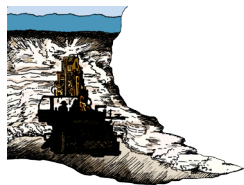


The Life and Times of Sodium Chloride

Illustration by
SARAH GAIL LUTHER

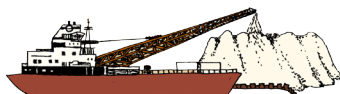


Salt is mined from deep beneath Lake Huron...

Much of the salt we spread in southeastern Wisconsin is excavated in subterranean mines deep beneath Michigan, Ohio, and Ontario. There is even a salt mine beneath Cleveland, Ohio!

...transported and stored on Jones Island...

Salt is then shipped to ports across the Great Lakes. In 2023, Milwaukee imported 727,596 tons of salt. Milwaukee's 20-year average import was 914,474 tons.



...shipped across the state for salting roads and properties.

Each freighter contains enough salt for 1,200 truckloads. Roughly 20 tons per truck. Communities across 16 Wisconsin counties purchased over 300,000 tons of salt shipped through Milwaukee last winter.



Salt enters rivers as runoff and flows into Lake Michigan.

In 2018, Wisconsin DNR measured 800,000 tons of salt per year in Wisconsin's 26 largest river systems. That was up from about 600,000 tons measured in the year 2000.

Salt finds many ways to get into the water.



Salting roads and sidewalks...

Do you know how much salt it is recommended to spread per 10 sidewalk squares? Only one 12-oz coffee cup!



Human food and our waste...

An average person consumes about 4.7 pounds of salt per year, and releases about 2.9 pounds of that through wastewater discharges.



Cheesemaking and industry...

Wisconsin cheesemaking is another underappreciated source of chloride. Around 50% of salt used in cheesemaking is lost in brine waste and disposed of at local wastewater treatment plants.

Water softeners...

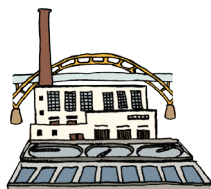
In areas that use groundwater rather than Lake Michigan for drinking water, water softeners can be a major source of chloride, discharging about 0.56 pounds of chloride per person per day to wastewater systems.

Salt impacts many parts of our lives.



Soil and groundwater

Salt from deicing or fertilizers are washed into the soil and chemically change the soil structure. Salt ions can also pull nutrients out of the soil and transport toxic heavy metals into the groundwater.



Humans, pets, and food

Salt can affect the quality of our drinking water, the air we breathe, and the ability for soil to grow vegetables. Pets can be irritated by walking on salted sidewalks or poisoned if they ingest too much salt.



Plants, animals, and nature

Salt impacts algae, plants, reptiles, fish, and mammals differently depending on tolerance and exposure. All organisms are part of ecosystems and food webs, so all organisms' health and survival are interconnected.

City and home infrastructure

Salt corrodes materials that make up our roads, buildings, bridges, cars, and pipes. Over time, this means costly maintenance for cities and residents. Think about rusty cars and bridges.

Salt in our water never disappears...

Treatment does not remove salt.

Rivers and streams in our area ultimately drain into Lake Michigan, the source of Milwaukee's drinking water. Salt is not removed at wastewater treatment plants.

Our water is getting saltier.

Research estimates that about 1.2 million tons of chloride enter Lake Michigan every year. Our salt is slowly but measurably raising the salinity of our freshwater lake.



Edited by Michael Timm, February 2024
Source: SEWRPC Chloride Impact Study

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Salt travels great distances.

Salt enters rivers as runoff and flows into Lake Michigan.

...transported and stored on Jones Island...

Salt is mined from deep beneath Lake Huron...

...shipped across the state for salting roads and properties.

Salting roads and sidewalks...

Salt finds many ways to get into the water.

Human food and our waste...

Cheesemaking and industry...

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Salt impacts many parts of our lives.

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