Healthy Streams & Rainwater Harvesting

Infrastructure and the Environment: Closing the Loop

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Rainwater Harvest Workshop, Victoria
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Objective

- Capture (keep water on the land longer)
- Store (detain / retain water everywhere possible)
- Beneficial use (not simply water supply)

- Restore Landscape Proper Functioning Condition
- Restored aquatic environments - will this work in sub-urban areas?
- Rainwater harvesting as a primary restoration tool
Colquitz River Watershed, Saanich, B.C.

Essential to manage landscape development at Catchment scale

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Use water as the integrating landscape element (e.g. rainwater harvesting)
Saanich has been trying to protect and restore the Colquitz River for almost 25 years.
Blenkinsop Creek prior to restoration
Blenkinsop Creek 1999

- Ditched to drain a farmer’s field decades ago
- No functional habitat
- Get water off the land
- Poor water quality
Leeds Creek

- Flexibility - everyone agreed to minimize on-site treatment
- Leveraged funding
- Education - graduate student project
Willowbrook Subdivision
Development Catalyzing Restoration
• Degraded stream
• Stormwater bylaw prompted restoration
• Conservation subdivision design
• 17% land donated, linked to 2 adjacent subdivisions & park
Rogers Farm Subdivision

Filled in wetland (Sept. 1996)

Restored pond/wetland Effective stormwater treatment (Oct. 2003)
Vancouver Island Technology Park

- 35 acre site
- Conversion from hospital to research technology park
- 1st LEED™ building in Canada (Gold)
- Traditional stormwater infrastructure: $680,000
- Engineered ecology (bioswales/ponds): $150,000
- Savings: $530,000
Grass/Gravel/Pave parking lot
- Holds 10-year storm event
- Eliminates heat-island
- Saves energy
Stream in ecological reserve was degraded. Why? Runoff and no rainwater capture

Now developing an integrated stormwater and watershed management plan

Integrate Rainwater harvesting options
Show Us How
Colquitz River Watershed, Saanich, B.C.

Capture
Store
Beneficial use

Restore Proper Functioning Condition

Restoration Economy
If you are thinking one year ahead, sow seed.
If you are thinking ten years ahead, plant trees.
If you are thinking one hundred years ahead, educate the people.

(Chinese proverb)