

# Water, roads and rec centres

**A** PROWL THROUGH THE MUNICIPAL Information Network ([www.municipalsuppliers.com](http://www.municipalsuppliers.com)) reveals several dominant themes. First, governments at all levels are spending to protect the environment, including their fresh water supplies.

In British Columbia – currently introducing a “drought action plan” to municipalities – a new University of Victoria study on Canada’s ailing urban water systems insists that to be eligible for infrastructure grants, municipalities should have to prove their commitment to water conservation. The report, *The Future in Every Drop*, is available at [www.waterdsm.org](http://www.waterdsm.org).

Meanwhile, the Province of Alberta has signed onto a \$12.5 million Canada-Alberta Water Supply Expansion Program. Applications are being accepted for projects that enhance agricultural water supplies. This news is encouraging in light of the prolonged drought in western Canada, but ironic, given Alberta’s February decision to allow Capstone Energy to continue the widespread oil-patch practice of pumping millions of cubic metres of fresh water into depleted oil reservoirs to boost failing production.

A further irony is that next door, a University of Regina sociologist has garnered \$2.4 million for a five-year study to determine social measures to prevent conflicts over scarce water resources as Prairie desertification advances.

But perhaps it is unnecessary to expend that anxious effort to conserve water, since Canadians’ favourite crop appears to be pavement. Most roads sprout near cities, which are located in prime agricultural land. Canada ranks fourth in the world with its total of 1,408,800 km of highways. Of that, 497,306 km is paved, including 16,900 km of expressways. That’s 43.71 km per 1,000 people ([www.nationmaster.com/country/ca/Transportation&define=1](http://www.nationmaster.com/country/ca/Transportation&define=1)). And that’s before dozens of jurisdictions do the summer scramble to pave and twin and resurface many more kilometres. By the time we run out of water we won’t have farmland left to irrigate.

Roads, however, are fundamental to our economy. Construction costs about \$1 million per kilometre; maintenance creates jobs. Roads allow the swift transportation of goods and materials using vehicles, the building of which also boosts our economy.

Transport Canada communications advisor Cathy Cossaboom offers a glimpse of just how huge a sector road building is. Transport Canada spends \$500 million, matched by the provinces, to improve the national highway system. That’s “a small portion of what happens in Canada,” Cossaboom says, pointing to Infrastructure Canada’s \$4 billion investment. Then there are provincial and municipal roads, and private roads.

The quantity of materials involved is mind-boggling. A twinned road is generally two lanes plus shoulders, approximately 11.4 metres wide. Thickness varies with the amount of truck use, and materials vary with location, since builders use whatever is at hand. In Alberta, where crude oil minus gasoline equals bitumen, i.e. asphalt, asphalt is the main surfacing material. A primary highway would likely be 160 mm (six inches) of asphalt spread over a 300 mm bed of gravel, which is mined

from alluvial deposits near streams and rivers. The asphalt layer is denser than gravel because the bitumen fills in gaps in the aggregate, so volume is about 4,020 tonnes of asphalt and 8,625 tonnes of gravel per kilometre. In limestone-rich Manitoba, highways are concrete poured over gravel scraped out of glacial eskers. In both provinces, these layers are laid over prepared soil.

Tom Gouthro, manager of technical services in Nova Scotia, says his province has recently tendered and awarded a project using rubberized asphalt to resurface three kilometres of an aging highway in Pictou County, 150 kilometres from Halifax. By crumbing used tires to mix into the asphalt slurry, the province keeps old tires out of landfills, makes the road quieter, and seals cracks effectively. Rubberized asphalt is also more durable. Nova Scotia gravel is crushed from locally-quarried rock.

Some of the roads under construction lead to a third theme of news on The Municipal Information Network – the sports and fitness facilities needed to counteract the proven link between driving and obesity.

- Regina is getting a \$12 million multi-purpose sport and convention facility at Regina Exhibition Park;
- the Atlantic Canada Opportunities Agency is contributing \$500,000 to the Valley District Soccer Association of Kentville, Nova Scotia towards construction of a year-round indoor multi-purpose facility; and
- the federal government is partnering with Toronto to rebuild the historic Varsity Stadium site on Bloor Street.

That brings us full circle to look again at the need for municipalities to conserve water – everyone exercising in these new facilities is going to be drinking a lot.

## P.S. to the June 2004 column

Prince Edward Island may be working towards being the fittest province, but it has some way to go. CBC reported that islanders were found to be the fattest folk in Canada when researchers used their own tape measures and scales. One-third are obese, double the rate people “fessed” up to – as if anyone would tell the truth.

This spring Montreal police used a battering ram on the prime minister’s office to oust protestors fighting an incinerator to be built across the Baie des Chaleurs in Belledune, New Brunswick. The plant was to treat contaminated soil shipped from the US. Now Environment Canada has announced a review of the plant. <sup>^^^</sup>

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