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**Are Canadian communities running out of fresh water?**

by Oliver M Brandes

While the Federal Environment Minister, Rona Ambrose, announces that clean air tops Canada's priority list, the scarcity of fresh water in many Canadian communities continues to be ignored. Water scarcity? In Canada? Just ask anyone from Tofino on B.C.'s "wet coast" — how can one of Canada's wettest places run out of water? Or ask the folks in the Prairies who wonder where their water will come from when the Rocky Mountain glaciers are gone. Even communities in the Waterloo Region of the Great Lakes are facing water limits — and have plans to plumb the Grand River valley with a giant pipe to Lake Erie.

Water scarcity isn't just a one-off event in a few isolated communities. It's becoming increasingly common throughout Canada. Aquifers shrink and we hardly notice. Glaciers are melting at a startling rate. The Prairie drought is increasingly common — so much so that Dr David Schindler, Canada's leading aquatic ecologist, believes that, with climate warming, "drought" conditions could well become just par for the course.

Cities are expanding fast, as is their undeniable thirst for clean water. Yet ecological limits exist and are increasingly obvious. Environment Canada reports that one in four communities face water shortages.

Climate change is the challenge of this generation, but all the signs point to water — not oil — as the strategic resource of the century.

A recent international conference, "Water in the City," held in Victoria, British Columbia, initiated a long-awaited discussion about what communities need to do in the face of a water-stressed future. The key theme of this discussion is that, too often, communities continue to respond to 21st century water problems with 20th century solutions — more concrete, bigger pipes and bigger pumps leading to bigger tax bills and ever more vulnerable systems.

But more than just identifying the problems, the conference emphasized opportunities and solutions, citing examples from various places around

the world where communities have made innovative thinking and water sustainability a priority. The solutions include simple things like emphasizing the benefits of "green" infrastructure — stormwater detention ponds and permeable surfaces — and indoor water savings of 30 to 50 percent from efficient fixtures and appliances.

Innovative new "sources" of water are also possible, such as rainwater harvesting or recycled water for toilets and outdoor irrigation.

A warming climate only accentuates (and accelerates) our water problems. The real challenge is how to replace a water management approach that endlessly seeks to increase supply with an approach focused on managing our water demands. To move from trying (and failing) to manage ecosystems, to managing the people who live within the watersheds.

A new report from Water Sustainability Project at the University of Victoria's POLIS Project on Ecological Governance mirrors the themes of the conference and documents the myriad of solutions available to address urban water scarcity issues in Canadian communities.

Thinking Beyond Pipes and Pumps: Top 10 Ways Communities Can Save Water and Money offers imaginative but well-grounded alternatives to the current "dam it, pump it and pipe it" solutions.

This research identifies the emerging trend of a new kind of infrastructure —one that goes beyond the existing physical infrastructure of water pipes, pumps and reservoirs to include innovative physical components, such as reuse and recycling and rainwater harvesting, but also policies and programs designed specifically for water conservation. The emphasis is on the decentralized technologies, but most importantly the "social infrastructure" of strategic long-term planning and community-based engagement.

It is a practical guide for elected officials, community leaders and water managers, urging them to embrace water conservation as the basis of water security for their communities. It is alive with examples, and points us toward immediate opportunities to begin making change happen. This kind of approach does not mean doing without. It's about taking a long-term holistic view of water resource management and encouraging a water ethic that permeates all of what we do — from decisions to water our lawns (or whether to have lawns at all) to decisions by local councilors about how a community will grow in the face of a limited water budget.

Not only is this approach better for the environment, it is cheaper in the long run and in this way becomes the only sustainable option.

**About the author:** *Oliver M Brandes leads the Water Sustainability Project at the POLIS Project on Ecological Governance and is an author of the report Thinking Beyond Pipes and Pumps: Top 10 Ways Communities Can Save Water and Money.*

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