include Smart Planning for Communities and A Guide to Green Choices. Conceptually, the Green Communities Project comprises four areas of activity as shown below:



Smart Planning for Communities

"Smart Planning for Communities is a new BC-wide collaborative initiative to assist local and First Nations governments in addressing their long-term



challenges," reports **Susanne Theurer**, Sustainability Facilitator
and a former local government
planner. "The program recognizes
that a flexible approach is needed
— an approach that allows
communities to build on, enhance
and integrate existing planning
processes while also exploring
innovative tools and frameworks."

"Rather than following a single-agency approach, Smart Planning for Communities calls for collaboration among organizations and teams of people working together to develop and implement integrated strategies for a sustainable future. The program helps to build mutually beneficial partnerships and develop an information-sharing and resource network. The result will be stronger, more vibrant and sustainable communities."

A Guide to Green Choices

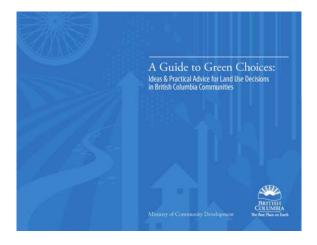
"The Ministry of Community Development is about innovation and integration, and making it real. The other piece of importance to the Ministry is providing communities with the tools

to ensure the right development in the right place at the right time," states **Karen Rothe**, the Ministry's Manager for Metro Vancouver and Fraser Valley Growth Strategies.



"To help local governments continue the extensive work they are already doing in fostering green communities, the Ministry has developed **A Guide to Green Choices** to provide practical advice and ideas in making land use decisions."

"Released in September 2008, this Guide is expected to work in tandem with many other provincial programs and projects already underway, including Living Water Smart, the BC Climate Action Plan, Smart Planning, and the Water Sustainability Action Plan. The Guide helps to establish expectations as to what communities can or should look like," concludes Karen Rothe.



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #5 about the Penticton Forum posted April 2009

Fostering Innovation and Integration

The mandate of the Ministry of Community Development is to foster partnerships, collaboration, innovation and integration through the program elements that comprise the Green Communities Project. The goal is to build capacity that will result in sustainable, healthy and vibrant communities. The continuous process for improvement is illustrated by the graphic below

"Ultimately it is the Ministry's grant programs that provide the incentives that enable the Province to influence behaviour; and reward those who meet program objectives for doing business differently on-the-ground," states **Glen Brown**.



Leveraging Change through Grants

"Integration of legislative goals and strategies with grant programs is achieved through the combination of *Eligibility Requirements, Evaluation Criteria,* and *Conditionality of Contracts,*" explains Glen Brown. "These three items provide the road-map for transitioning from today's expectations to tomorrow's standards. Over time, we are incrementally raising the bar."

"Conditionality of Contracts refers to what we ask local governments to do if they are successful in meeting the Eligibility Requirements and Evaluation Criteria. This is where we establish the clear link to program goals and objectives."



The New Business As Usual:

"We are using the slogan **The New Business As Usual** to convey the message that, for change to really occur, practices that until now have been viewed as the exception must become the norm

moving forward. We have to build regulatory models and develop models of practice and expertise to support *The New Business As Usual*," stated **Dale Wall**,



Deputy Minister when he announced the launch of the new Water Balance Model at the Gaining Ground Summit in May 2008.



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #5 about the Penticton Forum posted April 2009

5. Creating Our Future

"The Penticton Forum is an important milestone in advancing a regional team approach that will align local actions with provincial goals," states **Kim Stephens**.



"In addition to providing British Columbians with a vision and a framework for action, Living Water Smart sets a clear direction. Thus, our purpose in convening for action province-wide is to establish consistent expectations on-the-ground: This is what we want to achieve, and this is how we will get there."

Shared Responsibility

"Our immediate objective in convening the Penticton Forum is to encourage 'green choices' that will ripple through time, and will be cumulative in creating liveable communities, reducing wasteful water use, and protecting stream health. We are NOT saying that every community must follow the same formula; what we are saying is that everyone needs to agree on expectations and how all the players....regulators, developers, designers, etc....will work together, and after that each community can reach its goals in its own way."

"We are in the process of framing a **Responsibility**Matrix that will serve as a decision support tool in effecting change on the ground through the use of policy and legal tools, approved standards. Our focus is on linkages — that is, how people interact and collaborate to achieve community development sustainability goals.

Goal	Party	Tool
ObjectivesSituationsResponsibilities	 Regional Staff or Politicians Municipal Staff or Politicians Private Actors 	LawBylawPolicyProcedureIncentivePenaltySecurity

Creating A Legacy

"To get to the big picture, it starts with the smallest pieces. Thus, the ultimate goal of the Living Water Smart and Green Communities initiatives is to establish expectations that, in turn, will influence the form and function of the built environment."

"Improving the built environment can protect or help restore the natural environment. How we develop or redevelop individual sites has ripple effects at the watershed scale. By designing with nature, this means actions on the ground can result in cumulative benefits over time," concludes Kim Stephens.

Issue: How We Manage Population Growth
Impact: Growth Resulting in Urban Densification (Land Constraints; Smaller Lots)
Sustainability: Means Design with Nature
Built Environment: We Can Improve It
Natural Environment: We Can Protect It
Cumulative Benefits: Accrue Over Time
Outcome: Sustain Community Livability





Town Hall Sharing: How Will Embracing the Living Water Smart Vision Help Your Community Do Business Differently?

Penticton Forum showcases regional team approach on April 29, 2009



Building Bridges and Breaking Barriers - Teamwork for a WaterSmart World

Water Bucket Web Story #6 about the Penticton Forum posted April 2009

Convening for Action in British Columbia

How do we align our efforts at three scales – provincial, regional and local – to do business differently, prepare communities for change, and choose to be water smart?

"The Province's Living Water Smart and Green Communities initiatives provide a framework and direction for convening for action in the Okanagan, on Vancouver Island and in Metro Vancouver," states Glen Brown. He is an Executive Director with the Ministry of Community Development; and is Chair of the BCWWA Water



Sustainability
Committee. "Each
regional initiative is
developing a vision
and road map for doing
business differently in
order to change the
way that land is
developed and water is
used."

These three regional initiatives will be showcased at the Penticton Forum on April 29. The Forum is an adjunct to the annual conference of the BC Water & Waste Association (BCWWA); and is cohosted by three provincial Ministries (Environment, Community Development, and Agriculture & Lands), the Okanagan Basin Water Board, and the Water Sustainability Committee.



Forum Program – An Overview

"This is the sixth and last in a weekly series of stories leading up to the Penticton Forum on April

29," states Kim Stephens, Program Coordinator for the Water Sustainability Action Plan for British Columbia. "These stories connect the dots so that participants will know what to expect when they convene for action in Penticton."



"This Story #6 foreshadows how we will facilitate audience interaction through town hall sharing sessions. In particular, participants are encouraged to reflect on current actions that fulfil the spirit of the **Living Water Smart** vision. We also wish to continue our conversation about mechanisms to build commitment and motivate British Columbians to want change."

"Our vision is that the Penticton Forum will be a transformational event that inspires people to do better. We are showcasing how partnerships, collaboration, innovation and integration are helping local governments in three regions make the best choices for living water smart," states Glen Brown.

The forum program has four modules built around approaches and tools for achieving truly green development. While each module is stand-alone, they are also linked.

Smart Planning & Living Water Smart: Approaches and Tools for Doing Business Differently in BC

- A. Creating Our Future: What Do We Want British Columbia to Look Like?
- B. Doing Business Differently: Convening for Action in the Okanagan
- C. Doing Business Differently: Convening for Action in the Georgia Basin
- D. Facilitating Our Future: The Natural City Vision

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2. Vision for **Living Water Smart**

Living Water Smart, BC's Water Plan is a visionary document that provides a framework for province-wide action. The Province is encouraging local governments to do business differently, prepare communities for change, and choose to be water smart.

To Get to the Big Picture

"By living water smart, communities will be more prepared for climate change and their quality of life



will be enhanced. If we can show how to get the water part right, then other parts are more likely to follow," states Lynn Kriwoken, Director, Innovation and Planning in Water Stewardship Division of the Ministry of Environment. and

Province's lead person for delivery of Living Water Smart.

"To get to the big picture, it starts with the smallest pieces. The ultimate goal of the Living Water Smart and Green Communities initiatives is to establish expectations that will, in turn, influence the form and function of the built environment," adds Kim Stephens. "BCWWA is responding to the Province's call to action by leading, informing, educating and inspiring water practitioners about how to create the change needed."

LIVING WATER SMART



B.C.'s Plan to protect and preserve water resources through planning, regulatory change, education, and incentives such as economic instruments and rewards.

Implementation Themes

"Living Water Smart comprises 45 commitments, which are grouped into five themes," reports Lynn Kriwoken.

Living Water Smart - Implementation Themes

- 1. Governance, legislation, regulatory change
- 2. Efficiency, outreach, public awareness
- 3. Science, information & learning
- 4. Watershed planning & restoration
- 5. Community planning and development

"I applaud and welcome the BCWWA's leadership in playing a key delivery role in two of the five theme areas, namely: community planning development (#5); and efficiency, outreach, public awareness (#2),' concludes Lynn Kriwoken.



"The Penticton Forum combines these two implementation themes, with an emphasis on



community development because it encompasses how land is developed (or redeveloped) and how water is used and valued in our communities." Kim Stephens.

"The Penticton Forum will focus attention on the question of how communities will achieve performance targets identified in Living Water Smart."

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3. Alignment with Living Water Smart Vision

"Living Water Smart provides British Columbians with a vision of what this province can look like if we all work together," states **Daisy Foster, Chief Executive Officer** of the BCWWA. "Experience shows that the challenge is in moving from planning



(talk) to practice (action). This is the gap that the Convening for Action initiative is bridging through an inclusive and collaborative process that brings people together for the common good."

Build a Vision, Create a Legacy

"It is one thing to have a vision; it is another to do what needs to be done to create a lasting legacy. It requires sustained commitment to make things happen. BCWWA views the Penticton Forum as providing a vehicle for promoting commitment to bringing the Living Water Smart vision to fruition."

"The Penticton Forum will start a dialogue about what a formal mechanism for aligning with and committing to **Living Water Smart** might look like; and what role BCWWA will play in collaborating with local governments and local government stakeholders so that our leadership creates a legacy," concludes Daisy Foster.

'Build a Vision, Create a Legacy' means...

- Apply a science-based approach to create a shared vision of achievable goals
- Facilitate a participatory decision process to build stakeholder consensus and agree on expectations
- Obtain commitment from everyone to truly integrate water management with land development practices

Accelerating the Current Momentum

According to Daisy Foster, BCWWA can add value to Living Water Smart delivery by accelerating action with a particular focus on:

- By 2012, all land and water managers will know what makes a stream healthy, and therefore be able to help land and water users factor in new approaches to securing stream health and the full range of stream benefits (p 43 Living Water Smart)
- By 2020, overall water use in British Columbia will be 33% more efficient (p 53 Living Water Smart)

"In 2008, the pilot Vancouver Island Learning Lunch Seminar Series successfully demonstrated how to inform, educate and inspire local government practitioners about making 'green choices' to create liveable communities and protect stream health," reports Kim Stephens. "Building on the Vancouver Island experience, the Penticton Forum will kick-off a process led by BCWWA that will get people thinking about how to *make real* the 2020 objective of 33% more efficient water use."

Building a Vision & Creating a Legacy

- · Issue: How We Manage Population Growth
- Impact: Growth Resulting in Urban Densification
 (Land Constraints; Smaller Lots)
- Sustainability: Means Design with Nature
- Built Environment: We Can Improve It
- Natural Environment: We Can Protect It
- Cumulative Benefits: Accrue Over Time
- · Outcome: Sustain Community Livability

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4. Town Hall Sharing Sessions

"A distinguishing feature of the Penticton Forum will be the audience interaction segment that is part of each module. We are characterizing them as *Town* Hall Sharing Sessions to underscore that we are



going beyond question and answer segments," states Ron Smith, Planning Officer with the Integrated Land Management Bureau, and a member of the Water Sustainability Committee.

Town Hall Mind-Map

According to Ron Smith, the **Living Water Smart** vision will be a unifying theme for the four town hall sharing sessions. He points out that each session is defined by a specific question that is designed to engage participants in a conversation that will evolve over the course of the day:

- Module A: What are the Issues in Your Community?
- Module B: What Does 'Living Water Smart' Now Mean to You?
- Module C: What is Your Green Infrastructure Story?
- Module D: What Will You Do Differently After Today?

"Each Town Hall segment will be preceded by context presentations that are intended to inform and stimulate," observes Ron Smith. "The Forum emphasis is very much about on-the-ground application of new approaches and tools that will achieve Living Water Smart outcomes."



Shared Responsibility

"Coupled with the Living Water Smart vision is a way of doing business that is founded on

shared responsibility. We are in the process of framing a Responsibility Matrix that will focus on linkages – that is, how people interact and collaborate to achieve community sustainability



goals," states **Ted van der Gulik, Chair** of the Inter-Governmental Partnership that developed the **Water Balance Model for British Columbia**.

"The first iteration of a Responsibility Matrix was an outcome of the **Metro Vancouver Water Balance Model Forum**, hosted by the City of Surrey in March 2009."

Goal	Party	Tool
ObjectivesSituationsResponsibilities	Regional Staff or PoliticiansMunicipal Staff or PoliticiansPrivate Actors	LawBylawPolicyProcedureIncentivePenaltySecurity

Effecting Change on the Ground

"As we explained at the Surrey Forum, the purpose of a Responsibility Matrix is to effect change on the ground through the use of policy and legal tools, and approved standards. The underlying premise is that everyone will agree

on expectations and how regulators, developers, designers, etc will work together; and after that each community can reach its goals in its own way. The Penticton



Forum creates a further opportunity to explore what a Responsibility Matrix might mean in the context of the Living Water Smart vision," notes **Karen Rothe.** She represents the Ministry of Community Development on the **Green Infrastructure Partnership**.

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5. Aligning Local Actions with Provincial Goals

"The Penticton Forum program mirrors Living Water Smart in a number of ways," notes **Glen Brown**. "For example, the opening and closing modules speak to the community development



theme that is one of the five implementation themes. Also, the Okanagan and Georgia Basin modules address the water use efficiency and stream health objectives that could form the focus of a Living Water Smart alignment and commitment mechanism."

Metro Vancouver Example

"A key message going into the Penticton Forum relates to the desirability and importance of aligning local actions with provincial goals. Alignment leads to win-win outcomes for communities. In this regard, it is noteworthy that the Metro Vancouver Board recently voted to align its regional planning vision with Living Water Smart and the Green Communities initiatives," continues Glen Brown.

"Metro Vancouver is realigning the goals, strategies and actions in its **Liquid Waste**



Management Plan to keep current with provincial government policies and positions; as well as ensure that Metro Vancouver's and the provincial government's environmental and fiscal objectives and actions are

mutually supportive and successful," writes **Fred Nenninger** (Division Manager, Metro Vancouver Policy & Planning).

"From the Province's perspective, it is gratifying that Metro Vancouver is identifying how its actions support Living Water Smart and Green Communities objectives in a number of areas. This bodes well for voluntary alignment with and commitment to the Living Water Smart vision," concludes **Glen Brown**.

Creating a Legacy

"Living Water Smart provides BC with a vision, a framework for action, and sets a clear direction for achieving specific objectives. The addition of a formal endorsement and alignment mechanism could accelerate the process to build commitment and establish consistent expectations for effecting change on the ground: This is what we want to achieve, and this is how we will get there," summarizes Kim Stephens. "It could also help local governments engage on living water smart actions with their stakeholders."

"Viewed in this context, the Penticton Forum is an important milestone in advancing a regional team



approach that will align local actions with provincial goals. Much is already underway and being done by many players, including BCWWA. Yet we can do even more to add value as we align our collective efforts to bring the stream health and water efficiency objectives in Living Water Smart to fruition."

"Our immediate priority at the Penticton Forum is to encourage 'green choices' that will ripple through time, and will be cumulative in creating liveable communities, reducing wasteful water use, and protecting stream health.

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What will our neighbourhoods look like? We do have choices!

14 units per acre – Will it be 75% Impervious?

14 units per acre – Or will it be 55% Impervious?



