

Advertisement



Powered by Clickability

Advertisement

Road salt blamed as stream salinity rises

By Randolph E. Schmid, The Associated Press

WASHINGTON — The amount of salt dissolved in streams in the Northeast is rising and chemicals used to clear snow and ice from the roads are being blamed.



Snow plows trek over the Brooklyn Bridge in New York 2003. Chemicals to clear snow are adding salt to streams.

By J. David Ake, AP file

"We're basically hardening the watersheds and feeding them a high-salt diet. There is a direct connection between the number of driveways and parking lots we have and the quality of our water," said Sujay Kaushal of the University of Maryland Center for Environmental Science in Frostburg, Md.

Kaushal and colleagues tested water in streams in rural areas of New Hampshire, upstate New York and Maryland, comparing the amount of dissolved salt over several decades. Their findings are reported in Tuesday's issue of *Proceedings of the National Academy of Sciences*.

"We think that the salt has built up in the ground water, so even if we quit applying it, it would still be slightly salty for decades," Kaushal said in a telephone interview.

There are alternatives methods of deicing, he added, but they have side effects too. "The problem is the number of roadways," he said, saying the number being built should be limited.

In New Hampshire's White Mountains, some streams exceeded 100 milligrams per liter of chloride on a seasonal basis, the researchers said, similar to the salt level in the mixing region where the Hudson River meets the ocean.

Salt concentrations measured in the same streams in the 1970s were around 10 mg per liter, Kaushal said.

A liter is a bit more than a quart and a milligram is about one-thousandth of the weight of a paper clip. EPA's safe drinking water limit for salinity is 500 mg per liter.

In streams feeding into Baltimore's reservoirs, salinity increased from about 10 mg per liter to about 50 mg per liter in the since the 1970s, while in Dutchess County, N.Y., the increase was from 30 mg per liter to 60 mg per liter since the 1980s, the researchers said.

The study focused on Little Mogan Run, Middle Run and Beaver Run feeding into Baltimore's Liberty Reservoir; Wappinger Creek and the Mohawk River in New York State and streams in the Hubbard Brook Valley of New Hampshire's White Mountains.

The researchers noted that this problem is also occurring in other parts of the country, with rising salinity reported in some Midwestern lakes.

Overall there are 2.6 million miles of paved roads in the United States, with new roads being constructed daily. When parking lots and driveways are factored in, there is already enough blacktopped surface in the U.S. to cover the entire state of Ohio, they said.

Kevin Farley, a professor of ecology at Manhattan College, said he was not surprised by the findings as there has been concern about salt runoff for years. Farley was not part of Kaushal's research team.

The study was funded by the National Science Foundation, the Environmental Protection Agency and the A. W. Mellon Foundation.

Copyright 2005 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed.

Find this article at:

http://www.usatoday.com/tech/science/discoveries/2005-09-05-salty-streams_x.htm?POE=click-refer

Check the box to include the list of links referenced in the article.

Copyright 2008 USA TODAY, a division of Gannett Co. Inc.