

## Partnership for Water Sustainability in British Columbia

*In Collaboration with Green Infrastructure Partnership &  
Metro Vancouver Stormwater Interagency Liaison Group*



## Implementation of “ISMP Course Correction” In Metro Vancouver

An Educational Program to Transfer Knowledge, Develop Leadership Capacity,  
and “Achieve More With Less”

### **Convening for Action in Metro Vancouver: Visualize What We Want Our Region to Look Like in 50 years**



**April 2011**

## Implementation of “ISMP Course Correction” in Metro Vancouver

An Educational Program to Transfer Knowledge, Develop Leadership Capacity & “Achieve More With Less”

### CONTEXT FOR COLLABORATION WITH SILG

1. Metro Vancouver’s *Integrated Liquid Waste & Resource Management Plan*, finalized in May 2010, is aligned with the Province’s Living Water Smart and Green Communities initiatives.
2. The Partnership for Water Sustainability is helping the Province implement the *Living Water Smart* and *Green Communities* initiatives. The Partnership is doing that through shared responsibility in delivering the *Water Sustainability Action Plan for British Columbia*.
3. Local governments that are Water Balance Model Partners are charter members of the Partnership.
4. The Partnership is collaborating with Metro Vancouver and various municipalities and agencies to implement an initiative called *Convening for Action in Metro Vancouver*. (Refer to accompanying letter of support from the Metro Vancouver CAO.)
5. The need for an ISMP ‘course correction’ was identified by the *Metro Vancouver Liquid Waste Management Reference Panel* in its Final Report to the Metro Vancouver Waste Management Committee, released in July 2009.
6. Local governments bear the entire financial burden to stabilize and restore watercourses impacted by increased rainwater runoff volume after land is developed or redeveloped to a higher density. The resulting unfunded ‘infrastructure liability’ is a driver for the *ISMP Course Correction*.
7. During the period November-December 2010, the Partnership released a 5-part series that integrated **lessons learned** by leading local governments when undertaking watershed-based planning. A unifying theme in implementing the ‘course correction’ is to “achieve more with less”.
8. Release of the [Summary Report for ISMP Course Correction Series](#) followed in February 2011. This provides a guide for those about to embark upon an ISMP process.

### ABSTRACT FOR AN “ISMP COURSE”

1. Under the umbrella of *Convening for Action in Metro Vancouver*, the Partnership now proposes to develop and deliver an educational program in collaboration with SILG.
2. This educational program will help the region meet its commitments pursuant to the Integrated Liquid Waste & Resource Management Plan.
3. Initially, the program focus will be on the *ISMP Course Correction*. Program objectives include:
  - provide municipalities with the tools and education to “achieve more with less”; and
  - help them limit and/or mitigate the potential for incurring an unfunded ‘infrastructure liability’.
4. The program will be a two-day course taught by experienced practitioners in a classroom setting. The course will guide participants through the steps in developing a balanced and holistic ISMP.
5. There is a range of options for course delivery: at one end of the continuum, this could involve going to the places where people work (i.e. for inter-departmental learning); at the other end, it might involve bringing together a group of municipalities (i.e. for inter-governmental sharing).

### FUNDING

The Partnership has a grant to initiate this educational program on behalf of the region. There will be a registration fee for the course to provide cost-recovery for program delivery.

## THE ISMP COURSE CORRECTION: AN OVERVIEW

An ISMP that is truly integrated would provide a clear picture of how local governments can apply land use planning tools to create a future watershed condition desired by all. This approach contrasts with a conventional ISMP approach where the primary emphasis is on data collection, computer modeling and pipe analyses; and results in an enhanced Master Drainage Plan. (Refer to Figure 1)

### Framework for a Balanced and Holistic ISMP

The accompanying Table 1 is a foundation piece for the 'ISMP Course Correction'. Table 1 distills City of Surrey experience in commissioning seven ISMPs. Surrey has evolved a four-stage process for ISMP development:

- Stage 1 – “What Do We Have?”
- Stage 2 – “What Do We Want?”
- Stage 3 – “How Do We Put This Into Action?”
- Stage 4 – “How Do We Stay On Target?”

The course on the 'ISMP Course Correction' will guide participants through each stage. Participants will learn how they can draw on in-house resources, adapt the City of Surrey's ISMP framework, apply the Bowker Creek approach (in the Capital Region) to watershed team-building, and embed the vision for a *Watershed Landscape Restoration Strategy* in land use planning processes.

### Course Curriculum: A Blueprint for Action

Table 1 lays out the step-by-step process for plan development. Lessons learned by those who have developed watershed-based plans are synthesized as a set of five actions that provide the backbone for the course curriculum. Together, these lessons learned constitute a 'blueprint for action':

1. Re-Focus on Stream Health and Watershed Outcomes
2. Capitalize on Green Infrastructure Opportunities to 'Design with Nature'
3. Apply a Knowledge-Based Approach to Focus on Solutions and Outcomes
4. Move to a Levels-of-Protection Approach to Sustainable Service Delivery
5. Apply Inexpensive Screening Tools to 'Do More with Less'

Each action will correspond to a chapter in a 'how-to' guide that will serve as the course curriculum. These 'chapters' will add depth to the 4-stage process laid out in Table 1.

### A Two-Day Course

There is flexibility in how the 2-day course can be delivered. The course could be scheduled on consecutive days; or Day #2 could follow at different times in different locations (including the places where people work). This will depend on the 'needs-and-wants' of participating local governments.

Day #1 will be inter-departmental in scope; with Day #2 conducted in a computer lab setting for those interested in learning how to apply screening tools along with the Water Balance Model to establish performance targets at the watershed, neighbourhood and site scales.

The course would be eligible for professional development credits (e.g. APEGBC, PIBC).

### Team Teaching

There are many champions in local government. The City of Surrey, Bowker Creek Initiative and District of North Vancouver stand out because of their sustained commitment to collaboration, alignment and integration: *Establish the vision, set the target, and then implement*. The teaching team will draw on these and other champions in the local government setting to share their experiences.



**metrovancover**

Greater Vancouver Regional District • Greater Vancouver Water District

Greater Vancouver Sewerage and Drainage District • Metro Vancouver Housing Corporation

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January 6, 2011

File: CR-07-00

Jen McCaffrey, Grants Officer  
Real Estate Foundation of BC  
570 - 355 Burrard Street  
Vancouver, BC V6C 2G8

Dear Ms. McCaffrey:

Re: **PARTNERSHIP FOR WATER SUSTAINABILITY**  
Convening for Action in Metro Vancouver  
Letter of Support for 2011 Grant Application

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We understand the *Partnership for Water Sustainability in British Columbia* is seeking funding from the Real Estate Foundation to enable it to undertake 'convening for action' initiatives in several regions, including Metro Vancouver. Accordingly, we are pleased to provide this 'letter of support' to accompany the Partnership's grant application.

We foresee mutual benefits in **Convening for Action in Metro Vancouver**. The initiative would enable Metro Vancouver to contribute resources to help the Partnership advance a 'design with nature' approach to community design, green infrastructure innovation and regional water sustainability. Of importance to Metro Vancouver, the Partnership comprises individuals and organizations that have a track record of success. In our view, they are:

- experienced professionals
- effective communicators
- credible
- balanced
- grounded in the world of government

Metro Vancouver is looking forward to collaborating with the Partnership in 2011. We believe that the Partnership has the capacity and ability to deliver what it promises.

Yours truly,

Johnny Carline  
Commissioner/ Chief Administrative Officer  
Metro Vancouver

cc: Kim A. Stephens, Executive Director, Partnership for Water Sustainability

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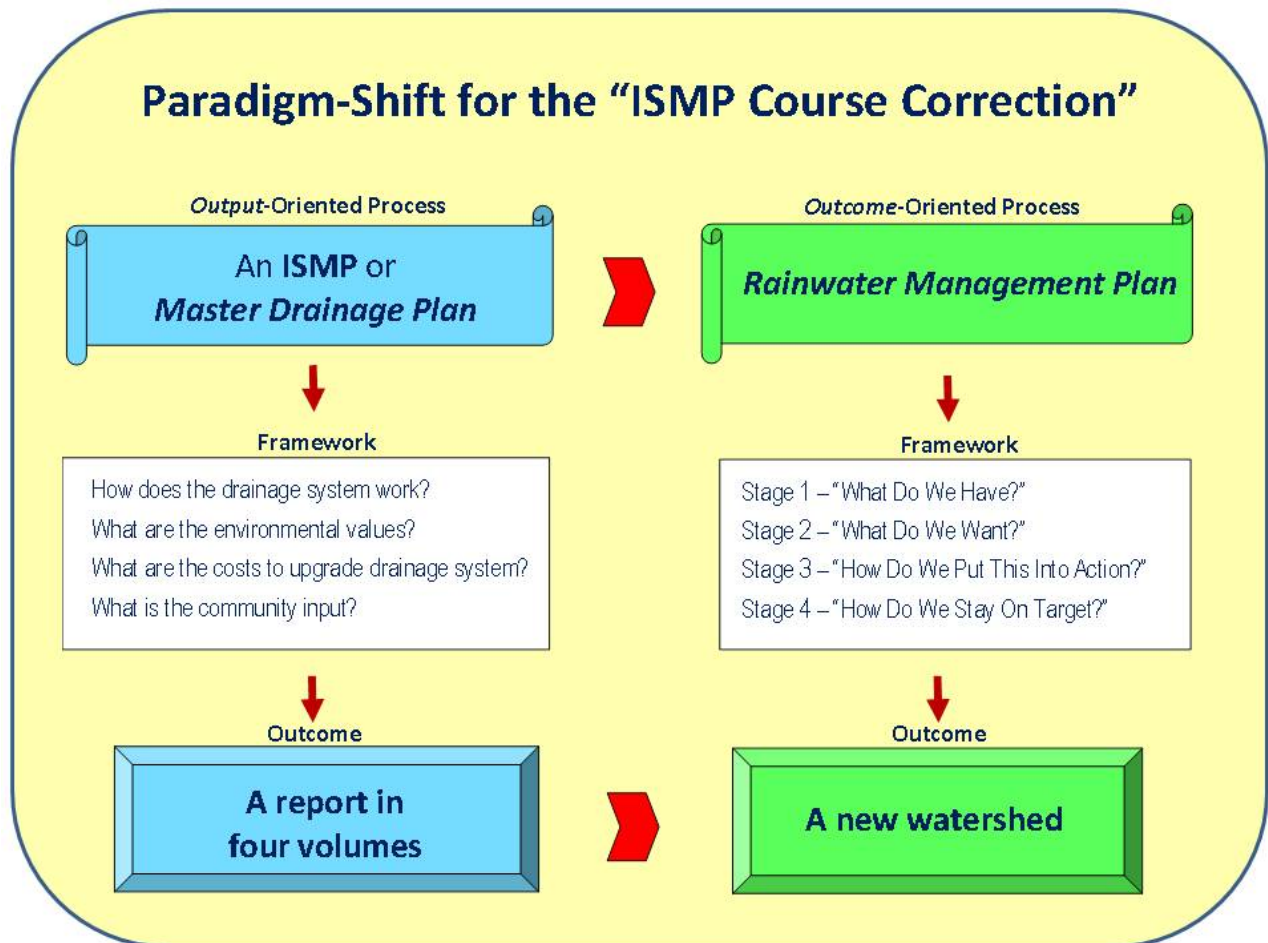


Figure 1

**Table 1 – City of Surrey Framework for an Holistic and Balanced ISMP**

(Page 1 of 2)

### **Guiding Philosophy**

- Recognize that each watershed area is unique, and its needs are unique.
- Integrate drainage planning with land use, environment, parks, and other infrastructure and community needs.
- Model the drainage system after there is some concept of overall direction – do not model just to model.
- Have short, medium and long term goals / visions for the plan area, complete with integration of opportunities.

### **The Process**

Stage 1 – “What Do We Have?”

Stage 2 – “What Do We Want?”

Stage 3 – “How Do We Put This Into Action?”

Stage 4 – “How Do We Stay On Target?”

### **Balanced Goals**

As part of defining “what we want”, the City has identified these balanced goals:

- a. Protect and enhance the overall health and natural resources of the watershed;
- b. Promote participation from all stakeholders to achieve a common future vision of the watershed;
- c. Minimize risk of life and property damages associated with flooding and provide strategies to attenuate peak flows;
- d. Protect and enhance watercourses and aquatic life;
- e. Prevent pollution and maintain / improve water quality;
- f. Prepare an inventory of watercourses and wildlife for the watershed;
- g. Protect the environment, wildlife, and habitat corridors;
- h. Identify areas of existing and future agricultural, residential, commercial, and recreational land uses;
- i. Develop a cost effective and enforceable implementation plan; and,
- j. Establish a monitoring and assessment strategy to ensure goals are achieved, maintained, and enforced.



Table 2 – City of Surrey Framework (page 2 of 2)

## Scope of the Four Stages

### **Stage 1: "What Do We Have?" Review Existing Information and Data Collection**

1. A review of existing information;
2. Watershed field reconnaissance and data collection;
3. Definition of hydrologic and hydraulic conditions; and
4. A public engagement strategy to begin dialogue on community objectives.

### **Stage 2: "What Do We Want?" Vision for Future Development**

To achieve the goals, the requirements for developing a vision encompass:

5. Land use plans which will be developed to identify future land use types, stream setbacks, wildlife corridors, potential pond locations and any other opportunities or constraints for development
6. Public engagement (depending on area, with possibly an open house) and community education that builds understanding of the resource that the community has and how individual decisions can either impact or protect it.
7. Hydrogeological assessments;
8. Link environmental assessments for habitat protection and enhancement to land use planning and zoning;
9. Innovative Low Impact Development (LID) techniques and rainwater Best Management Practices (BMP) to mitigate against impacts to the lowland areas, reduce runoff volume through source controls, decrease stream velocity, maintain and/or improve water quality, provide erosion protection, and maintain baseflows to streams; and
10. Sound, proven numerical hydrologic and hydraulic modelling techniques.

### **Stage 3: "How do we put this into action?" Implementation Plan, Funding Strategies, and Enforcement Strategies**

11. A review of the existing Design Criteria to assess which are appropriate for this ISMP and what should be added or modified;
12. A long-range capital works, operation, maintenance and renewal plan;
13. Cost analysis;
14. A project approvals procedure;
15. A life-cycle funding strategy for implementing now and maintaining in the future;
16. A by-law enforcement strategy which identifies existing and missing bylaws; and
17. A list of action items with time scales.
18. A public engagement and community education plan that fosters a land ethic.

### **Stage 4: "How do we stay on target?" Monitoring and Assessment Plan**

19. Creation of a strategic plan for monitoring and assessing that includes an explanation of why data needs to be collected and assessed in a monitoring program and how to interpret the collected data.
20. Provision of a summary of key performance indicators (KPIs), both qualitative and quantitative with a sensitivity analysis to indicate the relative magnitude of flexibility that resides in each identified KPI.
21. Summary of the type, duration, and frequency of monitoring associated with each KPI.