

BACKGROUND

ON THE NEED FOR PROVINCIAL ACTION ON SALT POLLUTION FROM ROAD SALT

[See adjoining draft municipal resolution here](#)

Effects of Salt

1. Ontario uses more than 2 million tonnes/yr of road salt (sodium chloride) to manage snow and ice on provincial highways, regional public roads and public and private local roads, sidewalks and parking lots
2. Sodium and chloride concentrations in many of Ontario's groundwater aquifers are steadily rising, with some locations exceeding permissible levels for sodium and chloride in drinking water, requiring mandatory source water protection action under the Ontario *Clean Water Act* (2006)
3. Chloride concentrations in many of Ontario's creeks, rivers and lakes are steadily increasing, with some locations exceeding Canada's (CCME) chronic toxicity levels for aquatic life. During winter months, waterways in Ontario cities can approach ocean-level salinity readings
4. Different types of lakes (eg soft water vs. hard water) respond differently to salt, meaning chloride toxicity thresholds for aquatic life will differ between water bodies and watersheds
5. Road salt is also a corrosive agent, damaging infrastructure such as bridges, walkways, surfaces and pipes
6. Ontario's rapid population growth, increased urbanization and road construction, and changing weather patterns (more freeze-thaw cycles) will accelerate salt usage and accelerate these impacts to surface water, drinking water and infrastructure

Earlier Government Actions

7. Ontario has had long-standing drinking water aesthetic objectives for chloride of 250 mg/l max and for sodium of 200 mg/l max (notify Medical Officer of Health if sodium > 20 mg/l)
8. In 2001, the Canadian Council of Ministers of the Environment (CCME) declared salt a toxic substance "because of tangible threats of serious or irreversible environmental damage"
9. In 2004, CCME established a voluntary Code of Practice for the Environmental Management of Road Salt
10. In 2011, CCME established a Canadian Water Quality Guideline on chloride loads for Freshwater Aquatic Life of 120 mg/l max (long term) and 640 mg/l max (short term)
11. In 2011, Ontario Ministry of Environment published voluntary guidelines on snow disposal and de-icing operations in Ontario
12. In 2018, the Environmental Commissioner of Ontario report "Back to Basics" listed four recommendations to reduce pollution from road salt: researching alternatives, requiring municipal salt management plans, certification of contractors, and liability protection
13. In 2018, Ontario proposed a Made-in-Ontario Environmental Plan that included an action to "build on the ministry's monitoring and drinking water source protection activities to ensure that environmental impacts from road salt use are minimized." This included the commitment to "Work with municipalities, conservation authorities, the private sector and other partners to promote best management practices, certification and road salt alternatives"
14. In 2020, the Freshwater Round Table, consisting of a very broad range of stakeholders, issued a discussion paper "Road Salt Use on Commercial Properties" recommending a single set of BMPs, a training and certification program, regulations to limit winter maintenance contractor liability, and media/public education

15. In 2021, the Canada-Ontario Great Lakes Agreement obligated Ontario to implement various actions related to road salt, including minimizing salt usage, certification and alternatives for public and private salt applicators, assessing pathways for and prevention of road salt into groundwater, and developing site-specific guidelines for areas with salt-sensitive species
16. In 2022, Ontario Ministry of Environment, Conservation and Parks held a workshop on road salt use and management in Ontario, including discussion of best management practices, but there has been no followup on these initiatives;

Current Status

17. Numerous compilations of best practices have been developed (Transportation Association of Canada, Conservation Ontario, TRCA, Smart About Salt), but need to be compiled into one single set of provincially-endorsed BMPs that identify a reasonable standard of care that contractors and municipalities can rely on to address current liability issues
18. Many Ontario municipalities have Salt Management Plans, but these often require updating in the light of improved science and better management practices now available.