

RISING CHLORIDE LEVELS IN LOCAL STREAMS



METROPOLITAN COUNCIL – ENVIRONMENTAL SERVICES

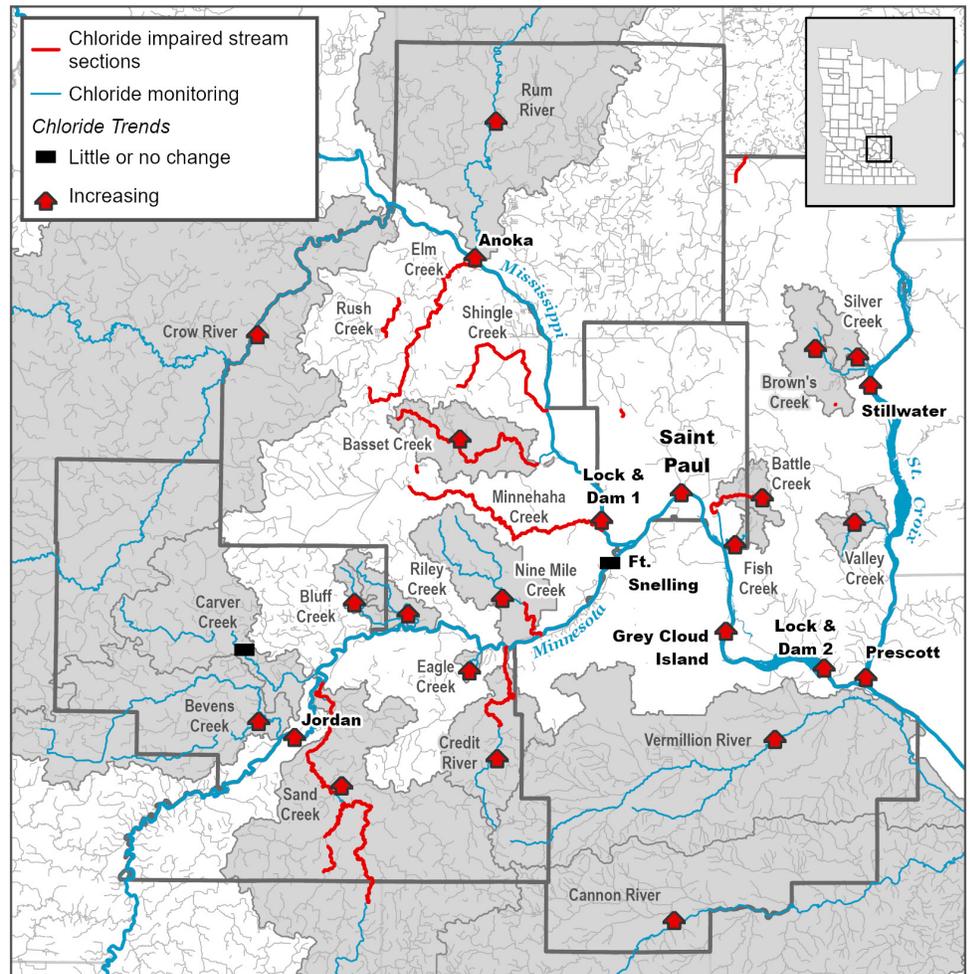
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Chloride levels have increased in Twin Cities waterbodies. Over two decades, the Met Council studied annual chloride concentration levels and trends for 18 streams in the seven-county metropolitan area. The recently published report — [Regional Assessment of Chloride in Select Twin Cities Metro Streams \(1999 – 2019\)](#) — reveals that nearly all the streams are experiencing rising chloride levels.

What's at risk?

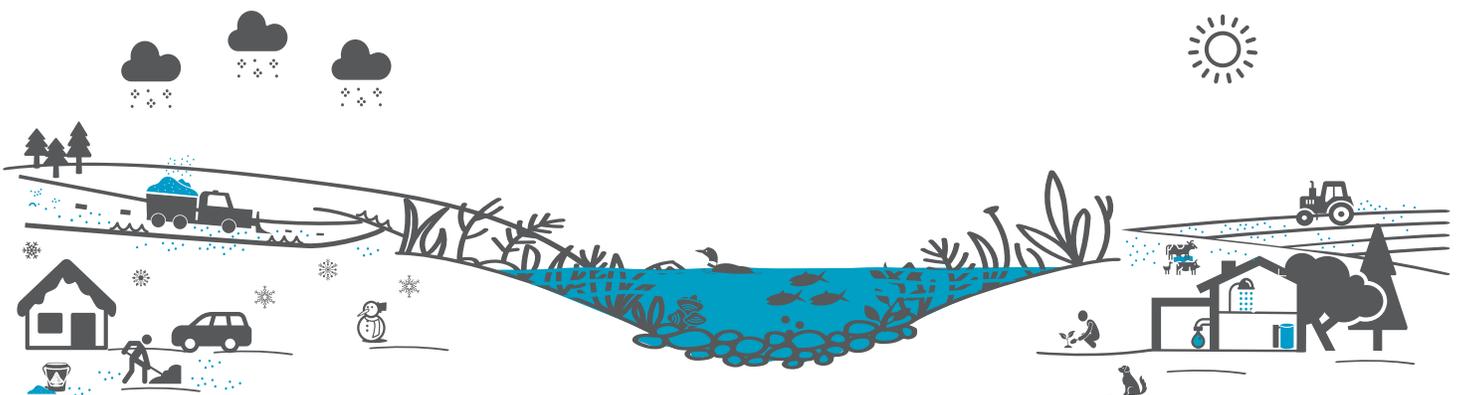
More than 1.1 million tons of chloride is released to the environment annually in Minnesota¹ — damaging infrastructure, and threatening pets, wildlife, and aquatic organisms.

Currently, 42 Twin Cities waterbodies are contaminated with excess chloride.² Chloride pollution in water is permanent. With no way to remove it, it's critical we reduce chloride sources immediately.



Chloride trends and stream sections with high chloride levels that threaten aquatic life.

Excess salt threatens our environment



Major chloride sources in Minnesota

Studies from the University of Minnesota indicate that de-icing salt is responsible for 44% of the chloride in our waterbodies. Other chloride sources include synthetic fertilizers (23%), household water softening salt (14%), livestock waste (7%), and a wide range of other sources (15%).¹ Additionally, the recent Met Council study shows that streams with urbanized watersheds tend to have higher amounts of chloride, presumably from de-icing salt.

What you can do to reduce chloride levels

Everyone has a role in reducing chloride concentration levels. Here are ways you can help protect our area's waterbodies, infrastructure, pets, wildlife, and aquatic organisms:

Use less salt. Grab a shovel before the de-icing salt container. When salt is necessary, less than ½ cup can sufficiently melt snow and ice for about 10 sidewalk squares. Avoid salt use in temperatures below 15 degrees. Sweep up extra salt to minimize runoff.

Seek training and certification. Property managers, winter maintenance contractors, and even organizations can become [Smart Salt certified](#). The program offers participants cost-saving tips for using less salt and protecting our water resources.

Improve water softener efficiency. Some U.S. communities have placed restrictions or even bans on antiquated, significantly less-efficient water softeners with excessive chloride usage. Renters and homeowners can do their part by upgrading their current system to a more efficient unit that requires less salt.

¹ Overbo and Heger, n.d. Estimating annual chloride use in Minnesota. Water Resources Center. wrc.umn.edu/chloride

² 2022 Impaired Waters List. Minnesota Pollution Control Agency. pca.state.mn.us/water/minnesotas-impaired-waters-list

Protect our waterbodies, infrastructure, pets, wildlife, aquatic organisms, and more

- Use less salt
- Seek training and certification
- Improve water softener efficiency



De-icing salt
44%



Synthetic fertilizer
23%



Household water softener
14%



Livestock waste
7%



Other
15%

For more information

The [Metropolitan Council](#) has researched and published multiple reports about Twin Cities streams.

The [Minnesota Pollution Control Agency](#) offers a wide range of information, including the latest studies and resources, on chloride use

Contact Cassandra.Champion@metc.state.mn.us for more details about Met Council stream monitoring efforts and our recent chloride reports.

