

**Beyond the Guidebook: The New Business As Usual  
Create Liveable Communities & Protect Stream Health**

**Summary Report**  
on  
**Cowichan Valley Water Balance Model Forum**

**October 2008**



Organized under the umbrella of the Water Sustainability Action Plan for British Columbia  
By the Cowichan Valley Regional District and the Water Balance Model Inter-Governmental Partnership  
In collaboration with CAVI – Convening for Action on Vancouver Island and the Green Infrastructure Partnership

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## Agenda

The forum is a ‘hybrid-training workshop’ that will **inform, educate** and **enable** those who wish to apply the Water Balance Model to support a Design with Nature approach to land development which results in Green Value.

Three groups are represented at the forum: land owners/developers; planning/engineering consultants; and local government reviewers.

Three case study applications of the Water Balance Model will build a common understanding of how to achieve **runoff-based performance targets** for rainwater management and green infrastructure.

<b>Before Lunch</b>  1000 - 1215	<b>Establishing Expectations: Create liveable communities &amp; protect stream health</b>
	<ol style="list-style-type: none"> <li>1. <b>PART ONE:</b> <i>Living Water Smart: Today’s expectations are tomorrow’s standards</i> <ol style="list-style-type: none"> <li>a. Context and Overview (Kate Miller, Jay Bradley &amp; Kim Stephens)</li> <li>b. How Water Moves Through Soil &amp; Trees Intercept Rainfall (Richard Boase)</li> <li>c. Stormwater Guidebook, Performance Targets and the Water Balance Model (Kim Stephens &amp; Richard Boase)</li> </ol> </li> <li>2. <b>PART TWO:</b> <i>Use the Water Balance Model to inform land development strategies</i> (Jim Dumont)           <ol style="list-style-type: none"> <li>a. Define the Problem First</li> <li>b. Place the Emphasis on What is Important</li> <li>c. Generate Reliable Numbers Quickly</li> <li>d. Application of the Water Balance Model at Three Scales: Introduction to Case Studies</li> </ol> </li> </ol>
	Take a break, re-energize and start a conversation!
<b>After Lunch</b>  1300 - 1500	<b>Meeting Expectations: How do you know when you have been successful?</b>
	<ol style="list-style-type: none"> <li>1. <b>PART THREE:</b> <i>Case Study Reports: What we learned, and how we anticipate using the Water Balance Model in future</i> (Michelle Mahovlich/Oleh Dubek; Shaun McIntyre; Dave Conway)           <ul style="list-style-type: none"> <li>– Each case study team will make a 20-minute presentation in order to share their experience in applying the WBM, the outputs they generated, and how the process has influenced their thinking.</li> <li>– This reporting out will set the scene for the roundtable segment.</li> </ul> </li> <li>2. <b>PART FOUR:</b> <i>Town Hall Sharing: Creating our future – taking actions on-the-ground that add up</i> <ul style="list-style-type: none"> <li>– The purpose of the town hall segment is to provide a roundtable opportunity for Forum participants to reflect on what they have heard, and to talk about what they have done or what they want to do.</li> </ul> </li> </ol>



## Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

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**THE NEW BUSINESS AS USUAL:** By 2012, provincial water laws will improve the protection of ecological values, provide for more community involvement, and provide incentives to be water efficient. This legislation will recognize water flow requirements for ecosystems and species. In addition, green developments waiting for approval will be fast-tracked.

### What does this mean to those involved in land development or redevelopment?

The Province and local government are collaborating to develop a suite of user-friendly tools and approaches for assessment purposes and to provide consistency when reviewing development applications. As a development leader in our local community, or a reviewer of applications, you are invited to participate in a 1-day forum on the use of the **Water Balance Model** as a tool to assess and report on the impact of development on local rainwater runoff.

**WHAT is it:** The new 'Water Balance Model powered by QUALHYMO' (WBM) is unique, bridges engineering and planning, links development sites to the stream and watershed, and enables local governments to establish science-based runoff performance targets. Further, the WBM correlates green infrastructure effectiveness in protecting stream health. Web-based and public domain, the WBM is available to any and all at [www.waterbalance.ca](http://www.waterbalance.ca). This tool is the computational and communication backbone that will take us towards the sustainable reality of a greening of the built environment.



**WHY does it matter:** The Cowichan Valley is the pilot region for an inclusive and collaborative approach to building capacity through education and training. A select group comprising leading Island land developers, development consultants and Cowichan Valley local governments is invited to participate in a hands-on training forum. You will learn how to apply the WBM, the most innovative tool available for rainwater management. This tool will help you make informed green infrastructure decisions.

**WHEN:** Friday, October 17 from 10am to 3pm

**WHERE:** The Board and Training rooms at the offices of the Cowichan Valley Regional District

**WHO will conduct the forum:** The teaching/facilitation team comprises:

- Kim Stephens – Water Sustainability Action Plan
- Jim Dumont – Engineering Applications Authority
- Richard Boase - District of North Vancouver

**HOW it will be organized:** The forum will be conducted as a 'hybrid-training workshop' to meet the diverse information needs of invitees.

This means the day will be built around case study demonstrations of the WBM. These will provide the technical foundation for a roundtable sharing and cross-fertilization of ideas on 'how to' achieve runoff-based performance targets for developments, the "New Business as Usual" for rainwater management and green infrastructure.



## Cowichan Valley Water Balance Model Forum

### Create Liveable Communities and Protect Stream Health

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**HOW it will be organized:** The forum is by invitation. It will be conducted as a 'hybrid-training workshop' to **inform, educate** and **enable** those who wish to apply the Water Balance Model to support a Design with Nature approach to land development which results in Green Value. The forum will be structured in two parts:

- **Part One** (morning session): Establishing Expectations
- **Part Two** (afternoon session): Meeting Expectations

Three groups will be represented at the forum, namely: land owners/developers; planning/engineering consultants; and local government reviewers.

Case study applications of the Water Balance Model will build a common understanding of how to achieve **runoff-based performance targets** for rainwater management and green infrastructure.

**WHAT are the key messages:** Too often technical people jump prematurely into the details, make technical analyses unnecessarily complex, and solve the wrong problem. Thus, an over-arching message is: pause, step back and define the problem first. The Water Balance Model helps us solve the right problem.

Furthermore, the purpose of the case study applications is to demonstrate that the Water Balance Model:

- can be applied at all scales of land use;
- places the emphasis on what is important;
- provides a consistent approach;
- generates reliable numbers easily and quickly; and
- informs land development strategies.

Willing owners/developers are collaborating with the Water Balance Model team to develop case study applications.

**Case Studies at Three Scales:** Prior to the forum, the Water Balance Model will be applied to these projects so that the results will inform the forum learning outcomes:

- **Watershed:** Bamberton
- **Community:** Echo Heights, North Cowichan
- **Site:** Lane's Landing

Jim Dumont, Engineering Applications Authority, will provide each case study team with guidance and assistance.

**Establishing Expectations:** Part One will present the local government perspective ("this is what we want to see") and will answer these questions:

- Why runoff-based performance targets?
- What does Design with Nature mean?
- How does one use the Water Balance Model?
- What is the nature of each case study?

By developing a common understanding of expectations, this will set the stage for Part Two and a detailed discussion of the case studies.

**Meeting Expectations:** In the first hour of Part Two, each case study team will share their experience in applying the Water Balance Model, the outputs they generated, and how the process has influenced their thinking.

The case study sharing will inform a roundtable discussion in the second hour on the topic of: *How do you know when you have been successful?*

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# Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

Water Bucket Story #1

## Cowichan Valley Forum is provincial pilot for building developer and local government capacity to apply the Water Balance Model

Cowichan Valley Regional District hosts Water Balance Model Forum

### Living Water Smart

By 2012, provincial water laws will improve the protection of ecological values, provide for more community involvement, and provide incentives to be water efficient. This legislation will recognize water flow requirements for ecosystems and species. In addition, green developments waiting for approval will be fast-tracked.

- **What does this mean to those involved in land development or redevelopment?**

The Province and local government are collaborating to develop a suite of user-friendly tools and approaches for assessment purposes and to provide consistency when reviewing development applications. The web-based [Water Balance Model for British Columbia](#) (WBM) is one of these tools.



# Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

Water Bucket Story #1

## What is the Cowichan Valley Water Balance Model Forum?

On October 17, the Cowichan Valley Regional District (CVRD) is hosting a Water Balance Model Forum in collaboration with the Inter-Governmental Partnership which developed this scenario modelling and decision support tool. The Forum is organized under the umbrella of [Convening for Action on Vancouver Island](#) (CAVI).

## Inclusive and Collaborative

"The Cowichan Valley is the pilot region for an inclusive and collaborative approach to building capacity through education and training," explains **Jay Bradley** (Ministry of Agriculture & Lands), Chair



of the [Vancouver Island Coordinating Team](#), a sub-group of the Inter-Governmental Partnership. "The Forum will be conducted as a hybrid-training workshop to **inform, educate** and **enable** those who wish to apply the Water Balance Model to

support a Design with Nature approach to land development."

## Sharing, Exploration and Cross-Fertilization

"The Forum is an outcome of the [Cowichan Valley Learning Lunch Seminar Series](#), also a provincial pilot," continues **Kate Miller**

(CVRD Environment Manager), Chair of the Cowichan Valley Organizing Team. "We are describing the Forum as a hybrid-training workshop because the day will be built around case study applications of the Water Balance Model. These will provide the technical



foundation for roundtable sharing, exploration and cross-fertilization of ideas on how to implement green infrastructure effectively."

## Runoff-based Performance Targets

"The case study applications will build a common understanding of how to achieve **runoff-based performance targets** for rainwater management and green infrastructure," elaborates **Rob Conway**, Assistant Manager, CVRD Development Services. "What is unique about our approach is the educational context.



Willing owners/developers and their planning/design consultants have volunteered to develop and share the case studies. It truly is a collaborative effort."

## Common Understanding

"The educational approach is helping us to 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," adds **Peter Nilsen**, Deputy Engineer with the District of North Cowichan. "This building of practitioner capacity encompasses both local government and the development community. Project proponents and reviewers will have a common language."



# Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

## Water Bucket Story #1

### Meeting Expectations

“The Inter-Governmental Partnership is providing each case study team with technical support by making Jim Dumont, the WBM Engineering Applications Authority, available to guide them through the process,” concludes

**Kim Stephens**, Program Coordinator for the [Water Sustainability Action Plan for British Columbia](#), and leader of the WBM teaching/facilitation team.



“Our goal is that everyone will have a successful experience on October 17, and there will be a clear understanding of how to meet expectations.”



David Hewetson, Rob Conway, Kate Miller, Peter Nilsen, Kim Stephens

### How the WBM Forum will be structured

According to Kim Stephens, the Forum will be structured in two parts: “The theme in the morning is Establishing Expectations. The afternoon theme is Meeting Expectations. Part One will present the local government perspective. By developing a common understanding of expectations, this will set the stage for Part Two and a detailed discussion of the case studies.”

“In the first hour of Part Two, each case study team will share their experience in applying the Water Balance Model, the outputs they generated, and how the process has influenced their thinking,” continues Kim Stephens. “The case study sharing will inform a roundtable discussion in the second hour on the topic of: *How do you know when you have been successful?*”

### What is the Water Balance Model?

The new ‘**Water Balance Model powered by QUALHYMO**’ is unique, bridges engineering and planning, links development sites to the stream and watershed, and enables local governments to establish science-based runoff performance targets.

Further, the WBM enables experienced users to correlate green infrastructure effectiveness in protecting stream health. Web-based and public domain, the WBM is available to any and all at [www.waterbalance.ca](http://www.waterbalance.ca). This tool is the computational and communication backbone that will take British Columbia towards the sustainable reality of a [greening of the built environment](#).



# Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

Water Bucket Story #2

## Cowichan Water Balance Model Forum features case study applications at three scales: watershed, neighbourhood and site

Living Water Smart (BC's Water Plan) provides context for 'Doing Business Differently' to create liveable communities and protect stream health

### Living Water Smart – Doing Business Differently in BC

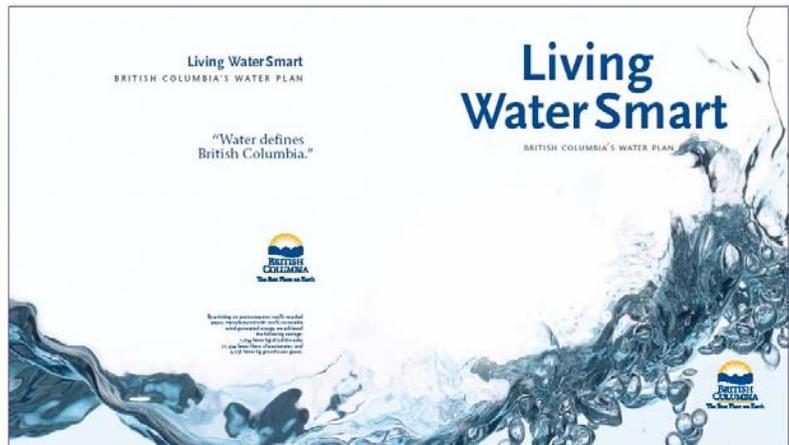
Published in June 2008, [Living Water Smart](#) is the provincial government's vision and plan to keep British Columbia's water healthy and secure for the future. Through this plan, the Province commits to new actions and targets – and builds on existing efforts to protect and keep our water safe.

#### Protect Stream Health:

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.

- **What does this mean to those involved in land development or redevelopment?**

The Province and local government are collaborating to develop a suite of user-friendly tools and approaches for assessment purposes and to provide consistency when reviewing development applications. The web-based **Water Balance Model for British Columbia** (WBM) is one of these tools.



# Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

Water Bucket Story #2

## Cowichan Valley Water Balance Model Forum: how to achieve the vision

On October 17, the Cowichan Valley Regional District (CVRD) is hosting a 'by invitation only' Water Balance Model Forum in collaboration with the Inter-Governmental Partnership. The Forum is organized under the umbrella of [CAVI - Convening for Action on Vancouver Island](#)<sup>1</sup>. The Forum will feature a roundtable sharing of case study experience related to achieving runoff-based performance targets.

The Cowichan Valley Water Balance Model Forum is part of the implementation program for [Beyond the Guidebook: The New Business As Usual](#)<sup>2</sup>. A goal of the Forum is to advance a common understanding and consistent messaging regarding on-the-ground expectations for rainwater management and green infrastructure.



## Create Liveable Communities & Protect Stream Health

This provincial initiative builds on the foundation provided by [Stormwater Planning: A Guidebook for British Columbia](#),<sup>3</sup> published in 2002, and incorporates lessons learned over the past six years in moving from planning to action.

“Too often technical people jump prematurely into the details, make technical analyses unnecessarily complex, and solve the wrong problem. Thus, an over-arching message is: pause, step back and define the problem first,” observes



**Kim Stephens**, Forum moderator and Program Coordinator for the [Water Sustainability Action Plan for British Columbia](#)<sup>4</sup>. “The Water Balance Model helps us solve the right problem. The desired outcome is to create liveable communities and protect stream health.”

Kim Stephens was project manager and principal author of the Guidebook. This transformational document set in motion a chain of outcomes that has resulted in British Columbia being recognized internationally as a leader in implementing a natural systems approach to rainwater management in the urban environment.

1

<http://www.waterbucket.ca/cfa/index.asp?sid=19&id=176&type=single>

2

<http://bc.waterbalance.ca/index.asp?type=single&section=Events&sid=17&id=84>

3

<http://www.env.gov.bc.ca/epd/epdpa/mpp/stormwater/stormwater.html>

4

[http://www.waterbucket.ca/cfa/index.asp?type=summary&section=Water\\_Sustainability\\_Action\\_Plan&sid=4](http://www.waterbucket.ca/cfa/index.asp?type=summary&section=Water_Sustainability_Action_Plan&sid=4)

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# Cowichan Valley Water Balance Model Forum

## Create Liveable Communities and Protect Stream Health

### Water Bucket Story #2

## Water Balance Model Case Study Applications

Willing owners/developers and their planning/design consultants are collaborating with the Water Balance Model team to develop three case study applications that will be shared at the Forum. The purpose of the case study applications is to demonstrate that the Water Balance Model:

- can be applied at all scales of land use;
- places the emphasis on what is important;
- provides a consistent approach;
- generates reliable numbers easily and quickly; and
- informs land development strategies.

The case study applications are at three scales: watershed, neighbourhood and site. "These will provide the technical foundation for roundtable sharing, exploration and cross-fertilization of ideas on how to implement green infrastructure effectively," notes **Kate Miller** (CVRD Environment Manager), Chair of the Cowichan Valley Organizing Team.



## Introduction to the Three Case Studies

"What is unique about our approach is the educational context. Willing project proponents have volunteered to develop and share the case studies," states **Rob Conway**, Assistant Manager, CVRD Development Services. "It truly is a collaborative effort."



Prior to the Forum, the Water Balance Model will be applied to these three projects so that the results will inform the Forum learning outcomes:

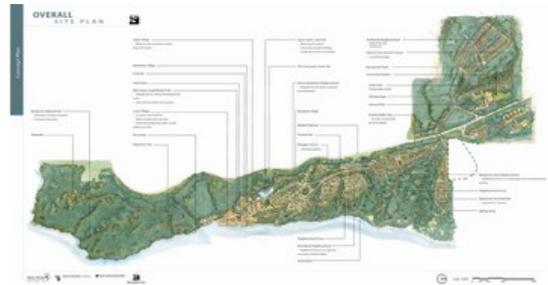
- **Watershed-scale:** Bamberton Lands, a project by Three Point Properties

- **Neighbourhood-scale:** Artisan Village (Chemainus), a project by Chris Clement
- **Site-scale:** Lanes Landing (Cowichan Bay), a project by Len Barrie

## Bamberton Lands

"The Bamberton Lands consist of 1580 acres of land with 5km of oceanfront along the Saanich Inlet," reports **Michelle Mahovlich** of Three Point Properties. "It operated as a cement plant for 70 years. The site was abandoned in 1981 following the cement plant closure."

"Upon its purchase in 2005, Three Point Properties spent the next two years remediating the property and formulating a revitalization plan," continues Michelle Mahovlich. "The property is currently in a rezoning process with the CVRD. Plans for the site include three comprehensive development zones of residential, commercial, eco-industrial and marine industrial land and dedication of 65% of the property for parks and open spaces."



"The residential areas consist of up to 3,227 units, with one-third single family, one-third condo and one-third townhome," concludes Michelle Mahovlich. "The project proposes to attain LEED Platinum for Neighbourhoods status using the Docksides Green development as a template for the Bamberton site, including the design with nature rainwater/stormwater systems."

# Cowichan Valley Water Balance Model Forum

## Create Liveable Communities and Protect Stream Health

### Water Bucket Story #2

#### Artisan Village

The Artisan Village property has significant historical ties to the Chemainus community, including the Hermit Trails, which were donated to the community in the late 80's and remain a popular well-used amenity. This site was the location of the original "Artisans Village", planned as an international campus intended to accommodate artists and artisans from around the Pacific Rim.



"The proposed development will create a safe, pedestrian-oriented neighbourhood that provides amenities for both the residents and the larger community," continues Dave Conway. "The spirit of Artisans Village will be kept alive with the incorporation of a small welcoming live-work development at the eastern side of the property."

"We are working with the District of North Cowichan to establish performance targets consistent with Environmental Best Management Practices and implement what can be practically achieved based upon the site terrain and conditions," adds Dave Conway. "An inventory of the existing landforms, soils and drainage conditions will form the background for a rainwater/stormwater management plan to guide the development so that it achieves the goal of having no adverse impact on Askew Creek, adjacent properties or downstream drainage facilities."

"The Vision is to create a unique mixed-use neighbourhood utilizing open space, quality architecture, and the site's natural beauty," explains **Dave Conway** of Creative Engineering, the civil engineering/rainwater management member of the consulting team.



# Cowichan Valley Water Balance Model Forum

## Create Liveable Communities and Protect Stream Health

### Water Bucket Story #2

## Lanes Landing

"The proposed Lanes Landing development proposes a total of 70 units composed of 9 clustered cottage town homes, 2 duplex cottages, 2 duplex ravine still homes and the relocation, restoration and expansion of the existing Wilcum Lodge building," explains **Shaun McIntyre** of Merrick Architecture, the project team leader.



"The site is characterized by its steep natural grade, spectacular water views, and a natural ravine along the east property line, which occupies a third of the site's total area," continues Shaun McIntyre. "There is no required setback from top of the ravine bank, facilitating a more comprehensive development plan."

"Rainwater management is being addressed by a combination of green roofs plus a number of different methods of permeable paving," concludes Shaun McIntyre. "The Water Balance Model case study application provides us with an opportunity to quantify the rainwater runoff volume reduction that will result from our proposed rainwater management innovation."



## What is the Water Balance Model?

The new 'Water Balance Model powered by **QUALHYMO**' is unique, bridges engineering and planning, links development sites to the stream and watershed, and enables local governments to establish science-based runoff performance targets.

Further, the WBM enables experienced users to correlate green infrastructure effectiveness in protecting stream health. "Web-based and public domain, the WBM is available to any and all at [www.waterbalance.ca](http://www.waterbalance.ca)," states **Ted**



**van der Gulik** (Ministry of Agriculture & Lands), Chair of the Inter-Governmental Partnership that developed the Water Balance Model.

"This tool is the computational and communication backbone that will take British Columbia towards the sustainable reality of a greening of the built environment."

To learn more, click on the following link to an article in the April 2008 issue of **Runoff: Create Liveable Communities and Protect Stream Health: Water Balance Model powered by QUALHYMO integrates the site with the watershed and the stream**<sup>5</sup>



<sup>5</sup> <http://bc.waterbalance.ca/sites/wbm-canada-template/documents/media/19.pdf>

# Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

Water Bucket Story #3

## Cowichan Water Balance Model Forum introduces "Living Water Smart" application to development community

Report from the Chair of the Vancouver Island Coordinating Team describes what provincial pilot accomplished

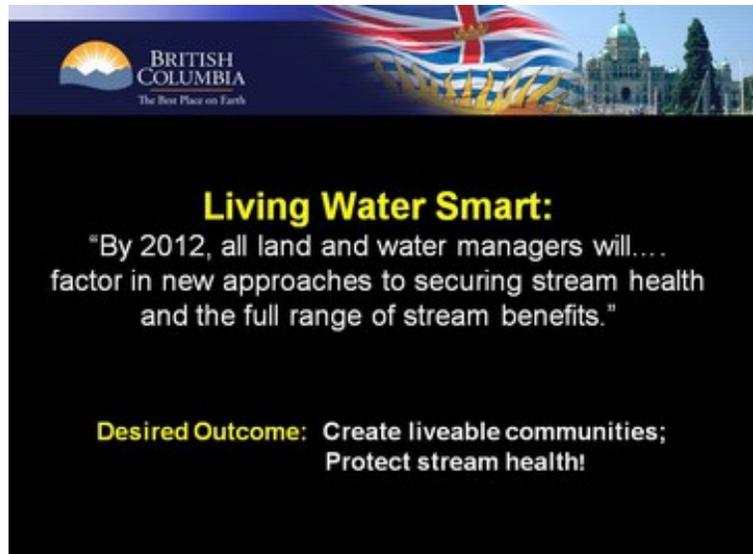
### Living Water Smart – Doing Business Differently in BC

On October 17, the Cowichan Valley Regional District (CVRD) hosted a 'by invitation only' Water Balance Model Forum in collaboration with the Inter-Governmental Partnership. The Forum was organized under the umbrella of **CAVI - Convening for Action on Vancouver Island**. The Forum featured a roundtable sharing of case study experience related to achieving runoff-based performance targets.

The Cowichan Valley Water Balance Model Forum is part of the implementation program for **Beyond the Guidebook: The New Business As Usual**. This initiative adds depth to [Living Water Smart](http://www.livingwatersmart.ca/brochure.html)<sup>1</sup>, the provincial government's vision and plan to keep British Columbia's water healthy and secure for the future.



....BC's plan for 'doing business differently'



<sup>1</sup> <http://www.livingwatersmart.ca/brochure.html>

# Cowichan Valley Water Balance Model Forum

## Create Liveable Communities and Protect Stream Health

### Water Bucket Story #3

## Vancouver Island Coordinating Team (VICT)

**Jay Bradley**, Chair of the [Vancouver Island Coordinating Team](#) (VICT), a sub-group of the Inter-Governmental Partnership, represented the



Province and provided the Living Water Smart context for the Forum purpose and desired outcome.

Initiated by three provincial Ministries in December 2006 to facilitate a consistent, science-based approach to rainwater management, **VICT** is moving forward with an outreach program that involves meeting with local governments to generate dialogue and build bridges.

## Report from the VICT Chair

The forum was delivered to a target audience comprised primarily of developers and consultants. "The success of the Forum is demonstrated by a number of results," reports **Jay Bradley**. These are summarized as follows:

### A Full House!

We went from a list of 20 planned to over 50 actual attendees!!

### Big Wheels!

The participation of prominent local developers and consultants (Michelle Mahavlich of Three Point Properties; Oleh Dubek of 1st Team Consulting Ltd; Dave Conway of Creative Engineering) who reported out on their experience of using the Water Balance Model to assess their development proposals (Bamberton; Artisan Village; Lane's Landing)

### Enthusiasm!

Everyone stayed until the end (punctually ended at 3:00); the question and answer period was notably abuzz with interest and interaction, focused on what water-centric planning is all about and what the Water Balance Model can do (as well as what the challenges are).

### Networking!

The session brought developers, consultants and local government together to learn and share, greet and meet. I noticed a lot of card-swapping and hand-shaking going on.

### The Bigger Picture!

Practitioners came away with an understanding that the Province's Living Water Smart plan provides further context for 'Doing Business Differently,' to create liveable communities and protect stream health.

### Paradigm-Shift!

The idea of setting easily-understood science-based runoff targets and seeing the results through the Water Balance Model went a long way to shifting mindsets away from the pipe-and-convey mode of thinking, to the concept that managing rainfall "where it falls" is not only in keeping with a design with nature approach, but also creates 'green value.

### 'Facts over Fear!

Because the Water Balance Model is a science-based tool it can be used early in the development planning process to provide informed decision-making. It won't tell us what choices to make, but it will help guide choices by revealing options and their impacts.

# Cowichan Valley Water Balance Model Forum

## Create Liveable Communities and Protect Stream Health

### Water Bucket Story #3

#### Enlightenment!

From the outset the tone was set for "give and take." The forum was carried out on the principle of two-way communication, sharing and education.

"In the larger context, the forum is indicative of how far along our community of Vancouver Island practitioners has come," concludes **Jay Bradley**. "We are fostering a growing understanding of the fact that what goes on at a site, in terms of how rainwater is treated, is linked not only to stream and watershed health, but also to our social well-being and aesthetics of our communities. Unlike the pipe-and-convey approach, the use of source control features is an investment in green value that brings returns for the developer and end-users of a site."



The 3-person teaching/facilitation team comprised **Kim Stephens** (Program Coordinator, Water Sustainability Action Plan), **Jim Dumont** (Water Balance Model Engineering Applications Authority) and **Richard Boase** (District of North Vancouver, and member of the Inter-Governmental Partnership Steering Committee). To view their PowerPoint presentations, click on the links below.

- [Living Water Smart - Today's Expectations are Tomorrow's Standards](#)<sup>2</sup>
- [An overview of where we are and how we got here](#)<sup>3</sup>

To view the presentation by Michelle Mahovlich and Oleh Dubek, click on the link to [Bamberton Case Study](#)<sup>4</sup>. The other two case study teams (Artisan Village and Lanes Landing) presented their findings verbally.



#### PowerPoint Presentations



2

<http://www.waterbucket.ca/rm/sites/wbcrn/documents/media/75.pdf>

3

<http://www.waterbucket.ca/sites/wbcrn/documents/media/77.pdf>

4

<http://www.waterbucket.ca/sites/wbcrn/documents/media/78.pdf>

# Cowichan Valley Water Balance Model Forum

Create Liveable Communities and Protect Stream Health

Water Bucket Story #3

## Previous Water Bucket Stories

To learn more about the Cowichan Forum, click on the two links that follow:

[Cowichan Water Balance Model Forum features case study applications at three scales: watershed, neighbourhood and site --- \*Living Water Smart \(BC's Water Plan\) provides context for 'Doing Business Differently' to create liveable communities and protect stream health\*](#)<sup>5</sup>

[Cowichan Valley Forum is provincial pilot for building developer and local government capacity to apply the Water Balance Model --- \*Cowichan Valley Regional District hosts Water Balance Model Forum on October 17, 2008\*](#)<sup>6</sup>



5

<http://www.waterbucket.ca/rm/index.asp?sid=33&id=475&type=single>

6

<http://www.waterbucket.ca/rm/index.asp?sid=33&id=474&type=single>

## What is the Water Balance Model?

The new '**Water Balance Model powered by QUALHYMO**' is unique, bridges engineering and planning, links development sites to the stream and watershed, and enables local governments to establish science-based runoff performance targets.

To learn more, click on the following link to an article in the April 2008 issue of **Runoff: Create Liveable Communities and Protect Stream Health: Water Balance Model powered by QUALHYMO integrates the site with the watershed and the stream**<sup>7</sup>



<sup>7</sup> <http://bc.waterbalance.ca/sites/wbm-canada-template/documents/media/19.pdf>