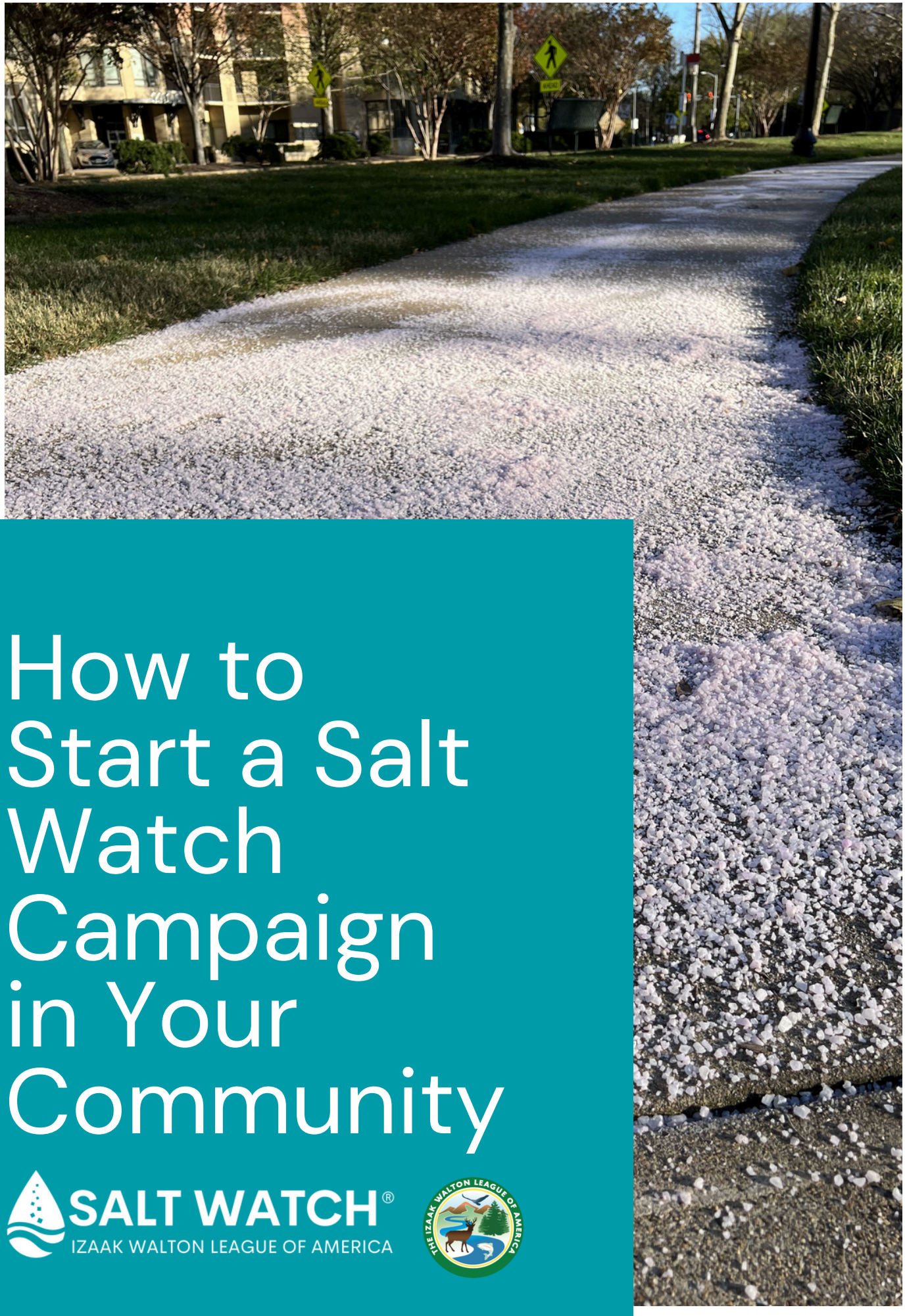

How to Start a Salt Watch Campaign in Your Community

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Our Story

Today, we are going to learn about Salt Watch–a program implemented by the Izaak Walton League of America.

In many areas, it's necessary to use salt on our roadways, sidewalks, and parking lots to stay safe during the winter. As the snow and ice melt throughout the season and as rain falls, salt gets washed into our storm drains, streams, and even into our drinking water. The United States alone uses between 10-20 MILLION TONS of road salt every year depending on the winter weather. Unfortunately, many salt applicators have very little information on the amount of salt needed, proper salt application, salt storage, and salt clean-up. And even worse, many are contracted by the amount of salt they apply each year (such as the number of bags), causing companies/contractors to oversalt just to make their quota.

In 2017 a Fellow at the Izaak Walton League of America noticed a truck's road salt spill, just outside of our national office headquarters in Gaithersburg, Maryland. The salt spill was on top of a storm drain leading directly to a small stream, the Muddy Branch, that runs through Maryland and feeds into the Potomac River. Our local government was notified, and the salt was cleaned up, but not before the chloride readings in the stream spiked to levels 3x the toxic limit set by the EPA. Inspired by our Save Our Streams (SOS) program, the Izaak Walton League staff launched the Salt Watch campaign in 2018 to mobilize community scientists to monitor chloride levels in their local waterways and to advocate for better stream health and smarter salting practices.

Salt Watch Goals

- Raise awareness in the general public about the connection between road salt pollution and stream health (and therefore drinking water pollution).
- To identify chloride hot spots in freshwater.
- To advocate for smarter salting practices—by sharing results with landowners and local and state agencies.

The salt pile (right) that started it all!

Monitoring with Salt Watch

As part of the Salt Watch program, we offer free Salt Watch Kits for testing local waterways for road salt (chloride) pollution. Each kit comes with 4 chloride test strips, sample testing instructions, conversion chart, and data uploading instructions.

Salt Watch is a year-round monitoring program!

It is best to monitor road salt pollution year round. Monitoring once a month is ideal for learning about road salt pollution in our local waterways. During winter, there are additional monitoring times to consider (in addition to monthly monitoring) to determine that the source of excessive chlorides is from road salt pollution. These times are before winter weather (to establish a baseline), after the first winter storm (when salt has been applied to roadways), after the first thaw or rainstorm of winter, and after the second rain event.

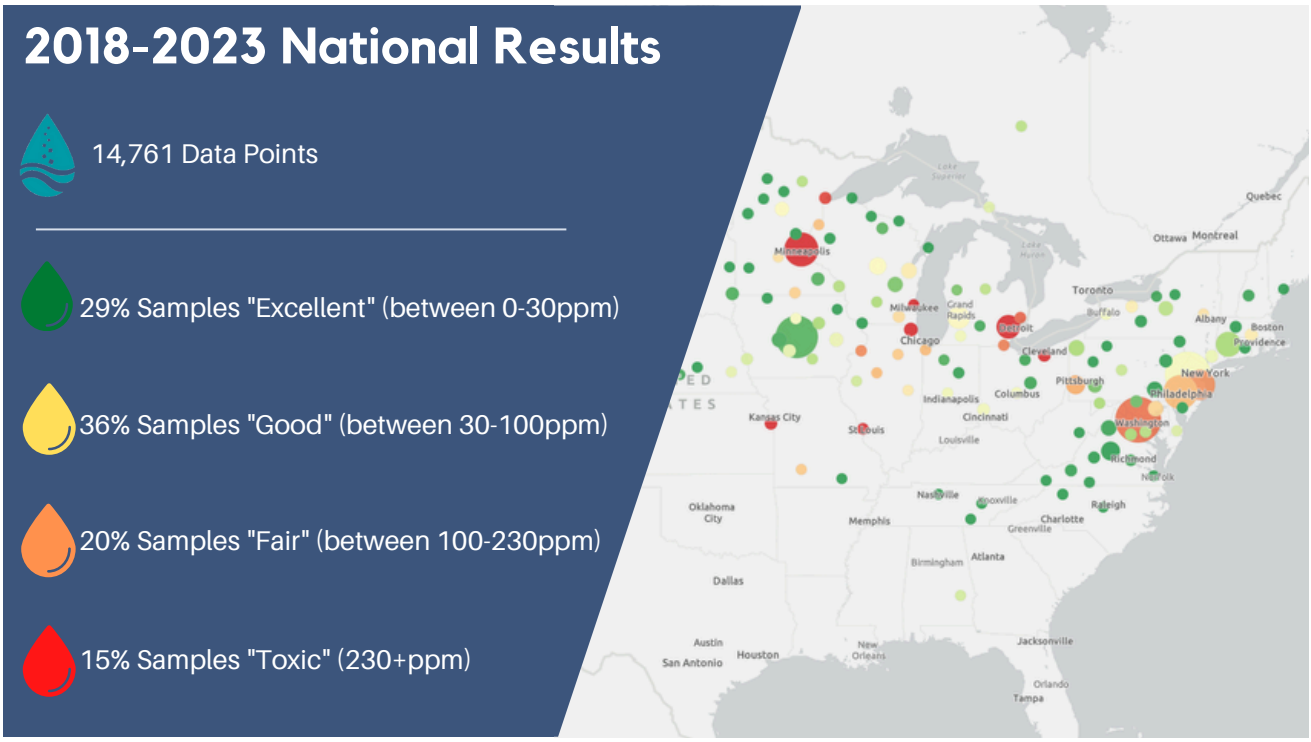
In addition to your kit, you need a small jar or container (ideally glass or plastic). It's important to rinse out your jar 3x (rinse and repeat) with water from your sample site before adding water for sampling. This is to make sure there isn't any residue in your jar that could contaminate your sample. When you are ready to sample, leave about .5-1" of water in the jar and add your test strip. The word "Quantab" should be at the top (and not touching the water).

Do not remove your sample until the yellow/orange horizontal line at the top of the strip turns a blue/black. This color change will indicate that your sample is ready to be read.

Once your test is complete, it's time to view your results! For this step, you will need your conversion chart (white paper with numbers that came with your kit or the chart on the bottle of your strips). Each line on the Quantab strips represents 0.2 Quantab units. If your test is between lines, go with the smaller number. Once you have determined the number of Quantab Units, then you can use the conversion chart to determine the amount of chloride in the water in mg/L or ppm. This is the number you will record when entering data.

How to pick a site?

- Sampling closer to roadways will likely have higher chloride levels.
- Find an area that is easy to access with no steep banks.
- You will not have to ever go into the waterways—will be sampling from the bank.
- If waterways are frozen in the winter, you can break the ice. If ice is not easily broken, come back and sample another day. Safety first.
- If you are sampling on private property, make sure you have the landowner's permission to sample.



What do the numbers mean?

According to a paper from the University of Rhode Island, chloride can naturally occur in freshwater up to 100 ppm (mg/L). *However, many freshwater waterways have natural levels of salt considerably lower than 100 ppm. The Environmental Protection Agency's (EPA) Ambient Water Quality Criteria for Chloride lists additional numbers:

At 230 ppm, chloride is considered to be “chronically” toxic to aquatic life. This means that chloride is toxic to aquatic life if aquatic life is exposed to chloride at this level over a period of time. If chloride is at an average at or above this level over a 4-day period, more than once every 3 years, it is toxic to aquatic life. At or above 860 ppm, chloride is “acutely” or instantly toxic to aquatic life and should not be exceeded more often than one hour every three years.

At 250 ppm, chloride hits the EPA’s Secondary Standard of Water. This number isn’t based on any health concerns, but is where water will start to taste “salty” to us. Whether we can perceive this taste as being “salt,” is a different story.

CHLORIDE LEVEL	WHAT DOES IT MEAN?
1-100 mg/L	Chloride in freshwater naturally occurs*
230 mg/L	Chloride is "chronically" toxic to aquatic life
250 mg/L	EPA's Secondary Standard of Drinking Water
860 mg/L	Chloride is "acutely" toxic to aquatic life

What is Road Salt?

Road salt deicers typically contain sodium chloride (NaCl), potassium chloride (KCl), magnesium chloride (MgCl2), and calcium chloride (CaCl2). Sodium chloride is the least expensive (and the most used) of the four. Sodium chloride is the same type of salt that we use in our food and have in our salt shakers. *Note: Even if both salts are the same chemical makeup, you should NEVER eat road salt, as it usually has additional chemicals in it to prevent it from clumping.

Salt usage in the United States is expensive. The immediate cost of sodium chloride is low, about $73/ton of sodium chloride, but there are indirect and long-term associated costs (corrosion of infrastructure like bridges, roadways, and pipes, and environmental damage).

Road salt also isn't the only source of chloride (salt) pollution in waterways. Chloride is naturally occurring, but levels have increased due to anthropogenic (human) sources. Other sources of salt in water are from water softener discharge, sewage discharge, processing plant discharge, and other sources. Road salt is he biggest contributor to chloride pollution in waterways.

There is no regulation for labels on road/winter salt packaging. Bags that are labeled "eco-friendly" or "pet safe" often still contain salt.

How is Road Salt Applied?

There are generally two ways for road salt to be applied–as a granular or as a liquid/brine (a salt + water mixture).

Granular/rock salt is typically applied when there is already snow or ice on the roadways. The rock salt application is a concentrated form of salt (unlike the brine treatment). Unfortunately, it also bounces when applied to roadways and can bounce or be thrown off of the roadways as vehicles drive by. The process of applying road salt to roadways after or during a storm event is called "deicing."

Brine or liquid (salt + water) treatments are applied before storm events and are effective at creating a layer between snow and pavement so the ice and snow do not stick to the pavement. This makes it easier for snow plows to effectively clear the roadways. The brine treatments are sprayed directly onto the roadways in lines, creating an effective barrier. The process of applying brine treatment to roadways before a storm event is called "anti-icing."

Using brine solution to treat roadways helps to limit the amount of road salt going into the environment. If you see brine lines in your community before a snow/ice event, you know that your municipality or state is taking steps to reduce road salt pollution. We love (to see) the lines!

Environmental Impacts

It only takes 1 teaspoon of salt to permanently pollute 5 gallons of water. A 50-pound bag of salt (how salt is normally sold to the individual consumer) can permanently pollute 10,000 gallons of water, which is a typical residential pool size.

In the environment, chloride creates unsuitable habitats for macroinvertebrates, fish, plants, and other animals. It can also encourage large mammals like deer and moose to encroach on roadways, using them as salt licks, which can lead to accidents.

Macroinvertebrates are “bugs” that live in waterways. They can be seen by the naked eye and do not have a backbone. Some examples of macroinvertebrates are dragonfly larvae, dobsonfly larvae, mayfly larvae, and mosquito larvae.

Small planktonic crustaceans like daphnia (water fleas) are very sensitive to chloride pollution. Daphnia eat algae, so without daphnia, algae blooms can become more prevalent. This can lead to a chain reaction in the ecosystem. If algae isn’t controlled, it can lead to an overabundance of algae, which will deplete oxygen from the waterways as that algae dies off and decomposes, causing problems for other aquatic life.

Vernal pools are water bodies that occur due to snow/ice melt in the late winter and early spring. Since there isn’t a consistent inflow or outflow of water in vernal pools, the pools are not flushed out and can be quickly and permanently contaminated by pollutants entering from snowmelt runoff (such as chloride from road salt pollution runoff). Many sensitive species like amphibians spawn (breed) in these ponds. Chloride has been shown to reduce hatching success rates of amphibian eggs.

Drinking Water Impacts

An additional problem related to drinking water is that most water treatment plants are not designed to remove chlorides from either source water or wastewater, as it is not easy or affordable. Anthropogenic sources such as road salt, water softener discharge, fertilizers, and sewage contamination only add to the problem, often creating higher chloride concentrations in wastewater discharge. This also creates a problem with individuals on low-sodium diets, as their drinking water becomes a source of daily unexpected sodium (from sodium chloride being applied to roadways).

Infrastructure Impacts

Corrosion of infrastructure (bridges, roadways, vehicles, etc.) and mitigation and remediation of removing salt from the environment in our surface water and groundwater are huge factors when considering the cost of salt. Chloride contamination also is linked to pipe corrosion, which can cause water quality issues with the water that we drink. As chloride accumulates in our waterways, it can increase the amount of corrosion in our pipes—increasing our risk of toxic chemicals making their way into our taps, particularly in communities where infrastructure investment has not been historically prioritized.

Road salt pollution has been estimated to cost the US between $16-19 billion annually in damages to bridges and roadways.

What Can You Do?

Shovel early and often in the winter to reduce the amount of salt you need to apply. Clear walkways before snow turns to ice.

Scatter salt. Salt works best when each granule is spaced out–about 3" apart. A typical coffee mug (12 oz mug) holds enough salt to treat a 20-foot-long driveway or 10 sidewalk squares (about 2 parking spaces).

Sweep! You can sweep up excess salt and reuse it during the next storm event! This reduces the amount of salt that will enter the waterways during rain or snowmelt events.

By following **Shovel, Scatter, Sweep**, you can reduce road salt pollution at your own home!

What is the Correct Amount of Salt?

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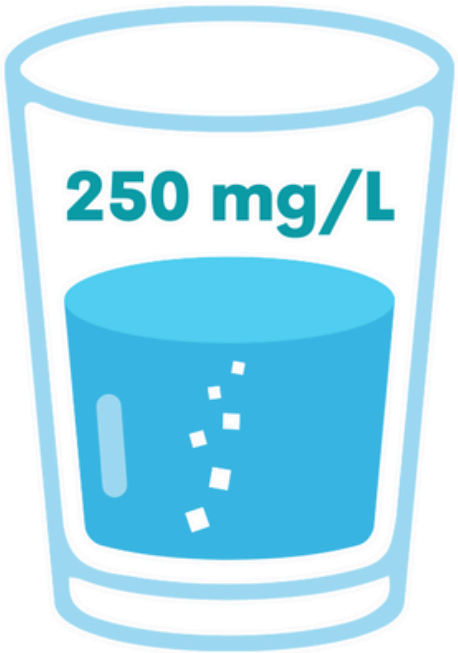
Chloride in Drinking Water

Road salt pollution is the leading cause of chloride pollution in waterways throughout the United States. Chloride pollution also comes from other sources including water softener discharge and sewage discharge. The impact of chloride on human health is an area of ongoing research, but there are several health risks that are known to be linked to increased chloride in drinking water.

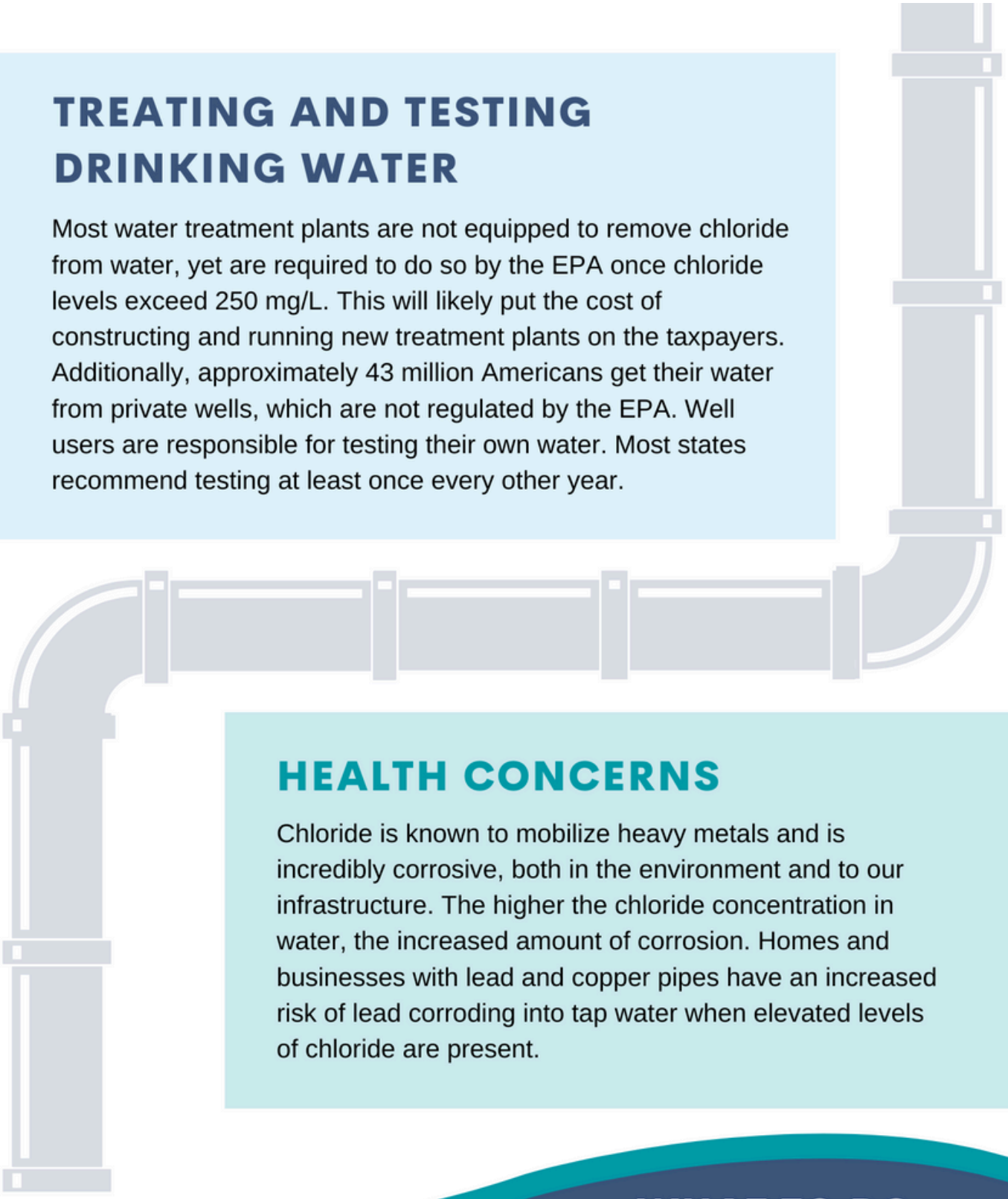


DRINKING WATER STANDARD

The drinking water standard for chloride is 250 mg/L, as established by the US Environmental Protection Agency (EPA) in 1988. At this level, water starts to taste "salty." There is no health-based guidance for chloride in drinking water, but there are health implications for consuming sodium. Sodium and chloride concentrations in water are often related since sodium chloride (NaCl) is the most common type of road salt being applied in the winter. The EPA recommends sodium in drinking water be less than 20 mg/L for individuals on severely restricted sodium diets.

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 other 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 businesses with lead and copper pipes have an increased risk of lead corroding into tap water when elevated levels of chloride are present.

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WHAT TO DO

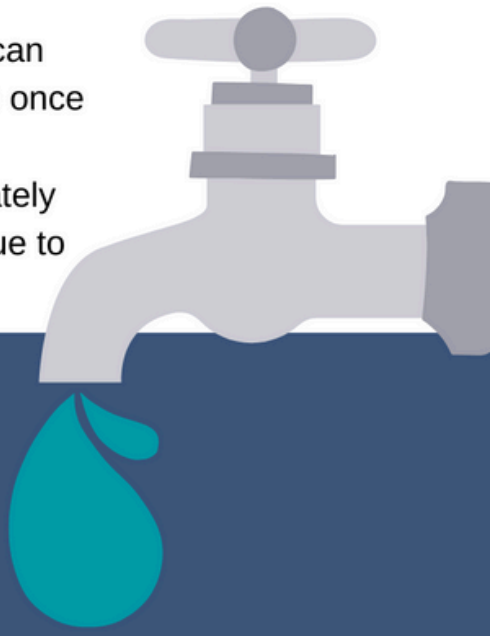
Want to find out how much chloride is in local waterways?
Visit **saltwatch.org** to learn more about smart road salting practices and to request your free Salt Watch Kit!

Chloride and Infrastructure

Each year, between 10-20 million tons of road salt are applied to roadways in the United States, depending on the winter weather conditions. The immediate cost of road salt is low, about $75/ton of sodium chloride, but there are long-term and indirect costs associated with the damage it causes.

INDIRECT COST 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 between $16-19 billion each year. Approximately 15% of bridges throughout the US are structurally deficient due to corrosion, which is exacerbated by road salt exposure.



HEALTH CONCERNS

Chloride is known to mobilize heavy metals and is incredibly corrosive to our waterpipes as well. Homes and businesses 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

SHOVEL

Clear walkways before snow turns to ice.

SCATTER

A 12 oz mug holds enough salt to treat a 20' driveway or 10 sidewalk squares!

SWEEP

Sweep up excess salt and reuse it!

JOIN SALT WATCH

Want to find out how much chloride is in local waterways?
Visit **saltwatch.org** to request your free Salt Watch Kit!

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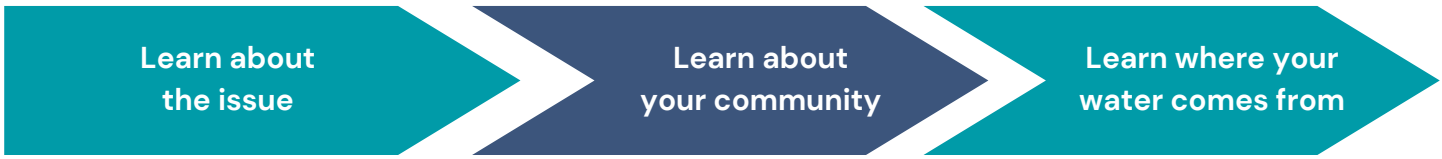
Community Considerations

This is a road map or guide to engage the road salt applicator community. Advocacy actions are embedded within each applicator group. There are a number of other ways to make a change within your community.

Don't get discouraged if you don't have immediate buy-in from different groups. Change takes time.

General Tip: When trying to gain support of your community (or even government officials), it helps to bring them with you while stream monitoring! Often they have limited time, so be on time and get your point across while being thankful for their time and attention.

Be nice and try to not point fingers. People generally want to do good things, but sometimes they just don't know a better way. You're here to show them the way!



It should be noted that road salt pollution can occur at any of the following times:

- Storage
- Application
- Cleanup
- Salt Application Vehicle/Equipment Washing

Think about road salt in your community.
Have you seen improperly stored salt piles or areas of the community that have been oversalted?

Who owns the property and who is responsible for applying salt?

Next Steps. As groups answer your questions in the attached template guides, consider the information and see if further salt reduction strategies can be made! If what you're learning from stakeholders is that the salting practices in your community do not have public and environmental health in mind, express your concern and ask for improvements.

Outreach Templates

There are different applicators involved in applying salt:

1. Department of Transportation (State, County, and City)
2. For Hire Contractors (full-time and part-time employees)
3. HOA/Business Owners/Property Owners
4. Individual Homeowners

Engage your local Department of Transportation (DOT)

Snow removal is often broken into different jurisdictions. There may be a different entity in charge of snow removal at the State, County, Township, and/or City/Borough levels. It's helpful to know where one jurisdiction ends and another begins, but it is sometimes very difficult to find out this information (especially at the local level). Salt applicators at the DOT level are usually trained internally and trainings are not open to other applicators and the public. You can often work with your local Storm Water, Department of Environmental Protection, or Soil and Water Conservation District to see how you/your organization can help to reduce road salt pollution.

Even at the DOT level, there are full-time and seasonal workers. In many cases, it is not the DOT who is overapplying salt (but we can all do better).

To Learn More (via internet search):

- Find out the jurisdiction of your city/state applicators. Usually this information can be found at the DOT webpage (often under "who plows your streets," "snow routes," etc.).
- Does your state have a road salt reduction strategy?
- What infrastructure/training does your DOT have for reducing salt? (*Do they have brine onsite? Do they calibrate their equipment every year? Do they use pavement temperature sensors to determine what and when to apply?)* Do they keep track of their salt use?

Key words for web search:

Who plows your streets
Snow routes
State road salt reduction strategy
Road salt use
Where's my plow
Winter by the numbers
Winter operations

Key words for road salt reduction:

Brine
Salt Brine
Calibrate equipment
Pavement temperature sensors
Anti-icing
Pre-wetted salt

Get in touch with your local municipality or Department of Transportation (DOT).

Find the contact information for DOT representative:

- Name of contact:
- Phone Number:
- Email Address:

Helpful link for DOT applicators:

- Minnesota Pollution Control Agency's Smart Salting Training offers multiple types of training: *https://www.pca.state.mn.us/business-with-us/smart-salting-training*

Department of Transportation (DOT): Email/Letter Template

Department of Transportation **Date**

Address

Dear **[Name of Contact]**,

My name is **[your name]** and I live in **[name of your town/county]**. I have been learning about the issue of road salt pollution in our drinking water and the environment and would like to learn more about what is being done at the **[state/county/city]** level to reduce road salt pollution.

Road salt keeps our roads and communities safe in the winter months, but this salt also washes into our creeks and streams and eventually into our drinking water, where it can corrode pipes and lead to serious health concerns. Water treatment plants are not equipped to filter out salt, which can end up in our tap water. Excess salt also degrades natural habitat and threatens the health of local streams and wildlife. Applying too much salt can kill grass, trees, and other plants adjacent to parking lots, sidewalks, and roads. Road salt can also be harmful to pets and wildlife, cause cars to rust, and corrode concrete.

More salt than needed is often applied to sidewalks, parking lots, and streets. This practice of over-salting is not only costly, but also deteriorates infrastruture and the environment. As a result, salt levels have been increasing steadily in our local waterways and some areas have concentrations that are harmful or even toxic to aquatic life.

I appreciate the work that is done each year to keep us safe in the winter from icy conditions and wanted to start a conversation to see not only what is already being done but also what can be done to maintain safety while minimizing environmental impacts from road salt pollution. Could you tell me about any strategies that are currently being applied to reduce road salt pollution now and any strategies that you are planning on applying in the future? If you are not the best person to answer these questions, could you please direct me to someone who can?

I have also included some link(s)/attachments for more information on this issue.

I appreciate your time and look forward to your response!

Sincerely,

[Your Signature]

[Your Name]

Department of Transportation (DOT): Phone Call/In-Person Template

My name is **[your name]** and I was hoping to speak with someone about road salt use in [your state/county/city]?

Hi **[name of contact person]**. Great to meet you! My name is **[your name]** and I live in **[name of your town/county]**. I have been learning about the issues of road salt pollution in our drinking water and environment and would like to learn more about what is being done at the **[state/county/city]** level to reduce road salt pollution? Would you have a few minutes to discuss road salt reductions in **[your state/county/city]**?

Response: If they say, "yes," continue with conversation, if "no," schedule a time when you are both available to talk. DOT departments oversee a wide variety of programs year-round (most involved with public safety), so it's important to be respectful of their time.

I really appreciate all the work you folks are doing at the **[state/county/city]** level to keep us safe in the winter. However, road salt pollution is a persistent issue and something that costs a considerable amount in the long-term with the damage it does to infrastructure, the environment, and infiltrating drinking water. Could you tell me some of the strategies that are currently being applied to reduce road salt pollution now and any strategies that you are planning on applying in the future?

See next page for potential questions to ask.

Could I send you some resources for road salt pollution reduction strategies that could save money and time? If so, could I have your email address or the best mailing address to send the resources your way?

Thank them for their time.

Department of Transportation (DOT): Phone Call/In-Person Template

Some potential questions to ask:

- How is road salt applied (i.e. as rock salt or as brine)?

- Is there a place to report salt spills or excess salt application? And if so, is the **[state/county/city]** responsive to cleaning up a spill?

- How is road salt being stored? Is it under cover/contained?

- Are vehicles washed inside after being used for salt application?

- Do you keep track of the amount of salt and brine used every year?

- Are you measuring salt used per lane mile? If so, what is that number?

- Is funding going to create more salt brine making facilities?

- Is there less salt used in areas considered to be "vulnerable habitats?"

Department of Transportation (DOT): Phone Call/In-Person Template

Some potential questions to ask:

- Are certain roads (such as emergency routes) prioritized when clearing the roadways?

- Are operators (full-time and seasonal) trained on Best Management Practices (BMP's)? Who (what organization) runs those trainings? How often are operators required to take those trainings?

- Are other operators in the state [state/county/city] trained in Best Management Practices for road salt application?

- Are trucks and equipment calibrated before the season?

- Do you use a formula to determine what to apply and when to apply salt? Does that formula include you taking pavement temperatures?

- *Bonus question: Has your DOT considered sourcing its brine from water softener reclamation?*

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 applied in a season--leading to gross over salting practices. Many companies that hire contractors for road salt application are concerned about slips and falls (they don't want to be sued), so expect gross over salting to occur on their properties to prevent lawsuits.

Not all states have applicator trainings available for contracted salt applicators, but it is something you can encourage local applicators to take through agencies like the Minnesota Pollution Control Agency (link below). Trainings are often offered by a state's pollution control or environmental agency. Training and certification in smart salting practices can help to save money, reduce pollution, and can help advertise applicators as more desirable candidates when advertising their services. Invite salt applicators to go through training to learn more about smart salt application and how to save money while maintaining safety.

You can also advocate for training programs in your region and state! In 2013, New Hampshire passed a bill that kickstarted the Green SnowPro program (flyer on left)--an incentive program for commercial road salt applicators to voluntarily become trained in smart salting practices. Commercial applicators who take and pass the Green SnowPro training and maintain records and best management practices are given free limited liability protection against slips and falls. Businesses who hire those certified applicators are also given limited liability protection against slips and falls.

A few states have tried to pass similar legislation, but have not yet been successful. Legislation like NH's program is sensible and helps to change the public's mindset of how much they *think* should be applied vs. how much salt should *actually* be applied. This gives commercial applicators the incentive to follow best management practices, instead of their application amounts being dictated by public perception.

To advocate for smart salting training in your state, contact your legislators and ask them to support smart salt trainings and road salt reductions at the state level *(template letter page 29)*.

Helpful link for commercial road salt applicators:

- Minnesota Pollution Control Agency's Smart Salting Training offers multiple types of training: *https://www.pca.state.mn.us/business-with-us/smart-salting-training*

For-Hire Contractors: Email/Letter Template

Business Address **Date**

Dear **[Name of Contact]**,

My name is **[your name]**. I have been learning about the issues of road salt pollution in our drinking water and environment and would like to learn more about what your company is doing to reduce road salt pollution?

Road salt keeps our roads and communities safe in the winter months, but this salt also washes into our creeks and streams and eventually into our drinking water, where it can corrode pipes and lead to serious health concerns. Water treatment plants are not equipped to filter out salt, which can end up in our tap water. Excess salt also degrades natural habitat and threatens the health of local streams and wildlife. Applying too much salt can kill grass, trees, and other plants adjacent to parking lots, sidewalks, and roads. Road salt can also be harmful to pets and wildlife, can rust cars, and corrode concrete.

More salt than needed is often applied to sidewalks, parking lots, and streets. As a result, salt levels have been increasing steadily in our local waterways and some areas have concentrations that are harmful or even toxic to aquatic life.

I appreciate the work that is done each year to keep us safe in the winter from icy conditions and wanted to start a conversation to see not only what is already being done but also what can be done to maintain safety while minimizing environmental impacts from road salt pollution. Could you tell me some of the strategies that are currently being applied to reduce road salt pollution now and strategies that you are planning on applying in the future? If you are not the best person to answer these questions, could you please direct me to someone who can?

If you are interested, I have also included some links/attachments for more information on this issue.

I appreciate your time and look forward to your response!

Sincerely,

[Your Signature]

[Your Name]

For-Hire Contractors: Phone Call/In-Person Template

My name is [**your name]** and I was hoping to speak with someone about road salt application during winter maintenance.

Hi **[fill in name of contact person]**. Great to meet you! I have been learning about the issues of road salt pollution in our drinking water and environment and would like to learn more about what is being done at your company to reduce road salt pollution? Would you have a few minutes to discuss?

Response: If they say, "yes," continue with conversation, if "no," schedule a time when you are both available to talk.

First off, does your company apply road salt in the winter? **Yes/No**

I really appreciate all the work you folks are doing to keep us safe in the winter. However, road salt pollution is a persistent issue and something that costs a considerable amount of money in the long-term with the damage it does to infrastructure, the environment, and infiltrating drinking water. Once road salt enters the environment, it cannot feasibly be removed.

Could you tell me some of the strategies that are currently being applied to reduce road salt pollution now and strategies that you are planning on applying in the future at your company?

_____

_____

_____

Have you or your coworkers/employers/employees considered participating in a road salt applicator training program? **Yes/No**

If yes, which training have you taken? _____

Do you keep track of the amount of salt and brine used every year? **Yes/No**

Are trucks and equipment calibrated before the season? **Yes/No**

Do you use a formula to determine what to apply and when to apply salt? **Yes/No** Does that formula include you taking pavement temperatures? **Yes/No**

Could I send you some resources for road salt pollution reduction strategies that could save your company money and time while reducing pollution? If so, could I have your email address or the best mailing address to send the resources your way?

Thank you for your time today!

Engage with HOAs, Business Owners, and Property Owners

Think about HOAs, Condo Associations, and businesses in your area. For those that have a large parking lot (think grocery store or shopping centers) or many community sidewalks, those areas are likely serviced by contracted road salt applicators.

In many residences and businesses, the residents and employees aren't the ones applying road salt. In the case of Homeowners Associations (HOA), Condo Associations, and many businesses and commercial properties, road salt application is contracted out to professionals.

Often, commercial road salt applicators are contracted by the bag or pound of road salt applied in a season--leading to gross over salting practices. Many companies that hire contractors for road salt application are concerned about slips and falls (they don't want to be sued), so have expectations for over salting to occur on their properties to prevent lawsuits.

It is important for HOAs and businesses who contract road salt applicators to include smart salting practices in their contract and make sure they aren't paying commercial applicators by the bag or number of pounds of road salt applied.

Many smaller businesses might have their employees apply road salt. In those cases, it is important for those employees to be trained in smart salting practices. This is a topic that can be included in standard operating procedures (SOP) and/or during regular safety trainings.

Going Further: Encourage HOA managers, business owners, and property managers to take a smart salt certification training course tailored to business owners. For businesses that apply their own salt, employees should also receive training on road salt best management practices. HOAs, businesses, and property managers should be encouraged to hire commercial salt applicators that follow best management practices and are certified in smart salting practices.

Helpful link for HOA/Property Owners/Business Owners:

- Minnesota Pollution Control Agency's Smart Salting Training offers multiple types of training (including one for property/business owners): *https://www.pca.state.mn.us/business-with-us/smart-salting-training*

Over salting on an apartment complex sidewalk in VA. (photo left)

HOA/Business Owners/Property Owners: Email/Letter Template

HOA/Business Address **Date**

Dear **[Name of Contact]**,

My name is **[your name]** and I am a resident in **[your community]**. For over 80 years in the United States, we have used road salt to melt ice on our roadways and sidewalks to make travel conditions safer in the winter. Road salt is effective when used correctly, but many individuals, especially "for hire" commercial applicators, grossly overapply road salt in ways that have detrimental effects on infrastructure, wildlife, human health, and the environment. Once road salt enters the environment, it is incredibly difficult and costly to remove and inevitably ends up in our local waterways and into our drinking water!

Maintaining safe travel conditions for our residents is a necessity, but our current methods are deteriorating our environment. I urge you to only hire road salt applicator contractors who are trained in best management practices in road salt application. Or encourage your current salt applicator to become trained in road salt best management practices. By doing so, you will be protecting water quality from the harms of road salt for generations to come.

Road salt applicator training certification programs for salt applicators have proven to save applicators and businesses money, maintain safety, and protect water resources with better salting practices. Applicators who have taken and passed an applicator training and certification program can provide common-sense, cost-effective solutions and best management practices around road salt application that will protect infrastructure, human health, wildlife, and local habitats. I also encourage you to take a similar program through the Minnesota Pollution Control Agency to learn about smart salt application and how it can save YOU money too!

If you are interested, I have also included some links/attachments for more information on this issue.

I appreciate your time and look forward to your response!

Sincerely,

[Your Signature]

[Your Name]

HOA/Business Owners/Property Owners: Phone Call/In-Person Template

My name is **[your name]** and I was hoping to speak with someone about road salt application during winter maintenance at the **[HOA/Condo Association/Business/Property]**.

Hi **[fill in name of contact person]**. Great to meet you! I have been learning about the issues of road salt pollution in our drinking water and environment and would like to learn more about what is being done in the community to reduce road salt pollution. Would you have a few minutes to discuss?

Response: If they say, "yes," continue with conversation, if "no," schedule a time when you are both available to talk.

First off, I assume you hire a contractor to apply road salt during winter weather events? **Yes/No**

I really appreciate all the work you folks are doing to keep us safe in the winter. Road salt keeps our roads and communities safe in the winter months, but this salt also washes into our creeks and streams and eventually into our drinking water, where it can corrode pipes and lead to serious health concerns. More salt than needed is often applied to sidewalks, parking lots, and streets. As a result, salt levels have been increasing steadily in our local waterways and some areas have concentrations that are harmful or even toxic to aquatic life.

Could you tell me some of the strategies that are currently being applied to reduce road salt pollution now and strategies that you are planning on applying in the future at the **[HOA/Condo Association/Business/Property]**?

Have you or your road salt applicators considered taking a road salt applicator training program? **Yes/No**

If yes, which training have you/your applicators taken or considered taking?

Do you or your applicators keep track of the amount of salt and brine used every year? **Yes/No**

Do you know if your contracted salt applicators have completed a training on best management practices when applying road salt in the winter? **Yes/No**

Have you considered writing road salt reduction strategies into your contract with your contracted road salt applicator? **Yes/No**

Could I send you some resources for road salt pollution reduction strategies that could save your **[HOA/Condo Association/Business/Property]** money and time while reducing pollution?

If so, could I have your email address or the best mailing address to send the resources your way?

Thank you for your time today!

Be a Smart Salter

Once you put salt down, it doesn't go away...

Salt alters the soil, harms plants, and weakens infrastructure like bridges and roads.

It gets into our streams, lakes, and rivers, putting aquatic life and human health at risk.

It only takes
1 teaspoon of salt...

...to pollute
5 gallons of water

Salt applied by cities, businesses, and homes adds up.

Reduce your salt use to protect our water!

Do your own salt application?

1. Shovel

Clear snow from sidewalks and parking lots before it turns to ice. The more snow you remove, the less salt you'll have to use - and the more effective it will be!

2. Scatter

If you use salt, scatter it so there's space between the grains. A coffee mug of salt is enough to treat an entire 20 foot driveway!

3. Sweep

Once the salt has done its job, sweep up the extra so you can reuse it for later storms - and prevent it from washing away.

4. Switch

Salt doesn't work when the pavement temperature is 15 degrees or lower. Switch to sand or use a different deicer that works at low temperatures.

Hiring a snow removal contractor?

Choose a contractor who is certified through a winter salt certification program.

Find out about salt application courses from your state Department of Transportation or visit www.saltwatch.org!

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Wisconsin Salt Wise

Engage with Individual Homeowners

In many Northern areas of the United States, homeowners (and their families) often need to apply road salt in the winter to keep their families and neighbors safe. Unfortunately, many homeowners don't know when to apply road salt or how much to apply.

There is also often misinformation on the road salt packages homeowners purchase. Information put on road salt packages is not regulated. For example, some labels say that a product does not contain salt when chloride is still listed on the ingredients list. "Eco-friendly," "pet safe," or "ice melt" labels also are not regulated.

In many cases, 50-pound bags of salt (amount usually sold to the consumer) are way more salt than the average homeowner needs each year. Many homeowners also use all of the salt in one season simply to get rid of it so they don't need to store it over the summer.

Speak with your neighbors about their salting practices.

a. They can save money and help the environment.
b. Many people have no idea road salt is a problem!

Teach neighborhood kids how to shovel/salt and pay them for their great work! Start a neighborhood shovel/smart salt brigade!

Find out if there is a salt "takeback" program in your community. Take-back programs are where community members can drop off salt so they don't need to store it over the summer (can usually be found through your Department of Environmental Protection or Department of Transportation websites/offices).

If you or your neighbors are on wells, it's a good idea to get those wells tested! You are responsible for testing your well water.

Be a friendly neighbor!

Individual Homeowner: Email/Letter Template

Homeowner Address **Date**

Dear **[Name of Contact]**,

I am writing to let you know about an exciting citizen science opportunity to help protect the local streams in our community. The Izaak Walton League is teaming up with partners across the country to provide free water testing kits to test our local streams for road salt pollution this winter.

Road salt (sodium chloride) is everywhere during winter months. Salt keeps us safe: but too much of any salt is a problem. It keeps us safe on roads and sidewalks, but it can also pose a threat to fish and wildlife as well as human health. Fish and bugs that live in freshwater streams can't survive in extra salty water. And many of us (more than 118 million Americans) depend on local streams for drinking water. Water treatment plants are not equipped to filter out the extra salt, so it can end up in your tap water and even corrode your pipes.

You can help.

Take the Salt Watch Pledge, and the Izaak Walton League will send you a FREE kit with everything you need to find out whether road salt pollution is a problem in your local stream. This is a great activity for all ages to help gather important data and make a difference in your community. Each kit includes 4 test strips to use throughout the winter, and each test only takes about 10 minutes! These kits are great for families, student groups, and for anyone looking to get outside this winter and explore local natural resources.

Visit SaltWatch.org to learn more about this program and to request your FREE Salt Watch kit today!

In the meantime, you can also make a BIG difference during the winter months by doing the following:

- Shovel early and often before snow turns to ice.
- Scatter salt. A 12 oz. mug (typical coffee mug) can hold enough salt to salt a 20 foot-long driveway or 10 sidewalk squares.
- Sweep up any excess salt. That salt can be stored and used during the next storm event!

Thank you for your time and consideration.

Sincerely,

[Your Signature]

[Your Name]

Individual Homeowner: Phone Call/In-Person Template

Hello **[community member]**,

My name is **[your name]** and I wanted to tell you about an exciting citizen science opportunity to help protect the local streams in our community. The Izaak Walton League is teaming up with partners across the country to provide free water testing kits to test our local streams for road salt pollution this winter.

Road salt (sodium chloride) is everywhere during winter months. Salt keeps us safe: but too much of any salt is a problem. It keeps us safe on roads and sidewalks, but it can also pose a threat to fish and wildlife as well as human health. Fish and bugs that live in freshwater streams can't survive in extra salty water. And many of us (more than 118 million Americans) depend on local streams for drinking water. Water treatment plants are not equipped to filter out the extra salt, so it can end up in your tap water and even corrode your pipes.

Do you mind if I ask you a few questions about road salt application in the winter? **Yes/No**

Do you know how much road salt to apply? **Yes/No**

Did you know that a 12 oz mug, or typical coffee mug, holds enough road salt to salt a 20 foot-long driveway or 10 sidewalk squares? **Yes/No**

Be a Smart Salter

Once you put salt down, it doesn't go away...

Salt alters the soil, harms plants, and weakens infrastructure like bridges and roads.

It gets into our streams, lakes, and rivers, putting aquatic life and human health at risk.

It only takes
1 teaspoon of salt...

...to pollute
5 gallons of water

Safe winter driving is easy as 1-2-3

1. Wait

Wait to allow time for plowing and deicing.

2. Know

Know the current road conditions before you leave.

3. Slow

Travel slowly and use caution on the roads.

Reduce your salt use to protect our water!

1. Shovel

Clear snow from sidewalks and driveways before it turns to ice. The more snow you remove, the less salt you'll have to use - and the more effective it will be!

2. Scatter

If you use salt, scatter it so there's space between the grains. A coffee mug of salt is enough to treat an entire 20 foot driveway!

3. Sweep

Once the salt has done its job, sweep up the extra so you can reuse it for later storms - and prevent it from washing away.

4. Switch

Salt doesn't work when the pavement temperature is 15 degrees or lower. Switch to sand or use a different deicer that works at low temperatures.

Wisconsin Salt Wise

SALT WATCH
IZAAK WALTON LEAGUE OF AMERICA

Road sign you can display for your neighbors:

Sticker prompt to remind you how to reduce road salt at home:

Bonus: Letter to State Representative (edit with your own experience and voice)

Dear Representative/Senator **[your rep's name]**,

Every winter, snowy weather creates dangerous conditions on our roads. Since the 1940s, communities across the U.S. have been spreading road salt on streets, sidewalks and parking lots to melt ice and create safer traveling conditions. Road salt is effective when used correctly, but we have fallen into a pattern of over-applying and misusing road salt in ways that have damaging side effects on wildlife, human health and the environment. I am asking that you work towards salt reduction in **[the name of your community/state]**.

Road salt inevitably ends up in our streams, rivers and lakes. USGS monitored 30 streams from 1960-2011 in Wisconsin, Illinois, Colorado, Michigan, Ohio, Pennsylvania, Maryland, Texas and the District of Columbia and found that 84 percent of those streams experienced high chloride concentrations due to road salt. And once road salt enters bodies of water, it is extremely difficult and expensive to remove; it's simply not feasible to filter it out at water treatment plants.

Road salt threatens our water quality in multiple ways, by contaminating drinking water, corroding pipes and leaching metals into our water. High levels of chloride are dangerous to human health, especially for people with pre-existing conditions such as high blood pressure. Chloride is also toxic to aquatic life and can degrade vegetation and soil. All told, our current road salt practices cost the U.S. $16-19 billion a year in damages.

It's possible to reduce salt usage without endangering travelers; some communities are already doing it. Minnesota, for example, has substantially reduced salt usage without seeing any loss of safety on the roads. They've accomplished this through strategies including training salt applicators in smarter salting practices, offering a smart-salting certification to professional applicators and private property owners, drafting model contracts between applicators and owners (https://www.pca.state.mn.us/water/smart-salting-training), and requiring applicators and manufacturers to properly store salt supplies.

[Your community/state] can take these steps too. By supporting smarter salting practices, you will be protecting water quality for generations of **[Marylanders/Iowans/etc.]** to come. Please **[insert specific action you want legislator to take: introduce a bill requiring smarter salting practices, co-sponsor an existing bill, etc.]**.

Sincerely,

[Your Signature]

[Your Name]

Bonus: Letter to the Editor (edit with your own experience and voice)

A little salt goes a long way.

Starting with the first snowfall of the year and continuing throughout the winter months, **[insert your county, state]** relies on sodium chloride (commonly called rock salt) and other chloride-containing ice-melt products to reduce snow and ice accumulation on our roadways. As a nation, we use roughly 20 million tons of road salt per year. Runoff from rain and snow then carries that salt into storm drains, which empty directly into nearby streams, causing potentially dangerous spikes in salt levels.

Increased salt levels in streams can corrode pipes, harm our pets, and make it tough for wildlife to find clean, safe drinking water. Many of us (more than 118 million Americans) depend on local streams for drinking water too. Water treatment plants are not equipped to filter out excess salt, so road salt can end up in our tap water, where it can cause health concerns for people with high blood pressure.

The problem is getting worse: Chloride concentrations approximately doubled in the northern U.S. from 1990 to 2011, increasing even faster than the rate of urbanization in the region. According to the New Hampshire Department of Environmental Services, damages due to road salt cost the U.S. $16-19 billion a year. More traffic and more roads will only exacerbate the problem further.

Traveling safely is important to all of us – and we can keep our roads and sidewalks ice-free while not destroying water quality in the process. Community members and government officials need to work together to reduce salt use, find alternatives to road salts, and stop the pollution of our nation's streams, rivers, and lakes.

For more information about road salts and what you can do, please visit www.saltwatch.org.

Contact Us

Email us at saltwatch@iwla.org

Find us online at www.saltwatch.org

Call us at 301-548-0150

Follow us on Social Media

- facebook.com/SaveOurStreamsIWLA
- instagram.com/saveourstreams

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