

WATER SUPPLY 4-1 2003

Kitchener Record

Road salt collecting in wells

Tues. July 22/03 - P. A1

Region set to spend \$1.2 million to reduce levels in drinking water

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WATERLOO REGION

Waterloo Region will spend about \$1.2 million over three years to reduce the amount of road salt finding its way into the region's drinking water.

"Our concern is that chlo-

ride levels are increasing in almost all of our supply wells and we didn't know when they would peak or at what levels," said Eric Hodgins, the region's manager of water resources protection.

Once levels of chloride in drinking water exceed 250 milligrams per litre, water can begin to taste salty.

That level — the provincial drinking water standard — has already been exceeded at six wells that provide about five per cent of the region's water.

If nothing is done to reduce the use of road salt, chloride concentrations in wells are expected to climb above 300 mg per litre by 2040 and close to 200 even in the areas less affected by salt buildup.

The provincial standard of 250 mg per litre is set for corrosion and taste problems and is not health-related.

The region has set a target to reduce road salt use by 25 per cent — which officials believe will either reduce or stabilize salt levels in groundwater — and has come up with a multifaceted plan to accomplish that.

"In the first place, we'll reduce the amount that we use. We are putting too much salt down now," Hodgins said.

Other possible measures include:

- Redesigning roads in new subdivisions so the shoulder of the road is paved with asphalt to

prevent the salt-laden water from soaking into the ground.

- Finding alternatives to road salt, such as calcium magnesium acetate.

- Grading new areas to eliminate steep roadway hills which require a lot of salt to ensure safety for motorists.

Hodgins acknowledges that, in some instances, keeping road salt out of groundwater could mean more will get into rivers and streams.

Collecting storm water and treating it before it gets into the

rivers is one option, but there aren't many systems that remove salt from water and those that do create large amounts of brine or concentrated salt solutions, Hodgins explained.

The Grand River Conservation Authority has already flagged high chloride levels in the Grand River as a concern.

Increasing levels of road salt in drinking water is among the challenges the region and other Canadian communities will face as they continue to grow.

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Salt: Land, animals at risk

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Historically, the trend has been like a vicious circle: more people, more roads and more salt.

"Ultimately, it would be great to break that trend," Hodgins said.

An Environment Canada study in 2000 concluded road salts are toxic to the environment and are entering the environment in very large amounts, posing a risk to plants, animals, rivers, lakes and groundwater.

A federal study found that in an average year, five million tonnes of road salt are used in Canada.

The federal government has since announced its intention to add road salt to the list of toxic substances.

Under the Canadian Environmental Protection Act, the government has two years from the time a substance is declared toxic to develop control measures and 18 months after that to implement them.

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