Goals of Salt Watch

- To raise awareness in the general public about the connection between salt and stream/public health
- To identify chloride hot spots in freshwater
- To advocate for smarter application of road salt by sharing results with private landowners and local and state agencies
Salt Watch Kit

Includes:

- 4 Hach 30-600ppm chloride test strips
- Sample testing instructions
- Conversion chart
- Data uploading instructions
2018-2023 National

14,761 Data Points

- 29% Samples "Excellent" (between 0-30ppm)
- 36% Samples "Good" (between 30-100ppm)
- 20% Samples "Fair" (between 100-230ppm)
- 15% Samples "Toxic" (230+ppm)
WHAT IS ROAD/WINTER SALT?

NaCl - Sodium Chloride
KCl - Potassium Chloride
MgCl₂ - Magnesium Chloride
CaCl₂ - Calcium Chloride
HOW IS SALT APPLIED?
Wildlife Impacts

- Affects fish, but macroinvertebrates, plankton, and microbes may be even more sensitive than fish.

- Vernal pools may be more intensely affected— as well as the organisms that spawn in them.

- Mammals drinking from high chloride streams can be negatively impacted.
Drinking Water Impacts

- Chloride is different than chlorine--does not disinfect water
- Chlorides not typically removed at water treatment plants due to high cost
- Can impact public health
Infrastructure Impacts

- Chloride is incredibly corrosive
- Costs US $16-19 billion annually in damages to bridges and roadways
It only takes 1 teaspoon of salt to permanently pollute 5 gallons of water.
Shovel: Clear walkways before snow turns to ice.

Scatter: A 12 oz mug holds enough salt to treat a 20-foot driveway or 10 sidewalk squares.

Sweep: Sweep up excess salt and reuse it!
Chloride in Drinking Water

Road salt application is the leading source of chloride pollution in urban areas throughout the United States. Chloride pollution can enter waterways and seep into groundwaters, affecting drinking water supplies and sources. Recent research indicates a need for ongoing research and action to limit chloride in drinking water.

**TREATING AND TESTING DRINKING WATER**

Most water treatment plants are not equipped to remove chloride from water, yet are required to do so by the EPA once chloride levels exceed 250 mg/L. This will likely put the cost of constructing and running new treatment plants on the taxpayers. Additionally, approximately 43 million Americans get their water from private wells, which are not regulated by the EPA. Well users are responsible for testing their own water. Most states recommend testing at least once every year.

**HEALTH CONCERNS**

Chloride is known to mobilize heavy metals and is incredibly corrosive, both in the environment and to our infrastructure. The higher the chloride concentration in water, the increased amount of corrosion. Homes and utilities with lead and copper pipes have an increased risk of lead corroding into tap water when elevated levels of chloride are present.

**WHAT TO DO**

Want to find out how much chloride is in your water system? Visit saltwatch.org to learn more about smart road salt spreading practices and to request your free Salt Watch kit!

Chloride and Infrastructure

Each year, between 10–20 million tons of road salt is applied to roadways in the United States, depending on winter weather conditions. The immediate cost of road salt is low, about $15/lb of sodium chloride, but there are long-term and indirect costs associated with the damage it causes.

**INDIRECT COSTS OF ROAD SALT POLLUTION**

Chloride, found in most road salt, is incredibly corrosive and can damage roadways, bridges, vehicles, and other infrastructure once applied. Indirect costs of road salt in the United States are estimated to be $16–19 billion each year.

**HEALTH CONCERNS**

Chloride is known to mobilize heavy metals and is corrosive to our waterways, homes, and buildings. Buildings with lead and copper pipes have an increased risk of lead corroding into tap water when chloride levels are present.

**WHAT TO DO**

- **Sweep:** Sweep up excess salt and reuse it!
- **Scatter:** Scatter before snow starts to arrive.
- **Shovel:** Clear walkways before snow turns to ice.
- **Sweep:** A 12 or mug holds enough salt to spread a 20’ driveway or 10 sidewalk square.

Join Salt Watch

Want to find out how much chloride is in your water system? Visit saltwatch.org to request your free Salt Watch kit!
What do you know about salt use in your community?
Breakout Questions

Who uses road salt in your community?
How much salt does your community use?
What discussions has your community had around salt use, and if so, what are the biggest concerns that have come up?
Breakout Questions

Are there any problems in your community that have been caused by salt?
Learn about the issue
Learn about your community
Learn where your water comes from

Be nice. Motivate others, don't blame others.
Department of Transportation (DOT)

- Different Jurisdictions
  - State
  - County
  - Township
  - City/Borough
- Full time vs. part time staff
- Often not biggest pollution contributor
Department of Transportation (DOT)

How can we assist DOT's to reduce their road salt use?
For Hire Contractors

- Landscapers in off-season
- Full time vs. part time staff
- Often large contributor to road salt pollution
  - Contracted by pounds of salt or number of bags applied
- Often don't have knowledge or training
  - Pressured by public
For Hire Contractors

Engage with For-Hire Contractors

There are full-time and seasonal workers. Some of these salt applicators are landscaping companies that remove snow and apply salt in their off season. Unfortunately, many of these applicators have little to no training on proper salt application. Many are also contracted by the bag or pound of road salt sold in a season—leading to gross over salting practices. Many companies that hire contractors for road salt application are concerned about slip and falls (they don’t want to be sued), so expect gross over salting to occur on their properties to prevent accidents.

Not all states have applicator training available for contracted salt applicators. If you are a salt applicator, take these classes and get those Salt Spreader and Environment Control certifications. These classes are easy to take and only cost a few dollars. Read the salt applicator’s training manual and get those training and certification. Training and certification in smart salting practices can help to save money, reduce pollution, and help advertise your services as more accurate contractors when advertising your services. Invite salt applicators to go through training to learn more about smart salt application and how to save money while maintaining safety.

How can we encourage contracted applicators to:

- Use less road salt
- Receive training on smart salting practices
HOA/Business Owners/Property Owners

- Contract out salt application
- Contract by number of bags or pounds of salt
- Concerned about lawsuits
- Doesn't know how much salt is the "right amount"
  - Often don't have knowledge or training
  - Pressured by public
How can we encourage HOAs and business/property owners to hire certified road salt applicators?
Individual Homeowners

- Often misinformed
  - Purchase too much (50# bag)
  - Packaging not regulated
- Doesn't know how much salt is the "right amount"
  - Often don't have knowledge or training
  - Pressured by neighbors
How can we work to change the mindset of the general public when it comes to expectations around winter travel and road salt application?
Case Studies
Dave
WINTER DRIVING SAFETY TIPS

**Winter Salt Sense**

Using salt to melt snow helps keep roads, parking lots, and sidewalks safe, but when the snow melts or it rains, salt ends up in creeks, wells, and groundwater sources that provide our drinking water. Water treatment plants are not equipped to filter out the salt, which can and do end up in tap water and contaminate metal water pipes. Salt in our freshwater creeks can harm plants and animals. Applying too much salt can kill grass, trees, and other plants adjacent to driveways, parking lots, sidewalks, and roads; can be harmful to pets and wildlife when it gets on their paws; and can rust cars and concrete curbs.

More salt is often applied than needed on sidewalks, driveways, parking lots, and streets. As a result, salt levels in Towamencin creeks (including Jenkintown, Bala-Cynwyd, and Tacony) have been increasing steadily—even during the summer. According to the Tacony-Tacony/Frankford Watershed, some monitoring locations are rated harmful or even toxic to aquatic life. Here are some ways residents and businesses can help reduce the amount of salt in our water:

- **If you must use salt, do it sparingly.** (Think “one handful per yard of walkway or driveway.”)
- **Remove snow or ice on sidewalks, driveways, and parking lots before you or a contractor applies salt.**
- **Sweep up excess salt after the storm for reuse the next time.**
- **Look for environmentally- and pet-safe products.**
- **Remember—salt does not work well at very low temperatures—applying more does not make it work better.**

Helpful Links:

Watershed-trendy Decoding: [https://watershed.decoding](https://watershed.decoding)


Save Our Streams From Road Salt Flyer: [https://watersheddecoding.com/content/often/2011/Road-Salt_Flyer-First-Conway](https://watersheddecoding.com/content/often/2011/Road-Salt_Flyer-First-Conway)

AWESOME CHESAPEAKE
A KID'S GUIDE TO THE BAY
2ND EDITION

BY DAVID OWEN BELL
ILLUSTRATED BY MARCY DUNN RAMSEY
LEXI A. BELL

Schiffer Kids
4900 Lower Valley Road, Atglen, PA 19310
Key Takeaways

Find the right message

Find allies in your community

Use different avenues to get your message out

Be persistent
Chloride Crisis: My Journey of Learning

Marialuna Schreiner Cintrón
Learn more about your community

Find experts in your area (or become the expert)

Age doesn't matter when making a difference
Karl
HOUSE BILL 216

M3
HB 371/22 – ENT
By: Delegates Qi, Foley, Fraser-Hidalgo, Guyton, Palakovich Carr, and Ruth
Introduced and read first time: January 23, 2023
Assigned to: Environment and Transportation

A BILL ENTITLED

AN ACT concerning

Environment – Salt Applicator Certification Program – Establishment

FOR the purpose of requiring the Department of the Environment to establish a Salt Applicator Certification Program to encourage efficient winter maintenance of roadways, parking lots, and sidewalks through the use of salt or salt alternatives; requiring each commercial applicator to participate in the Program, be certified on or before a certain date, and maintain a valid certification; requiring the Department to cover the cost of a certain fee for a commercial applicator who successfully completes the Program on or before a certain date; and generally relating to a Salt Applicator Certification Program.

BY adding to
Article – Environment

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
That the Laws of Maryland read as follows:

Article – Environment

SUBTITLE 25. SALT APPLICATOR CERTIFICATION PROGRAM.

9–2501.

(A) IN THIS SUBTITLE THE FOLLOWING WORDS HAVE THE MEANINGS INDICATED.
Key Takeaways

Make connections

Get the information

Start conversations

Take legislators to your monitoring site
Salted the day before but no snow fell.

Snowed heavily 1/28 and 1/30. Lots of salting in anticipation.
TTF Streamkeeper Testifies at Philadelphia City Council about Road Salt

Jamilee Hoffman
Mar 17, 2022

Testimony for City Council Hearing on Issues Around Road Salting
Say "yes to opportunities

Know the information
Which animal would make the best Salt Watch mascot?
Visit: www.saltwatch.org

Email: saltwatch@iwla.org