

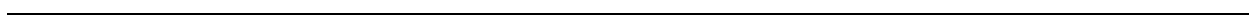


Green Infrastructure Partnership

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

Progress Report

First Release: August 2006
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Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

FOREWORD

IN RECENT DECADES, THE HIGH GROWTH REGIONS of British Columbia have been experiencing *cumulative impacts* as a result of pressures on land and water resources. The desire to mitigate environmental and social impacts has provided a driver for the 'green infrastructure' movement across North America, and especially in British Columbia. Looking ahead, the challenge for high growth communities is to make informed choices that will produce *cumulative benefits* over time, and thereby ensure long-term community livability.

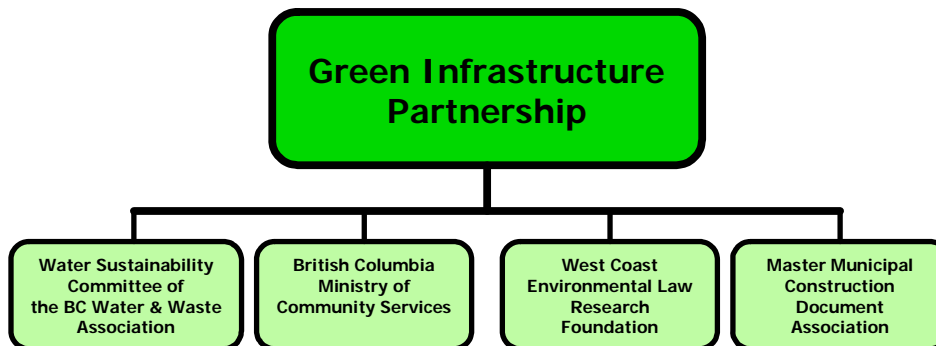
CONVENING FOR ACTION IN BRITISH COLUMBIA is an element of the Water Sustainability Action Plan, and is outcome-oriented. It is being implemented through collaboration and regional partnerships. The desired outcome is to bring the vision for *Communities in Balance with Water* to fruition. Conversations with elected officials are an essential ingredient in developing a shared understanding of what the vision looks like on the ground. The goal is to implement changes in the way we develop land and use water.

The Water Sustainability Action Plan for BC....



... provides a partnership umbrella for an array of *on-the-ground* initiatives that promote a 'water-centric' approach to community planning

THE GREEN INFRASTRUCTURE PARTNERSHIP was formed in 2003 and is a consortium of four organizations. Under the Action Plan framework, its mission is to facilitate implementation of *design with nature* infrastructure practices and regulation province-wide. If we design with nature, then the *water balance* can be maintained or even restored over time.



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EXECUTIVE SUMMARY

AN OVERVIEW: *Convening for Action in British Columbia* brings together people who have knowledge and expertise...with those who seek ways to meet present and future sustainability challenges in their communities.

The purpose in Convening for Action is to deliver a highly transparent process where everyone gets a voice, everyone sees their interests recorded and considered, and everyone is proactively engaged to focus on results.

The ultimate objective in Convening for Action is to build an informed ‘community of interest’ so that over time it will evolve into a ‘community of practice’.

It Starts with a Conversation: In May 2005, the Green Infrastructure Partnership organized a Consultation Workshop with local governments in the Greater Vancouver region. The workshop solicited feedback and input on the development of Communication Guides for elected officials and senior managers, respectively.

The workshop set in motion a chain of events. One outcome was a decision to have one-on-one conversations with an ‘ad hoc mayors focus group’ that has representation from three regions. By listening to what elected officials have to say, we provide an informed basis for moving forward with changes in the way we develop land and use water.

The report that follows is a prelude to developing a *Green Infrastructure Communication Guide for Elected Officials*. The Guide will fill a gap because what has been lacking is this – written information on green infrastructure from the perspective of elected officials, for elected officials.

The Storyline: This report summarizes the progress to date in meeting with elected officials and implementing pilot programs in three regions:

- **Section 1** introduces the *Context for Conversations* with elected officials.
- **Section 2** distils what we learned through our conversations with elected officials, and is titled *Views on Settlement, Economic Growth and Designing with Nature*.
- **Section 3** describes how *Convening for Action Regional Pilot Programs* are being delivered in the South Okanagan and Greater Vancouver regions, and on Vancouver Island.
- **Section 4** identifies deliverables and next steps in *Moving Forward with the Action Plan*, in particular for the Communication Guide.

The conversations with elected officials have been invaluable in providing focus for the pilots.

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Key Messages:

This progress report is designed to accomplish three communication objectives:

1. Tell the story of Convening for Action.
2. Report out on meetings with elected officials.
3. Provide funding agencies with a roadmap.

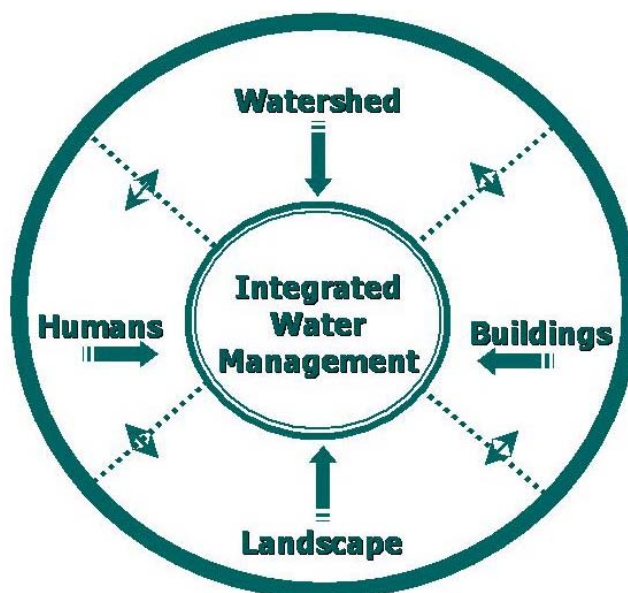
What You Need to Know:

The essence of this progress report is distilled down to a set of seven Key Messages which can also be viewed as Guiding Principles:

- **Growth and Settlement:** Doubling the population will require changes in the way we develop land and how we use water.
- **Water for Life and Livelihoods:** In a fully integrated landscape, water is the unifying element. If we get the water part right, then other parts will be more likely to follow.
- **Settlement in Balance with Ecology:** Settlement and ecology are equal values, and they must be as much in balance as possible for the wellbeing of human and natural systems.
- **Communities in Balance with Water:** *Water OUT = Water IN* is a 'mind map' for dealing with uncertainty and managing risk related to water supply, water use and runoff.
- **Design with Nature:** We can improve the built environment. We can protect the natural environment. We can sustain community livability.
- **Leadership:** Alignment at a regional scale will help individual mayors lead the move from talk (interest) to local action (practice) on-the-ground.
- **Communication:** Seek to understand and 'connect the dots' by having conversations.
- **Implementing Change:** Inform, inspire and enable people to work together through partnerships to act now.

Integrated Water Management:

The 'integration' process that is at the heart of a design with nature approach to land development involves consideration of land, water, air and living organisms – including humans – as well as the interactions among them.



'Greener' communities will enhance the quality of life, and will achieve higher levels of ecological and water protection in the Built Environment. But creating this outcome depends on connecting the dots between regional growth strategies and on-the-ground infrastructure. Looking ahead, federal / provincial infrastructure programs will ultimately drive implementation of green infrastructure policies, plans, standards and practices.

How to Read this Report

This synthesis report is structured to meet the information needs of different audiences. In effect, the report is a 2-in-1 document: the front-end is designed primarily for elected officials; and the back-end provides the supporting detail that civil servants need.

The purpose of the front-end is to provide context for conversations with elected officials, and show how the conversations to date are already influencing implementation of the Action Plan.

The ‘back-end’ comprises a set of five appendices. Their purpose is to provide a synopsis of program objectives and outcomes for each Convening for Action regional pilot program. The pilots are presented in this order: Vancouver Island, Greater Vancouver and the South Okanagan.

The Way We Develop Land Determines How Water is Used and How Water Runs Off the Land

In the Okanagan, green infrastructure is associated with the use of water and sustainability of supply;

Whereas in the Greater Vancouver region and on Vancouver Island, it is associated with control of water that runs off the land and sustainability of aquatic habitat.

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SECTION 1

Context for Conversations

1.1 Water Sustainability Action Plan

The Water Sustainability Action Plan for British Columbia is advancing an array of interconnected and on-the-ground partnership initiatives that promote a 'water-centric' approach to community planning. The managing partner for program delivery is the Water Sustainability Committee of the BC Water & Waste Association (BCWWA).

Water-centric planning means...

- We will plan with a view to water – whether for a site, a region, or the province
- We will integrate missions, mandates and accountabilities
- We will move towards a water balance way-of-thinking and acting



Green Infrastructure Partnership: Under the umbrella of the Action Plan, the mission of the Green Infrastructure Partnership is to facilitate implementation of infrastructure practices and regulation province-wide that embody a *design with nature* way-of-thinking and acting. Because everything is connected, the way we develop land determines how water is used, and how water runs off the land. Hence, if we design with nature, then the *water balance* can be maintained or potentially even restored over time.

The driver for the Action Plan in general, and the Green Infrastructure Partnership in particular, is the issue of how to accommodate a doubling of the population in the growth regions of British Columbia...while at the same time achieving community visions for a livable future.

How Will British Columbia Accommodate A Doubling of the Population & What Will Our Growth Regions Look Like ?



Addressing this issue requires thinking in terms of a continuum:

- where we are now (*the starting point*)
- where we wish to get to (*the end point*); and
- how we will get there (*the strategy*).

Addressing this issue also involves thinking in terms of accruing *cumulative benefits* over time, rather than *cumulative impacts*.

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1.2 Green Infrastructure Partnership

Infrastructure design is in a major sea-change, and British Columbia is in the vanguard of that change. The Green Infrastructure Partnership is promoting an integrated approach to land development and infrastructure servicing that addresses the need for coordinated change at different scales – that is: region, neighbourhood, site and building.

Formed in 2003, the *Green Infrastructure Partnership* is educating stakeholders regarding the benefits of a ‘design with nature’ approach to community planning and land development.

A ‘Design with Nature’ approach to community design means...



- Develop compact, complete communities
- Increase transportation options
- Reduce the loads on water, waste and energy systems
- Protect and restore urban ‘green’ space
- Strive for a lighter ‘hydrologic footprint’
- Achieve higher levels of stream, wetland and lake protection

In planning for the next 50 years and beyond, the Action Plan vision is for *Communities in Balance with Water*. To this end, an overarching goal is to protect and/or restore the natural environment by improving the built environment. This is the essence of why we ‘design with nature’.

Looking ahead, implementation of green infrastructure by local governments will be voluntary – involving a range of social and economic considerations – but once the decision is made to embrace ‘green infrastructure’, implementation will need clearly defined standards and regulatory models.

Integrated Work Plans: The Green Infrastructure Partnership organized Consultation Workshops in both 2004 and 2005. The latter was conducted under the work plan of *Convening for Action in British Columbia*, another element of the Water Sustainability Action Plan. The workshop resulted in development of a multi-pronged outreach and continuing education program (OCEP):

The Green Infrastructure Partnership is ‘turning ideas into action’ on-the-ground !

Outreach & Continuing Education Program (OCEP)				
Water Bucket Website	Celebrating Green Infrastructure: Showcasing Innovation Series	Communication Guide for Elected Officials	Guide to Green Infrastructure Standards	Water Balance Model
Speaker Series		Communication Guide for Senior Managers	Green Infrastructure Standards	Streamlined Environmental Approvals Protocol

Over the past year, and in collaboration with the Water Sustainability Committee, the Green Infrastructure Partnership has been systematically implementing the OCEP elements.

Change on-the-ground is being advanced through partnerships:



- Green Infrastructure Partnership
- Convening for Action in British Columbia
- Water Bucket Website Partnership
- Water Balance Model Partnership

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1.3 Convening for Action in British Columbia

The Convening for Action initiative is being implemented through regional partnerships, with an initial emphasis on the South Okanagan. Through an outreach and education program that is outcome-oriented, this key element of the Water Sustainability Action Plan is promoting water stewardship provincially by demonstrating what *design with nature* and a *water balance* way-of-thinking and acting mean on-the-ground.

When ‘convening for action’, we build capacity through a 3-step process:

1. **Challenge** practitioners and others to step back from existing ways-of-thinking
2. **Inform** them regarding alternatives
3. **Provide** the tools & experience to develop land and use water differently

Guidebook Precedent: The Convening for Action initiative is building on the successful precedent established in 2002 when the Province published *Stormwater Planning: A Guidebook for British Columbia*. The Guidebook 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.

The Convening for Action initiative has created an opportunity to move beyond rainwater management to embrace all components of the water cycle through integrated water management. It will turn ideas into action. It will do this by promoting awareness and supporting communities to integrate water management practices with local land use planning and development programs – that is, ‘green infrastructure’

Reference Documents: Progress to date in advancing Convening for Action is summarized in the following reports:

- *Report on a Mini-Summit dealing with Water Stewardship & Sustainability in the South Okanagan: A Communiqué on Water for Life and Livelihoods*, May 2006
<http://www.waterbucket.ca/cfa/index.asp?sid=10&id=46&type=single>
- *Water-Centric Planning in Oliver: Dealing with Uncertainty and Managing Risk*, April 2006
<http://www.waterbucket.ca/cfa/index.asp?sid=10&id=39&type=single>
- *Moving Towards a Water Balance Way-of-Thinking and Acting in the South Okanagan: A Synthesis of Conversations with Okanagan-Similkameen Residents*, February 2006
<http://www.waterbucket.ca/cfa/index.asp?sid=10&id=38&type=single>
- *The Green Infrastructure Partnership: Convening for Action in British Columbia*, July 2005 Progress Report
http://www.waterbucket.ca/waterbucket/dynamicImages/676_GreenInfrastructure_ConveningForActionProgressReport_15July05.pdf

Convening for Action in British Columbia comprises three regional pilot programs:

- Okanagan Basin
- Greater Vancouver Region
- Vancouver Island

**These pilots are providing case study content for
*Water-Centric Planning: A Guidebook for British Columbia***

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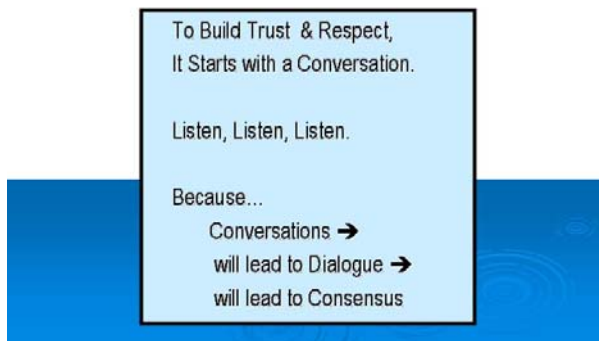
SECTION 2

Views on Settlement, Economic Growth and Designing with Nature

2.1 Seek to Understand

Convening for action starts with a conversation. Over the past year, conversations with a diverse group of individuals have enabled the Water Sustainability Committee and the Green Infrastructure Partnership to ‘connect the dots’ so that we can begin to create a picture of what *Communities in Balance with Water* means on-the-ground. The ultimate objective in convening for action is to build an informed ‘community of interest’ so that over time it will evolve into a ‘community of practice’.

Seek to Understand:



The conversational approach is proving to be an effective way to gain an understanding of how individuals and communities view settlement, economic growth, and water-centric issues. The focus of this report is on conversations with elected officials in the three regions. The emphasis is on the Okanagan because this is the region where water supply constraints are most urgent and the most progress has been made in advancing Convening for Action.

Green Infrastructure Communication Guides: It is a challenge to write documents that elected officials and senior managers will readily read and embrace. Language and flow are critical. The vision must be compelling to be accepted. This provides the context for the initiative of the Green Infrastructure Partnership in developing Communication Guides.

The Guides will establish a language. The way they are written will define broad themes so that elected officials and senior managers can step outside their normal view of the world.

The first to be developed will be the *Green Infrastructure Communication Guide for Elected Officials*. It will fill a gap because what is lacking is this - written information on green infrastructure from the perspective of elected officials, for elected officials.

Elected Officials Focus Group: We are having one-on-one conversations with an ‘ad hoc mayors focus group’ that comprises key contacts from various regions. We have broadened this group to include several regional chairs.

A distinguishing feature of this group is that it comprises elected officials who are known for their commitment to ‘sustainability’ because they believe it is an achievable community goal. Furthermore, they have thought about how to achieve environmental, economic and social objectives through a community’s infrastructure choices. Therefore, they constitute an ideal focus group for Communication Guide purposes. Table 1 lists those who were interviewed.

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Table 1 – Elected Officials Focus Group

Okanagan		
Interview #1 January 2006	John Slater, Mayor of Osoyoos, Chair of the Regional District of Okanagan-Similkameen (RDOS) Growth Strategy Steering Committee, and Chair of the Okanagan Basin Water Board.	A long-term elected official, John Slater has a leadership role at both the sub-regional and regional scales. This was a consideration in consolidating our efforts in the Okanagan. Having the same individual chairing both the RDOS Growth Strategy and Okanagan Basin Water Board created the opportunity for a consistent and complementary dialogue at those two scales. As discussed in Section 3, this synergy takes on added significance when <i>Convening for Action in the South Okanagan</i> is viewed as a pilot for the Okanagan in particular and for the province in general.
Interview #2 February 2006	Robert Hobson, City of Kelowna Councillor, Chair of the Central Okanagan Regional District (CORD), and Past-Chair and current CORD representative on the Okanagan Basin Water Board	Interviewing Robert Hobson emerged as a priority once it became clear that the South Okanagan was gaining recognition as a pilot for the Okanagan Basin. Because Hobson is a long-term advocate for a basin-wide approach to environmental management, his insights were invaluable in providing an historical context for looking ahead.
Interview #3 February 2006	Sharon Shepherd, Mayor of Kelowna	The City of Kelowna is piloting numerous innovative approaches to green infrastructure, in particular a landscape-based strategy for reducing water use and rainwater runoff. Thus, others can learn from the City's experience.
Greater Vancouver		
Interview #4 March 2006	Pam Goldsmith-Jones, Mayor of West Vancouver	One of the initiatives West Vancouver is piloting is a Neighbourhood Plan that is expressly built around a design with nature way-of-thinking and acting. This learning experience is providing an opportunity to establish a case study precedent that links design with nature principles to on-the-ground reality.
Vancouver Island		
Interview #5 March 2006	Vic Derman, District of Saanich Councillor, and Chair of the Water in the City Conference	Interviewing Councilor Derman became a priority once it was evident that <i>Water in the City</i> was building momentum as an international destination conference. We judged that Councilor Derman could provide an informed picture of how green infrastructure is viewed by his elected peers in the Greater Victoria region. Of relevance, he is the author of a paper titled <i>A Roadmap If You Please</i> .

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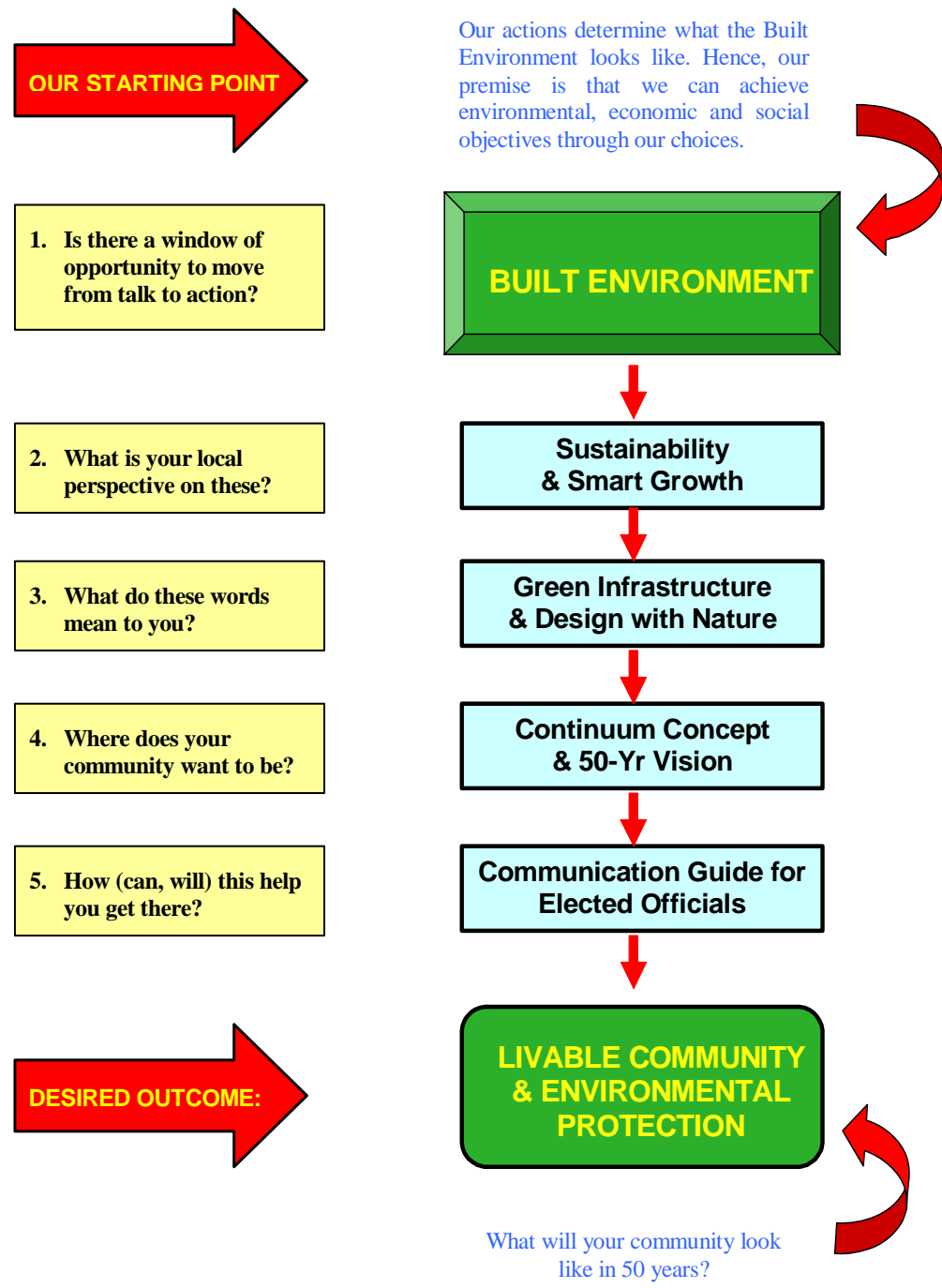


Figure 1 – Conversation Template

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2.2 Conversation Template

Figure 1 is the ‘conversation template’ that guides interviews with elected officials. It comprises a set of five questions that drill down from *high level* to *ground level*. The questions are open-ended. The answers influence the line of follow-on questions.

The Interview Process: When we conduct these interviews, we outline a frame-of-reference as described below to initiate the conversation:

- We understand that *green infrastructure* is but one of a myriad of issues that an elected official must process on an ongoing basis.
- Our approach is based on listening to them rather than ‘talking at them’.
- We recognize that senior municipal managers may only have ‘milliseconds’ to convey the essence of green infrastructure to elected officials.
- Similarly, senior managers may only have ‘minutes’ to absorb the supporting details from their technical staff.
- Therefore, choice of language is critical for effective communication, whether it be between technical staff and senior managers, or between senior managers and elected officials.
- Before we can write a Communication Guide, we need to understand what elected officials already know plus what they would like to know about green infrastructure.
- Only then can we judge what level of information transfer will be useful to them.

The interviews are yielding insights that will help us determine how we can be clear and compelling in conveying key messages in the proposed Communication Guide.

Context for Interviews: The starting point for the interviews is the premise that we can create our future, and the decisions that elected officials make today ripple through time. We point out that those decisions can result in either *cumulative impacts* or *cumulative benefits*.

In recent decades, high growth communities have typically been experiencing cumulative impacts. We note that the desire to mitigate those impacts has provided a driver for the green infrastructure movement across North America and elsewhere. Looking ahead, the challenge for communities is to make informed choices that produce cumulative benefits and thereby ensure community livability.

Relevance of 50-Year Planning Horizon: The focus of the interviews is on the Built Environment, with emphasis on what can be achieved in the suburban communities. Because our actions determine what the Built Environment will look like, we ask interviewees to visualize their communities in 50 years.

We point out that 50 years is one building cycle.

This provides a reality check on what can be done in newly developed areas. Basically, it is a missed opportunity because communities will have to wait for the next building cycle to do things materially different. As and when older areas are redeveloped, on the other hand, redevelopment creates opportunities to design with nature and achieve the vision for *Communities in Balance with Water*.

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2.3 Synopsis of What We Learned

In the first quarter of 2006, five elected officials in three regions were interviewed, with the emphasis on the Okanagan. We made the decision to consolidate our efforts in the Okanagan because of the synergies with the *Convening for Action in the South Okanagan* pilot program.

Given the progress that has been made so far in 2006, we are at a point in the process where it is timely to report out. The essence of what we learned through our conversations is captured in the ‘mindmap’ below:



Overview of the Synthesis Process: This section highlights *Key Findings* and *Key Messages* arising from the interviews. This has involved stepping back in order to view the big picture in context and identify the common threads in the set of conversations. Two considerations have shaped this synthesis process:

- What resonated during each conversation.
- How dots were connected as each conversation unfolded.

Expanding the Circle: Looking ahead, the specific experience and insights gained in the Okanagan would provide an informed basis for expanding the interview process to include additional mayors in Greater Vancouver and on Vancouver Island. It is anticipated that those additional interviews would then serve to advance the Convening for Action pilot programs in those two regions.

Refer to the Appendices for details of what has been accomplished so far in the three regions, and refer to Section 4 for a synopsis of what still needs to be done.

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Key Findings: What we learned was not unexpected. Rather, it was more a case of validation of what was becoming increasingly apparent as the interviews unfolded. Reflecting on what we heard during our conversations, our overarching findings across the three regions are synthesized as follows:

- 1. The Built Environment:** The winds of change that apparently characterized the November 2005 municipal elections have raised expectations that there will be a change in the way land is developed in British Columbia. Growth regions are at a crossroads: Will further settlement be in balance with ecology, or not?
- 2. Sustainability and Smart Growth:** These terms are abstract and over-used, and there is a disconnect between what people say and what they do in practice. Without on-the-ground examples that clearly demonstrate 'how to do it', the public will soon tune out.
- 3. Green Infrastructure & Design with Nature:** Green infrastructure is not fully understood, but is seen as water-centric:
 - In the Okanagan, green infrastructure is associated with the use of water and sustainability of supply;
 - Whereas in the Greater Vancouver region and on Vancouver Island, it is associated with control of water that runs off the land and sustainability of aquatic habitat.Design with nature resonates because people intuitively 'get it'; furthermore, it is equated with resiliency in addressing uncertainty.
- 4. Continuum Concept & 50-Year Vision:** While many elected officials may not have a long-term view, they do understand the need for a vision. Instant gratification is the barrier to acting long-term. There is a pressing need for short-term successes to create momentum and build support for long-term action.
- 5. Green Infrastructure Communication Guide:** Three words say it all: language, language, language. Sound bites are powerful. Be succinct and straightforward. Use layman language. Provide examples. The conversation process is as important as the eventual Guide product, and perhaps more so. Conversations about 'designing with nature' are creating awareness that in turn can have a domino effect in sparking other conversations when elected officials convene.

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Key Messages: Elaborating on the Key Findings, the Key Messages arising from the conversations with the Ad Hoc Mayors Focus Group are captured as follows:

Looking Back:

- a. There has been limited sharing of ‘lessons learned’ among municipalities within a region, and there has been virtually no cross-fertilization between regions.
- b. There has been little reward for being a champion; as a result, elected officials typically have only done the right thing when there has been a combination of no risk plus a good upside.
- c. If a community does not know where it is going or how long it will take to get there, how will it know when it gets there.
- d. People are starting to ask the right questions, but there has not yet been a culture change.

Looking Forward:

- e. Time is of the essence.
- f. To create a legacy, there must first be a shared vision.
- g. Trumpet small successes.
- h. Encourage innovation.
- i. Federal/provincial infrastructure programs will ultimately drive changes to infrastructure standards and practices.
- j. Leaders can create the ‘buzz’, the interest and the energy to imagine what the future could look like and then make it happen.
- k. The position of mayor provides a leader with the credibility and authority necessary to translate a community vision into action.
- l. Mayoral collaboration will be a powerful force for change when there is a shared regional vision for the Built Environment.

In conclusion, ‘Connect the Dots’

How we develop land determines

- how water is used
- how water runs off the land

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2.4 Implementing Change

So, how do we help the interviewees and others learn from what we have learned through these interviews? Well, a unifying theme for the conversations was the issue of *leading and implementing change*. Also, emphasis was placed on the need to mobilize political will to achieve the vision for *Communities in Balance with Water*.

Given the above frame-of-reference, the purpose of this concluding section is to juxtapose change management theory with what is happening on the ground in British Columbia. Then the reader will have an informed basis for judging where the three regions fit on the 'change continuum'.

Changing the Culture: The question now is how to move forward by *Convening for Action in British Columbia*. The immediate challenge for elected officials and others is how to implement the necessary changes in policies and standards of practice. In his book *Leading Change*, published by the Harvard Business School Press in 1996, John Kotter presented an 8-step mindmap for implementing change. Suffice to say, this process is well underway in British Columbia. For details, refer to Section 3.

1. Create sense of urgency
2. Create a guiding coalition
3. Develop a vision and strategy
4. Communicate the change vision
5. Empower stakeholders for action
6. Create short term wins
7. Consolidate gains to create more change
8. Anchor new approaches in the culture

Teachable moments create the sense of urgency that ultimately results in action. The key is in being able to capitalize on the early momentum that results from teachable moments.



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Change is a three-phase process. Building on Kotter's 8 steps, the mindmap below captures the essence of the 'change continuum' and what is involved in implementing change. Over the past decade, green infrastructure and the design with nature way-of-thinking have moved from the *creating change* phase to the *leading change* phase. By the early 2000s, the 'early adopters' were trail-blazing paths forward. Within the last couple of years, the 'fast followers' have begun to emerge throughout British Columbia.

Change from genesis to mainstream...

Creating Change		Leading Change		Implementing Change	
✓	Genesis	✓	Innovation	✓	Early Majority
✓	Idea	✓	Early Adopters	✓	Late Majority
✓	Invention	✓	Fast Followers	✓	Mainstream
		✓	Performance Tuners	✓	Laggards

Derived from Senge (1991); Gladwell (2000) and Oracle Corporation (2005)

Context is everything, and context on what is being accomplished in the three regions is provided by the graphic below:



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SECTION 3

Convening for Action Regional Pilots

3.1 Setting the Scene

The kickoff event for the launch of *Convening for Action in British Columbia* was the February 2005 ‘Okanagan Conference’ organized by the Canadian Water Resources Association and held in Kelowna. This education-based initiative has evolved from organizing events to delivering a program through collaboration and partnerships. Pilots are underway in three regions:

- **Convening for Action in the South Okanagan: Water for Life and Livelihoods**
- **Celebrating Green Infrastructure in the Greater Vancouver Region: Showcasing Innovation Series**
- **Convening for Action on Vancouver Island: Towards Water-Centric Sustainability**

Refer to the set of appendices for a synopsis of program objectives and outcomes for each region.

Opportunities for Regional Leapfrog:

An early observation is this: If local governments within a region do not as a rule share experiences and lessons learned, then the cross-fertilization between regions is even more of an exception. Yet, ‘cross-fertilization’ creates the opportunity to continually build on the experience of others and take turns leapfrogging ahead.



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3.2 Results to Date:

The purpose in Convening for Action is to deliver a highly transparent process where everyone gets a voice, everyone sees their interests recorded and considered, and everyone is proactively engaged to focus on results.

Key Messages: Context regarding what is being accomplished through the three regional pilots is provided as follows:

1. *Convening for Action in British Columbia* is helping to lead and implement change by bringing together people who have knowledge and expertise.....with those who seek ways to meet present and future sustainability challenges in their communities, both for water and infrastructure.
2. Conversations with elected officials are an essential ingredient in developing a shared understanding of the vision for *Communities in Balance with Water*.
3. By listening to what elected officials have to say, we have the basis for moving forward in order to implement changes in the way we develop land and use water.
4. Collaboration can lead to inter-regional alignment and expansion of partnerships.
5. A measure of success is the uptake of ideas and the adoption of a common language.

Pressures on land and water resources generated by demand for residential properties reflect rapid population growth in all three regions, with many residents becoming uneasy about the rate of change. Communities are seeking ways to address the resulting challenges.

Rates of Progress: Over the past year, the three pilots have been initiated one at a time. As a result, they are at different points along the ‘Convening for Action continuum’ -

- The South Okanagan pilot is well-advanced in terms of connecting with elected officials, building awareness, gaining credibility, and making a contribution; and
- The Greater Vancouver pilot is in the early stages of developing critical mass; whereas
- The Vancouver Island pilot is in the process of being launched.

Table 1 presents a succinct overview, and is complemented by a set of three Appendices. The latter provide a synopsis of Convening for Action program objectives and outcomes for each region.

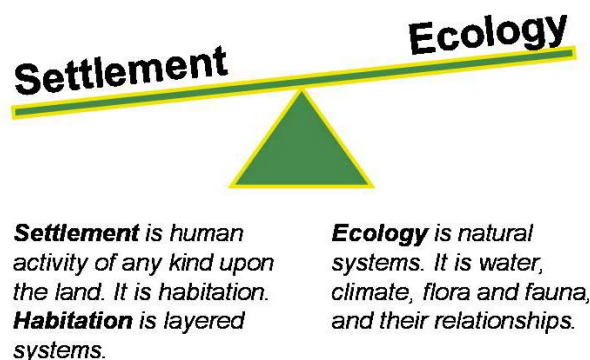
Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

Table 2 – Results to Date	
The South Okanagan:	Water is critical to the Okanagan way of life, yet water is not well understood. The Town of Oliver has emerged as an on-the-ground case study opportunity for testing the application of a ‘water-centric’ approach to community planning.
Greater Vancouver:	Competing demands for essential services limit the time that is left over for municipal staff to champion green infrastructure. The <i>Showcasing Green Infrastructure Innovation Series</i> is demonstrating what can be accomplished under a regional partnership framework for outreach and continuing education.
Vancouver Island:	The pace of development is changing the look-and-feel of Island communities. By linking a voluntary <i>Framework for Recognizing Innovation and Facilitating Water-Centric Land Development Approvals</i> to the ‘time is money’ principle, those who are implementing green infrastructure would be rewarded for designing with nature.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

3.3 Settlement in Balance with Ecology

Experience and understanding gained through the Convening for Action pilots in the three regions is giving meaning to the vision for *Communities in Balance with Water*. Conceptually, this vision is illustrated by the graphic below:



Community Wellbeing: Use of the phrase ‘Communities in Balance with Water’ is intended to focus the attention of decision-makers on two fundamental questions:

- How does a community weigh the benefits and liabilities of change driven by demand for land use?
- What will determine long-term wellbeing for a community or region?

In a nutshell, ‘wellbeing’ is about sustainability of what communities allow or prevent happening on the land. Wellbeing is about balancing settlement activity and ecology.

Healthy systems thrive. Compromised systems, without abolition of threats and restoration, decay.

According to **Tim Pringle**, Executive Director of the Real Estate Foundation of BC, “The key principle to this concept is that settlement and ecology are equal values and they must be as much in balance as possible for the wellbeing of human and natural systems. This principle leads to four statements of elaboration:

- Habitation and ecology are interdependent.
- Although ecology can exist without habitation by man, habitation cannot exist without ecology.
- Both systems are finite and subject to change, including growth, decline and decay – some end state.
- Balance requires measurement. Often the required metrics are not available.

The principle of balancing settlement and ecology helps clarify the relationships that exist among the players who make decisions that determine how land is developed and water is used.”

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

SECTION 4

Moving Forward with the Action Plan

4.1 Context

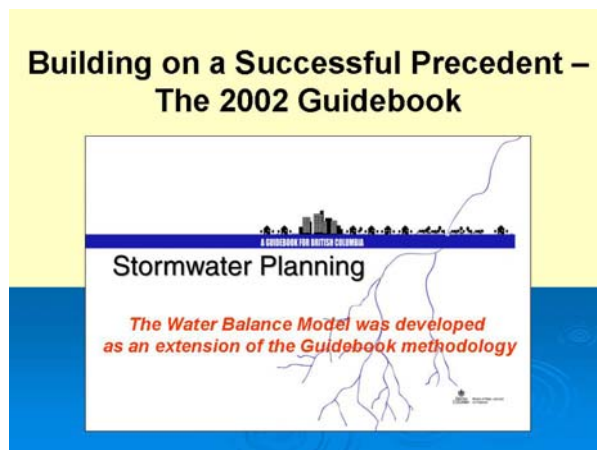
The ultimate objective in Convening for Action is to build an informed ‘community of interest’ so that over time it will evolve into a ‘community of practice’. The challenge lies in moving from talk to action. Leading and implementing change requires bridging of the gap between *talk* (interest) and *action* (practice). The conversations to date have established that:

- Water-centric issues resonate;
- There is a sense of urgency;
- There is an emerging vision; and yet
- Change is slow to happen.

Change is slow to happen because ‘bridging the gap’ is primarily a people matter, not a technical one.

Bridging to Innovation: Elected officials and others are already aware of the technical solutions, including the legislative and financial elements, that are part and parcel of moving forward with an approach that will achieve the vision for *Communities in Balance with Water*. Bridging the gap between talk and action involves motivating people to engage in ways that are meaningful enough to them such that they will be inspired to and be capable of acting.

The Convening for Action regional pilots can be viewed as bridge footings. They also show what can be achieved by having conversations. Looking ahead, the focus of *Convening for Action in British Columbia* will be on what else needs to be in place in terms of awareness, commitment to act, partnerships and the like.



Water-Centric Guidebook: Pilot program outcomes will be synthesized as chapters in *Water-Centric Planning: A Guidebook for British Columbia*, a deliverable under the Water Sustainable Action Plan. The Guidebook is how the bridging process will be achieved.

The Guidebook will be the ‘telling of the stories’ of how change is being implemented on-the-ground in BC. Before the Guidebook chapters can be written, the regional case studies have to run their course.

The precedent for a transformational document which is founded on a bottom-up case study approach is *Stormwater Planning: A Guidebook for British Columbia*, published in 2002.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

4.2 Guidebook Vision

The process for development of the Water-Centric Guidebook is an incremental one that has two parallel tracks. These tracks feed into each other at various points along the way:

- **Track #1** comprises the case study content that flows from the regional pilot programs.
- **Track #2** involves conversations, working sessions and workshops where case study content is vetted and refined.

Experience shows that the two-track approach leads to better understanding and better decisions, with more stakeholder support.

Ingredients for Success: As the Stormwater Guidebook has demonstrated, the potential for creating change on the ground via a transformational guidance document revolves around four basic ingredients:

- ☑ Start with a unifying philosophy;
- ☑ Develop a science-based and pragmatic methodology for undertaking technical analyses;
- ☑ Create a web-based calculation tool that has a user-friendly interface; and
- ☑ Implement a multi-audience outreach and continuing education program (OCEP) that provides consistent messaging.

The unifying philosophy for the Water-Centric Guidebook is captured as follows:

Water OUT = Water IN means we must deal with uncertainty and manage risk to ensure a safe and adequate water supply.

Just as the *Water Balance Model for British Columbia* was developed as an extension of the Stormwater Guidebook, it is anticipated that the *Water Conservation Calculator* will be the engine for an online tool that will be an extension of the Water-Centric Guidebook.

Local Government Foundation: Building on the precedent established by the Stormwater Guidebook, the Water-Centric Guidebook is also being developed in partnership with local government in order to:

- Draw on case study experience;
- Formalize a science-based understanding to set performance targets; and
- Incorporate feedback loops with local governments and the land development community during content development.

Looking ahead, it is envisioned that the Town of Oliver case study will be to the Water-Centric Guidebook what the City of Chilliwack was to the Stormwater Guidebook.

The Green Infrastructure Communication Guide for elected officials is an integral part of Guidebook development. The Guide will tell ‘the story of the Guidebook’ in a way that will make it easy for elected officials to communicate the rationale for changing the way land is developed and water is used.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

4.3 Building Capacity

The Convening for Action program is proving successful because it ‘connects the dots’ through a conversational approach that builds trust and respect, and this in turn leads to dialogue and consensus. Furthermore, it engages, informs and educates stakeholders on-the-ground.

The program is also bringing federal/provincial programs and local needs into alignment by demonstrating the linkages between strategic vision/planning and on-the-ground infrastructure, and showcasing hands-on tools that are being developed to support water-centric planning.

The table below identifies over-arching objectives for advancing Convening for Action pilots in the three regions. The desired outcome is to build the capacity to bridge the gap between talk and action.

Building Capacity – Objectives for Next 12-Month Period		
Convening for Action in the South Okanagan	Convening for Action in Greater Vancouver Region	Convening for Action on Vancouver Island
1	1	1
Expand the Ad Hoc Mayors Focus Group through more one-on-one conversations	Expand the Ad Hoc Mayors Focus Group through more one-on-one conversations	Expand the Ad Hoc Mayors Focus Group through more one-on-one conversations
2	2	2
Implement a Water OUT = Water IN outreach and continuing education program as part of the Regional Growth Strategy	Initiate a Mayors Forum on Green Infrastructure <small>(note: a program element could be a Green Infrastructure Speakers Series hosted by individual mayors)</small>	Undertake consultation workshops to vet the Framework for Facilitating Water-Centric Land Development Approvals
3	3	3
Implement an Okanagan* Green Infrastructure Showcasing Innovation Series	Implement Year 2 of the Green Infrastructure Showcasing Innovation Series	Implement a Green Infrastructure Showcasing Innovation Series
4	4	4
Undertake Water Balance Model Training Workshops* for Green Subdivision Design	Undertake Water Balance Model Training Workshops for Green Subdivision Design	Undertake Water Balance Model Training Workshops for Green Subdivision Design
5	5	5
Take stock to assess how people have put into practice what they have learned	Report out on monitoring results to assess how people have put into practice what they have learned	Take stock to assess how people have put into practice what they have learned
* presumably in collaboration with the Okanagan Basin Water Board as a region-wide program		

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

4.4 Communication with Elected Officials

The initial one-on-one conversations with elected officials have been essential to gaining an understanding of the needs and wants of municipal leaders. Looking ahead, an important next step is to bring forward the early findings into appropriate forums for validation. Opportunities to inform a dialogue among groups of elected officials include:

- The Building Sustainable Communities Conference that will be held in Kelowna in November 2006.
- Meetings of Regional District Boards.
- The Annual Conference of the Union of British Columbia Municipalities in September 2007.

Infrastructure design is in a major sea-change, and British Columbia is in the vanguard of that change. The Green Infrastructure Partnership is educating stakeholders regarding the benefits of a 'design with nature' approach to community planning and development. The purpose in reporting out at these forums would be to help municipal leaders create the 'buzz', the interest and the energy to imagine what the future could look like and then make it happen.

**The Core Issue:
How Will British Columbia Accommodate
A Doubling of the Population
& What Will Our Growth Regions Look Like ?**



Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

4.5 Next Steps

To build on the early momentum created by *Convening for Action in British Columbia*, it will be necessary to secure partnership commitments and program funding to:

1. Conduct additional interviews of mayors and report out at forums for elected officials.
2. Initiate a Mayors Forum on Green Infrastructure in Greater Vancouver.
3. Conduct one-on-one interviews with a Chief Administrative Officers Focus Group.
4. Develop Green Infrastructure Communication Guides for elected officials and senior managers.
5. Continue the Green Infrastructure Showcasing Innovation Series in Greater Vancouver.
6. Initiate Green Infrastructure Showcasing Innovation Series in the Okanagan and on Vancouver Island.
7. Organize consultation workshops on a Framework for Recognizing Innovation and Facilitating Water-Centric Land Development Approvals.
8. Implement a *Water OUT = Water IN* outreach and continuing education program in the South Okanagan.
9. Develop the case study content for the Water-Centric Guidebook.
10. Develop a web-based Water Conservation Calculator as an extension of the Water-Centric Guidebook.
11. Integrate the Water Conservation Calculator as part of a water use module in the Water Balance Model.
12. Undertake Water Balance Model training workshops province-wide.
13. Write stories for WaterBucket communities-of-interest.
14. Report out via WaterBucket on the results of performance monitoring for green infrastructure and water sustainability projects.

APPENDICES

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How to Read these Appendices

This synthesis report is a 2-in-1 document: the front-end is designed primarily for elected officials so that they will have a broadbrush picture; while these Appendices are intended to provide civil servants with the supporting detail that they need regarding program objectives and outcomes for the three Convening for Action regional pilots.

Change on-the-ground is being advanced through partnerships:



- Green Infrastructure Partnership
- Convening for Action in British Columbia
- Water Bucket Website Partnership
- Water Balance Model Partnership

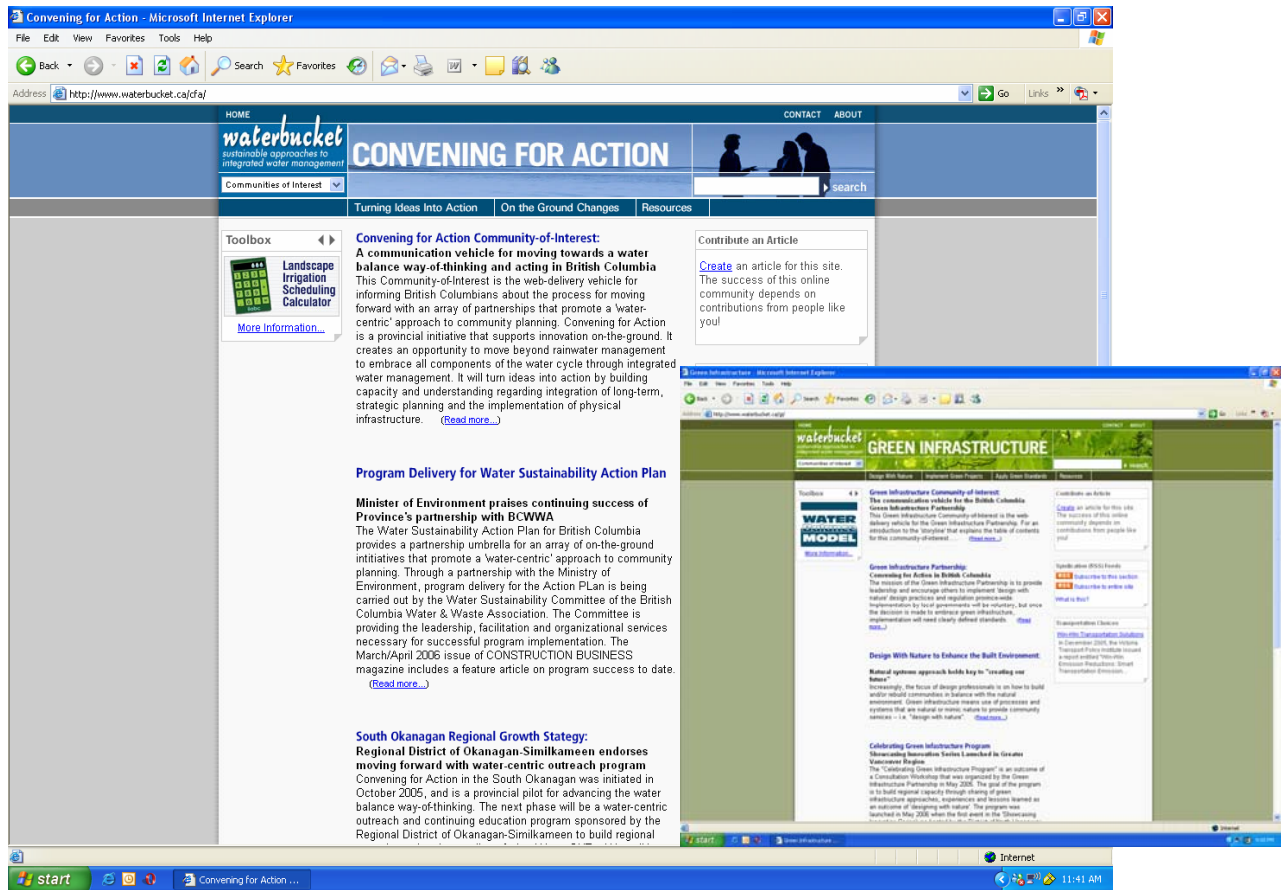
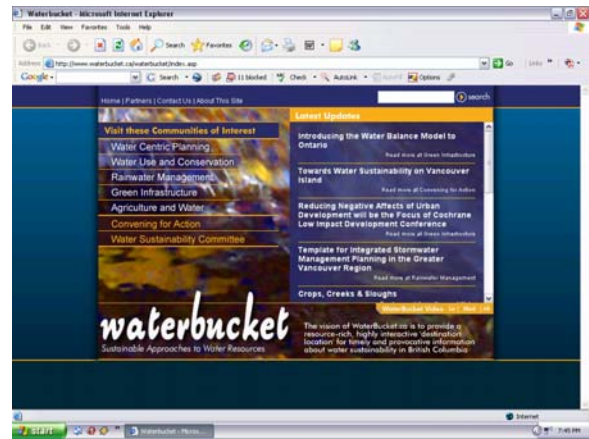
In addition to a stand-alone appendix for each regional pilot program, the 'book-ends' for the Appendices are included for the purposes of introducing two other inter-connected partnerships, namely: the Water Bucket Website and the web-based Water Balance Model are also key to facilitating changes on the ground.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

APPENDIX A

WaterBucket Website

Convening for Action in British Columbia has its own community-of-interest on the WaterBucket Website: www.waterbucket.ca WaterBucket is the recognized 'water portal' for British Columbia, serves as the communication vehicle for each element of the Water Sustainability Action Plan (including the Green Infrastructure Partnership), and presently comprises seven communities-of-interest. For access to stories that elaborate on the three regional pilots, click on this direct link: www.conveningforaction.ca.



Water - Choosing Sustainability for Life & Livelihoods: Convening for Action on Vancouver Island

APPENDIX B

Vancouver Island

Commencing with the Rainwater Harvesting Series in June 2005, there has been a series of outreach events on Vancouver Island over the past year where the unifying theme has been sustainability and/or a water-centric approach to community development.

- **Meeting of the Minds Workshop Series:** Workshops were held by invitation in Parksville in September 2005 and May 2006. The first was sponsored by BCWWA. It was the consensus of



the participants that the dialogue initiated at the first workshop continue in the future with the goal of building an effective long-term communications network addressing issues facing both the public and the water and wastewater industry on Vancouver Island. As an interim step, an ad hoc committee was formed to establish future directions. The Meeting of the Minds initiative has evolved into **Convening for Action on Vancouver Island**.

- **Water in the City Conference:** Under the umbrella of Convening for Action in British Columbia, a consultation workshop is being held in conjunction with the conference. This is a direct outcome of the second Meeting of the Minds Workshop. Participation is by invitation.



Titled *Towards Water Sustainability on Vancouver Island*, the workshop is intended to coalesce a broad-based coalition of stakeholders under the banner of **Convening for Action on Vancouver Island**. The structure that proved so successful in inspiring participants at the 2005 Greater Vancouver Workshop will again be applied.

WIC Workshop: The purpose of the Water in the City (WIC) Workshop is to initiate the process for development, through dialogue, of a *Framework for Recognizing Innovation & Facilitating Water-Centric Land Development Approvals*. This voluntary Framework could be used by local governments to assess whether land development projects are in balance with ecology.

The Framework will provide a way to reward innovation. The assessment process will quantify how a project integrates and harmonizes the development footprint within the watershed context, and achieves water-centric sustainability as a condition of land development approval.

Desired Outcome in Rewarding Innovation:

Enhance community livability, improve watershed and stream health, build/restore aquatic habitat, reduce infrastructure costs, eliminate wasteful water use, and reduce rainwater runoff volumes.

Provincial Pilot: The proposed Framework will be the first deliverable under Convening for Action on Vancouver Island, and will have province-wide application. Because the Framework dovetails with the *Streamlined Environmental Approvals Protocol* as envisioned by the Green Infrastructure Partnership (note: refer to Appendix C), the two can be viewed as one and the same.

To provide certainty and reward those who are implementing green infrastructure, the Framework would promote linkages between the 'time is money' principle and the opportunity to use the savings in interest costs to finance environmental restoration.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action on Vancouver Island



A WORKSHOP: TOWARDS WATER SUSTAINABILITY ON VANCOUVER ISLAND

When:	Sunday, September 17th 2006
Where:	Victoria Conference Centre Saanich Room
What Time:	1215 until 1630
Why:	'Meet, Greet and Eat' at 1215 'Convene for Action' promptly at 1300
Desired Outcomes:	<ul style="list-style-type: none">▪ By 2010, be well on the way to achieving water sustainability on Vancouver Island.▪ As a regional pilot program for <i>Convening for Action in British Columbia</i>, and as a program deliverable, develop a voluntary framework that could be adapted province-wide by local governments and environmental agencies for recognizing innovation and facilitating water-centric land development approvals.▪ On September 17, take the first step in the process to coalesce a broad-based coalition of stakeholders under the banner of <i>Convening for Action on Vancouver Island</i>.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the Greater Vancouver Region

APPENDIX C

Greater Vancouver

In Greater Vancouver, two events were held in May 2005 under the umbrella and work plan of *Convening for Action in British Columbia*. These events created the momentum for a pilot program.

- **REAC Consultation Workshop:** The Green Infrastructure Partnership sponsored a workshop in collaboration with the Regional Engineers Advisory Committee (REAC). The City of Surrey hosted this event. The lead partner for workshop organization and documentation of outcomes was the BCWWA Water Sustainability Committee.

The exchange of information underscored just how much innovation is taking place on-the-ground throughout the region. The report resulting from the workshop is titled *The Green Infrastructure Partnership: Convening for Action in British Columbia*.

- **Rainwater Harvesting Series:** Workshops held in Vancouver and Victoria were part of a series of cross-Canada events sponsored by Canada Mortgage & Housing Corporation. The lead partner for workshop organization and documentation of outcomes was the BCWWA Water Sustainability Committee.



Because rainwater harvesting is a potential 'new' source of water supply, the unifying theme was 'thinking outside the pipe' and the focus was on "when, not if" this will happen. The registration response established that there is an appetite for new approaches; and the local case studies demonstrated that substantial progress is already being made.

Key Message: Built and Natural Environments are Connected



Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the Greater Vancouver Region

Celebrating Green Infrastructure: The reason for convening the 2005 REAC Workshop was to solicit the participation of willing municipalities in developing green infrastructure content for policy and technical communication guides that would be written from the perspective of elected officials and senior managers, respectively.

Key Messages: At the REAC Workshop, it became clear that pilot projects are scattered around the region, but there is no overall vision for what each community wants its municipality to look like. Other key messages are distilled below:

- **Role of Champions:** The rate of progress in changing standard practices generally depends on the willingness of individual champions to push the envelope in applying new approaches.
- **Availability of Resources:** Even where there is a willingness on the part of a local government to deliver changes in policies and practices, competing demands for essential services limit the time that is left over for municipal staff to champion green infrastructure.
- **Experience:** Because green infrastructure is currently viewed by local governments as non-essential, new approaches are needed to share, adapt and leverage experience among practitioners - both within and among municipalities.
- **Effective Communication:** Relying solely on written documents is not the way to create the appetite for change; new approaches are needed to inform and educate elected officials and the community at large.

By pooling resources under a regional partnership framework for outreach and continuing education, it was concluded that municipalities can leverage the efforts of their own staffs and develop a common understanding of issues and solutions.

Outreach & Continuing Education: Guides by themselves are not sufficient to move green infrastructure *from market-niche to market-share*. Rather, the process to:

- create,
- promote and
- implement

a consistent regional vision for ‘designing with nature’ depends on having an outreach and continuing education program that reaches a range of target audiences and builds capacity.

Outreach & Continuing Education Program (OCEP)				
Water Bucket Website	Celebrating Green Infrastructure: Showcasing Innovation Series	Communication Guide for Elected Officials	Guide to Green Infrastructure Standards	Water Balance Model
Speaker Series		Communication Guide for Senior Managers	Green Infrastructure Standards	Streamlined Environmental Approvals Protocol

Celebrating Green Infrastructure: Showcasing Innovation Series is an amalgam of two OCEP elements identified by REAC Workshop participants as rating a high priority for early implementation, namely:

- **Project Tours:** To enable sharing and cross-fertilizing of ‘how to do it’ case study experience, organize regional field trips.
- **Workshop Roadshow:** To ensure consistent messaging and build capacity within the member municipalities, pool municipal resources to conduct training workshops.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the Greater Vancouver Region

Showcasing Innovation Series: The goal of the Showcasing Innovation Series is to build regional capacity through sharing of green infrastructure approaches, experiences and lessons learned as an outcome of 'designing with nature'. The series is a building block process --- each time the objective is to raise the bar when celebrating successes in Greater Vancouver municipalities. The program was launched in May 2006.



The Showcasing Innovation Series is organized as a workshop in the morning followed by field tour in the afternoon. The series is structured

this way to create opportunities for practitioners to network and share "how to do it" experiences on the ground. The host municipalities set the scene for the field tour by providing comprehensive and in-depth presentations. The program is designed for engineering, planning, land development, operations, and environmental departments in Greater Vancouver municipalities.

According to **Paul Ham**, Chair of the Green Infrastructure Partnership, "When we talk to practitioners in local government, it doesn't matter what the region, the message is the same...they tell us that they are too busy to communicate with their colleagues in neighbouring municipalities. Yet the irony is that there is much to learn by sharing information with each other. At the end of the day, it seems that it takes a third party to bring people together. Our intention is that the Greater Vancouver pilot will provide the inspiration for similar Showcasing Innovation Series on Vancouver Island and in the Interior."



The first in the series – Showcasing Innovation in North Vancouver – successfully used a lane, an arterial highway and the Maplewood community as real-life case studies that informed



participants about the benefits of innovation. For the lane example, selection of porous pavement to infiltrate rainwater runoff was an outcome of an inter-departmental design charrette where the Water Balance Model was a key decision tool.

The second in the series – Showcasing Innovation in Surrey – was held in June 2006 and focused on what the City of Surrey believes it can systematically accomplish on-the-ground, at a watershed scale, now and over the next 50 years by building on experience gained from the East Clayton Sustainable Community.



The third in the series – Showcasing Innovation in Vancouver and at the University of British Columbia – is scheduled for September 2006 and will feature eco-friendly roadways that reflect a 'design with nature' approach to integrating rainwater runoff management and transportation design.



Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the South Okanagan

APPENDIX D

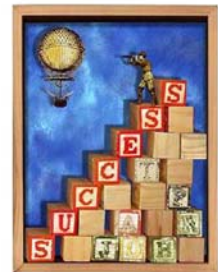
South Okanagan

Drought, forest fires and floods in 2003 combined to create a 'teachable moment' for change in British Columbia, and especially in the Okanagan. Because water has been identified as the #1 concern of the public, the South Okanagan Regional Growth Strategy is a provincial pilot for implementation of a 'water-centric' approach to community planning at a sub-basin scale. This pilot is creating an array of opportunities to learn from case study experience.

Building Capacity: A desired outcome in building on case study experience is that a chain of events will be triggered that will ultimately result in implementation of well-grounded sustainability policies and practices that can be adapted province-wide.

Building Blocks: *Convening for Action in the South Okanagan* is being cross-fertilized by other processes and is also informing those processes. Building blocks include:

- Water-Centric Planning:
A Guidebook for British Columbia
- South Okanagan
Regional Growth Strategy
- Convening for Action
in the South Okanagan
- Town of Oliver:
Smart Growth on the Ground



When 'convening for action', we build capacity through a 3-step process:

1. **Vision:** What do you want this place to look like in 20 years, 50 years?
2. **Starting Point:** What are you doing to achieve this?
3. **Strategy:** What are you going to do better or differently to get from here to there?

The intent is that the Town of Oliver experience will provide a 'water-centric template' for other communities in the South Okanagan, in particular those seeking provincial funding for infrastructure projects. In terms of the building block process:

- Convening for Action in the South Okanagan is being informed by Oliver.
- Convening for Action in turn is informing the Regional Growth Strategy.
- Convening for Action is also informing the Okanagan Basin Water Board.

Case study outcomes will be synthesized as chapters in *Water-Centric Planning: A Guidebook for British Columbia*, a deliverable under the Water Sustainable Action Plan.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the South Okanagan

Outcomes and Outputs: Convening for Action is an outcome-oriented process. Along the way, ‘outputs’ are reports that document how progress is being made and outcomes are being achieved. The end goal is to improve practices and standards for land development and water use.

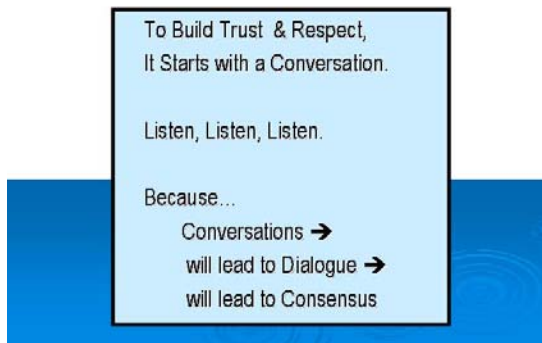
Desired Outcome in Designing with Nature:

Enhance community livability, reduce infrastructure costs, reduce water use and rainwater runoff volumes, improve watershed and receiving water health, and build/restore aquatic habitat.

Deliverables: This report is the fourth in a series of four. The context for each of the previous three reports is captured as follows:

- ☑ *Moving Towards a Water Balance Way-of-Thinking and Acting in the South Okanagan: A Synthesis of Conversations with Okanagan-Similkameen Residents, February 2006* --- In launching Convening for Action, we decided we would first have informal discussions with a diverse group of individuals --- because we believed this approach would be an effective way to gain an on-the-ground understanding of how communities in the Okanagan view settlement, economic growth and water issues. [The conversational approach facilitated the ‘connecting of dots’ so that synergies resulted.](#)

Seek to Understand:



- ☑ *Water-Centric Planning in Oliver: Dealing with Uncertainty and Managing Risk, April 2006* --- The first round of conversations created the momentum for additional conversations with an expanding group about a ‘water-centric’ approach to planning. During the period November 2005 through February 2006, these additional conversations led to a decision by the Town of Oliver and the Oliver & District Community Economic Development Society to co-host a water-centric working session. [The Oliver process demonstrated how to bring provincial programs and local needs into alignment.](#)



The March 2006 Working Session was the first step in a long-term educational process to change water-use habits, technologies and practices in Oliver

- ☑ *Report on a Mini-Summit dealing with Water Stewardship & Sustainability in the South Okanagan: A Communiqué on Water for Life and Livelihoods, May 2006* --- A ‘Mini-Summit’ was organized as part of the 2006 Annual Conference of the BC Water & Waste Association that was held at Whistler. This precedent-setting approach to audience participation accomplished several objectives. First, the fact that the conference was a provincial forum raised the profile of the South Okanagan as a provincial pilot for water-centric planning. Secondly, it provided the Convening for Action team with a focus group opportunity to test an approach to engaging an audience in a dialogue. [The Mini-Summit commenced the branding process within British Columbia for the term Water for Life and Livelihoods.](#)

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the South Okanagan

RDOS Regional Growth Strategy: The Regional District of Okanagan-Similkameen (RDOS) is developing a Regional Growth Strategy for the South Okanagan. Everything is connected, and how we develop land determines how water is used and how water runs off the land. The 'water component' of the *South Okanagan Regional Growth Strategy* is being developed through collaboration with Convening for Action. The essence of the collaborative process is synthesized opposite.

The Town of Oliver experience provides credibility and legitimacy for the 'water component' because it demonstrates how to bring people together and connect the dots. At the same time, the Oliver experience also shows other municipalities how they too can fulfil their commitments under the Regional Growth Strategy.

Regional Growth Strategy and Convening for Action

Growth Strategy and 'Convening for Action' are collaborating to:

- **Build vision:** what will the South Okanagan look like in 20 years, 50 years?
- **Describe the starting point:** good practices, functioning relationships, gaps and challenges for water stewardship
- **Identify and propose strategies:** what will be done to get from here to there (e.g. water-centric planning, transferring and supporting success)

A regional growth strategy is the most effective way to integrate the full range of government and non-government interests in a region. Implementation Agreements that flow from the *South Okanagan Regional Growth Strategy* will hold the key to long-term success in achieving water sustainability. Implementation Agreements will define what local governments will actually do on-the-ground to change policies, programs and practices that influence how land is developed and water is used.

3 Key Elements of the Growth Strategy System



Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the South Okanagan

Provincial Grant Programs and Sustainable Infrastructure: There is a logical link between a growth strategy and infrastructure. The South Okanagan Regional Growth Strategy and Convening for Action are working together to support implementation of 'sustainable infrastructure'.

Experience shows that there is a strong linkage between effective long-term local government planning and long-term infrastructure costs. A Growth Strategy that is mindful of this connection, and is effectively implemented on the ground, can result in long-term infrastructure cost-efficiencies plus positively influence the future form of development.

In the case of water-centric infrastructure, the Province supports innovative local government planning and is working proactively to improve integration of long-term, strategic planning and implementation of physical infrastructure.

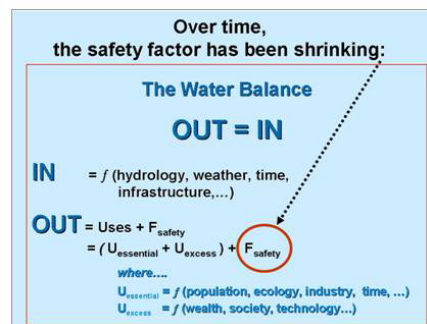
Context is provided by the water balance equation opposite. This illustrates the essence of water-centric thinking, and has provided a technical basis for Convening for Action presentations to elected officials and others. A key message is: Ensuring a safe and adequate water supply depends on understanding the science behind the **Water OUT = Water IN** equation, as well as understanding what this means operationally on the ground. Over the past 20 years or so, we have effectively used up the safety factor because we have not understood climate variability.

Regional Growth Strategy, Convening for Action and Sustainable Infrastructure

Growth Strategy and 'Convening for Action' are collaborating to support implementation of sustainable infrastructure by:

- Making the linkages between strategic vision/planning and 'on-the-ground' infrastructure;
- Providing 'real-life' examples of what the vision looks like;
- Achieving improved value regarding both capital and life-cycle costing for infrastructure investments (economic, social and environmental); and
- Supporting and promoting provincial programs and objectives.

Convening for Action brings applied science to the conversation



To ensure a safe & adequate water supply:

- Deal with uncertainty
- Manage risk

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the South Okanagan

Water for Life & Livelihoods: Convening for Action has borrowed this term from the United Kingdom, where basin plans are being prepared in accordance with the European Community's 'water policy directive'. The purpose in branding this term in British Columbia is to focus attention on what is at stake over both the short and long terms.

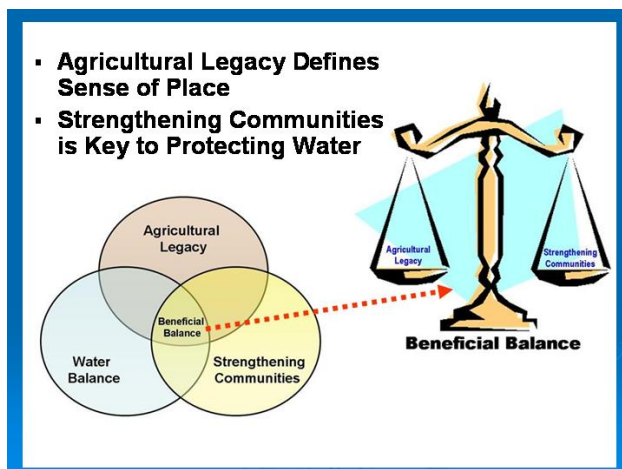
British Columbia Precedent: Use of the phrase *Water for Life and Livelihoods* conveys the fundamental principles of sustainability of natural systems in their own right and in relation to the health and wellbeing of people who benefit from the use of water for basic life needs and economic activity. Application of this approach is being pursued in the South Okanagan by using the planning systems and programs we have in British Columbia.

In June 2006, the Steering Committee for the *South Okanagan Regional Growth Strategy* established a British Columbia precedent when it approved these policy statements relating to water management

- *Apply the concept water for life and livelihoods to promote a water balanced approach to social, economic and environment sustainability over the short and long term.*
- *Promote three guiding principles to stretch the water resource capacity of the Okanagan basin:*
 - a. *Encourage best water management practices in agriculture to maintain accessibility, adequate water quality and affordability for agriculture efficiency to offset climate variability and/or expand irrigated farmland;*
 - b. *Reduce residential water use to support population growth in urban areas;*
 - c. *Use best practices to manage water use for industrial, commercial and institutional purposes.*

Promoting these Guiding Principles via the Growth Strategy will *Protect the Agricultural Legacy and Strengthen Communities:*

1. Increase Agricultural Water Use Efficiency to Offset Climate Variability and/or Expand Irrigated Farmland
2. Reduce Residential Water Use to Support Population Growth in Urban Centres.



Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in the South Okanagan

Tools that Make a Difference: The Convening for Action initiative is providing stakeholders with the tools and the experience to develop land and use water differently. Tools that are either already available or under development include:

- **Water Balance Model for BC:** This web-based calculator is used for scenario modeling and decision support. It quantifies the benefits – in terms of reducing rainwater runoff volume – of installing source controls such as green roofs, rain gardens and infiltration facilities under different land use, soil and climate conditions.



- **Landscape Irrigation Scheduling Calculator:** This online tool enables users to determine when and how much to water turf, thereby achieving more efficient outdoor water use.



- **Water Conservation Calculator:** This decision support tool for quantifying the benefits of specific water conservation measures is currently being pilot-tested by a number of municipalities in different regions, and will be accessible via the Water Bucket website once it is converted to an online tool.

A defining outcome of *Convening for Action in Oliver* is the vision for combining the Water Conservation Calculator with a 'land use front-end'. The integrated tool would then enable comparison modeling of water use versus development type (e.g. single family versus high density residential). This would provide the missing link between how we develop land and how we use water.

- **Okanagan Agricultural Water Model:** The database comprises land use, crop types, irrigation systems and soil conditions for each and every property in the Okanagan Basin.

Results

Water Use Reporting and Land-Use Database (WURLD) will incorporate data from:

- Metering
- Scheduling
- Climate
- Land use

A report can be generated for producers that shows actual water use compared to requirements based on climate.

- **Okanagan Water Portal:** This pending community-of-interest on the Water Bucket Website will be designed around the recently created *Okanagan Waterscape Poster*, and will provide the means to publicize Okanagan success stories and lessons learned.

The poster consists of panels that describe the water cycle and physical processes at various scales, sources of water contamination, the effects of climate change, best practices for water source protection, water conservation methods, and other related topics.

- **Infrastructure Benchmarking Initiative:** Province-wide data are being compiled so that BC municipalities can measure and compare their utility performance with others.

Water - Choosing Sustainability for Life & Livelihoods: Convening for Action in British Columbia

APPENDIX E

Water Balance Model

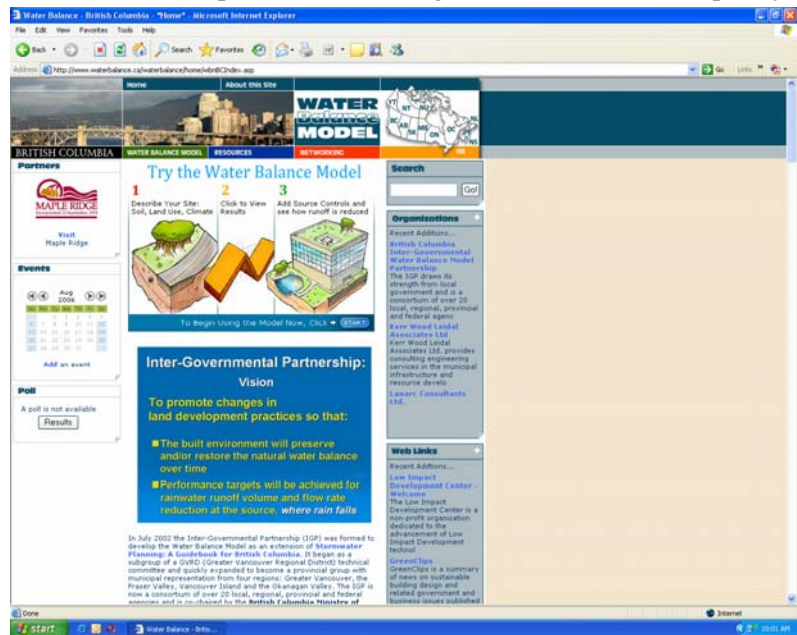
In 2002, the Province published *Stormwater Planning: A Guidebook for British Columbia*. The Guidebook formalized a science-based understanding to set performance targets for reducing rainwater runoff volumes from individual sites, neighbourhoods and watersheds.

Also in 2002, an Inter-Governmental Partnership (IGP) was formed to develop the web-based *Water Balance Model for British Columbia* as an extension of the Guidebook. The IGP recognized that practitioners needed an easy-to-use tool so that they could readily calculate annual runoff volumes under different combinations of building coverage, rainfall, soil type and depth, tree canopy coverage, and source controls.

The Water Balance Model is supporting 'sustainable drainage' initiatives within BC and across Canada. At present, the main focus is on the use of source controls for runoff volume reduction to protect property, habitat and water quality. Less volume means less flooding of agricultural and/or suburban lowlands. This is one reason why the WBM has emerged as the rainwater management tool of choice in making sustainable land development decisions - it demonstrates how to achieve a light hydrologic footprint.

The IGP draws its strength from local government and is a consortium of local governments and regional, provincial and federal agencies. The IGP began as a subgroup of an inter-agency technical committee of the Greater Vancouver Regional District. It quickly expanded to become a provincial group with municipal representation from four regions of British Columbia: Greater Vancouver, the Fraser Valley, Vancouver Island and the Okanagan Valley.

Drainage engineers want to simulate what happens to overflows once source controls have reached capacity during sustained wet weather periods. To provide the engineering community with 'one-stop shopping', the WBM calculation capabilities are being enhanced and water quality



is being added. This means engineers will be able to hydraulically model the storage and routing of outflows from a subdivision and/or neighbourhood through a detention pond or down a stream channel.

The IGP has pioneered a comprehensive and multi-layered communications and workshop training program. The goal is to build broad-based support for moving from talk to action in implementing on-the-ground changes in rainwater management practices at the site level. Key partners for delivery of hands-on training workshops for practitioners include the Real Estate Foundation of BC, the Urban Development Institute, and the Association of Professional Engineers & Geoscientists of BC.