

# Watershed Planning and Rainwater Management: Creating the Future in the City of Coquitlam

## Part B – Implementing a Watershed-Based to Community Planning in Coquitlam

### 6. Partington Creek IWMP: Putting It All Together

Adopted by Council in July 2011, the *Partington Creek Integrated Watershed Management Plan* showcases a culmination of efforts over the years to make the switch from traditional land development to a new approach where watershed health is considered as important as development. It features the solutions worked out during the Hyde Creek watershed development process where new source control requirements faced some challenges come implementation time.

Partington Creek itself is one of the last ecologically healthy streams in Metro Vancouver and boasts a salmon spawning return in the thousands. The watershed has several other fish-bearing creeks with forested headwaters.

The watershed is planned to support the addition of 10-15,000 people and feature a new village centre.



“The Partington process ran generalized land use planning, watershed planning and financial modelling processes concurrently,” says Perry Staniscia, Lands and Properties Manager. “The

proposed land use pattern evolved, through an iterative process, to maximize environmental protection and rainwater management outcomes, while still meeting the financial objectives of the development.”



#### Implementation

The Partington Creek IWMP recommendations are fully funded through development cost

- Enhancing 1.4 km of important fish habitat through floodplain creation, riparian restoration and instream complexing;
- Maximizing source controls to intercept rainwater and infiltrate it into the ground;
- Supplementing with regional facilities where source controls can only be partially implemented; and
- Using baseflow augmentation facilities and diversions with flow splitters to mimic natural creek flows.

charges and include:

#### Recognition

Kerr Wood Leidal, the consultant retained to undertake the watershed plan, and the City of Coquitlam shared the Consulting Engineers of BC (CEBC) Award of Excellence in March 2012 for the Partington Creek IWMP.

“The Partington Creek IWMP is a significant achievement and is expected to be instrumental in ensuring that future development activity in the watershed is congruent with the fish habitat values that currently exist in the watershed,” says Diana Trager, Area Director for Fisheries and Oceans Canada.

Exhibit 4 encapsulates the story of the Partington Creek Integrated Watershed Management Plan.

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**Awards 2012**  
**cebc**  
Consulting Engineers  
of British Columbia

**CEBC  
Award of  
Excellence  
2012  
WINNER**

### Partington Creek: A New Watershed Development Planning Process

*Where Watershed Health is as Important as Development Needs*

Partington Creek is one of the last ecologically healthy streams in Metro Vancouver, a prolific salmon spawning stream with thousands of chum returning annually. The lower third of the watershed is planned for a \$1.5 billion greenfield development. Over the next 20 years, what is now forested land will become a new town centre, home to about 12,000 people.

Kerr Wood Leidal developed an Integrated Watershed Management Plan (IWMP) for the City of Coquitlam, which charts a new and better way to plan sustainable communities. The \$30 million IWMP is fully funded through development cost charges. It includes:

- Enhancing 1.4 km of important fish habitat on Partington Creek through floodplain creation, riparian restoration, and instream complexing.
- Maximizing source controls to intercept rainwater where it falls and infiltrate it into the ground.
- Implementing a new and innovative concept of baseflow augmentation facilities and diversions with flow splitters to mimic natural creek flows.

The above was accomplished without reducing the development's population, livability, or financial pro forma.

*"The [Partington Creek] IWMP is a significant achievement and is expected to be instrumental in ensuring that future development activity in the watershed is congruent with the fish habitat values that currently exist in the Partington Creek watershed."*

Ms Diane Trager, Area Director, Fisheries and Oceans Canada

**The Problem:**  
The common approach to land development is to first create land use plans and then engage civil engineers to lessen the negative impacts of development. This reactive approach limits the opportunities and solutions available. The result has been inadequate and costly mitigation plans, and urban developments that harm adjacent watercourses and their aquatic life.

**The Solution:**  
The land use planning, watershed planning, and financial modelling processes must be done **concurrently**, not sequentially. The Partington Creek process accomplished this. The land use was changed, in an iterative process, to maximize environmental protection and rainwater management, and to meet the financial objectives of the development.

**The Iterative Watershed Development Planning Process**

- 1 Source Controls**  
Maximize On-site Rainwater Capture. Determine Land Uses that cannot Fit Source Controls.
- 2 Regional Rainwater Controls**  
Supplement with Regional Facilities where Source Controls can only be Partially Implemented.
- 3 Land Use Changes**  
Change Land Use to Preserve Watercourses and Expand Source Controls. Check Financial Pro Forma and Adjust Land Use, as Required. Repeat.
- 4 Environmental Enhancements**  
Identify Enhancement and Restoration Opportunities such as the Creation of 4.5 ha of New Fish and Wildlife Habitat.
- 5 The Outcome**  
A Livable Community with Protected Environmental Values.  
*Artist concept only subject to public input*

**kwj** KERR WOOD LEIDAL consulting engineers

**Coquitlam**

Other Consultants:  
Raincoast Applied Ecology (environmental assessment)  
HB Lanarc Consultants Ltd. (land use planning)  
Garther Lee Ltd. (hydrogeological assessment)

Exhibit 4