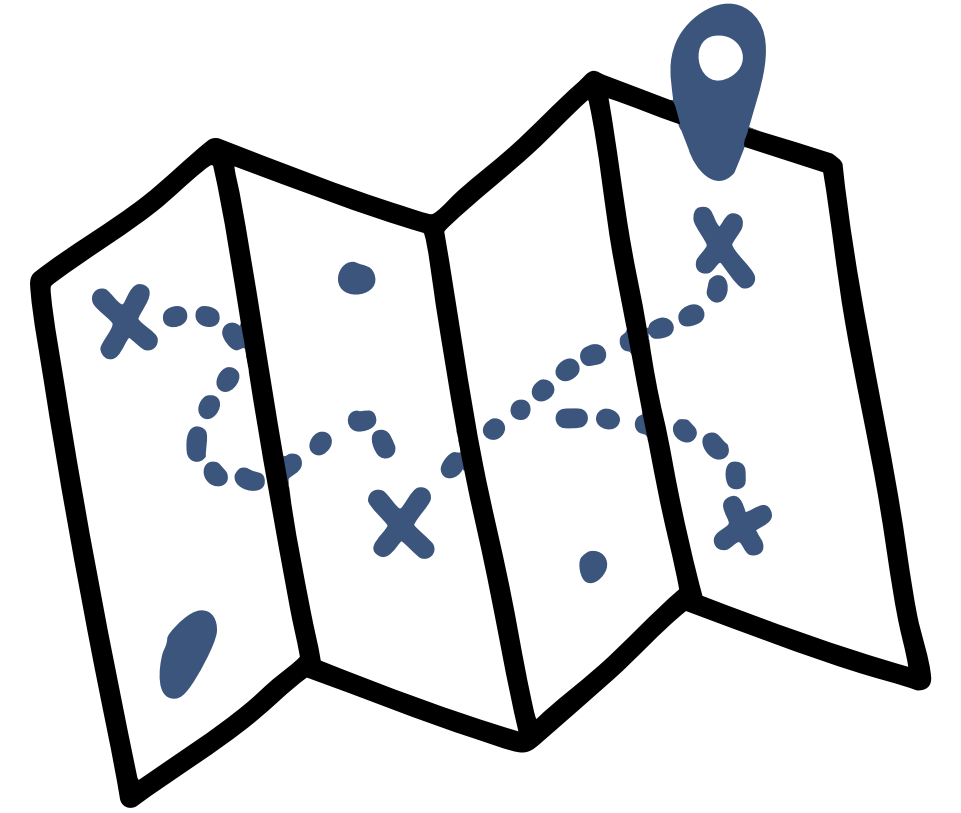




Roadmap: Advocating for Change

Abby Hileman
Salt Watch Coordinator
Izaak Walton League of America



Izaak Walton League of America

*To conserve, restore, and promote the sustainable use and enjoyment of our natural resources, including **soil, air, woods, waters, and wildlife.***



Izaak Walton League of America

📍 *Upper Mississippi National Wildlife and Fish Refuge*

📍 *Black Bass Act*

📍 *Land and Water Conservation Fund*

📍 *Clean Water Act*

📍 *Clean Air Act*



youtube.com/@IzaakWaltonLeague

WHAT IS ADVOCACY?

Advocacy is an activity by an individual or group of people that aims to raise awareness and influence decisions.



The Izaak Walton League of America has been advocating for more than 100 years.

WHAT IS ADVOCACY?

- Advocacy can be lobbying
- Advocacy actions can be small and simple or time consuming and complex
- Anyone can engage in impactful advocacy



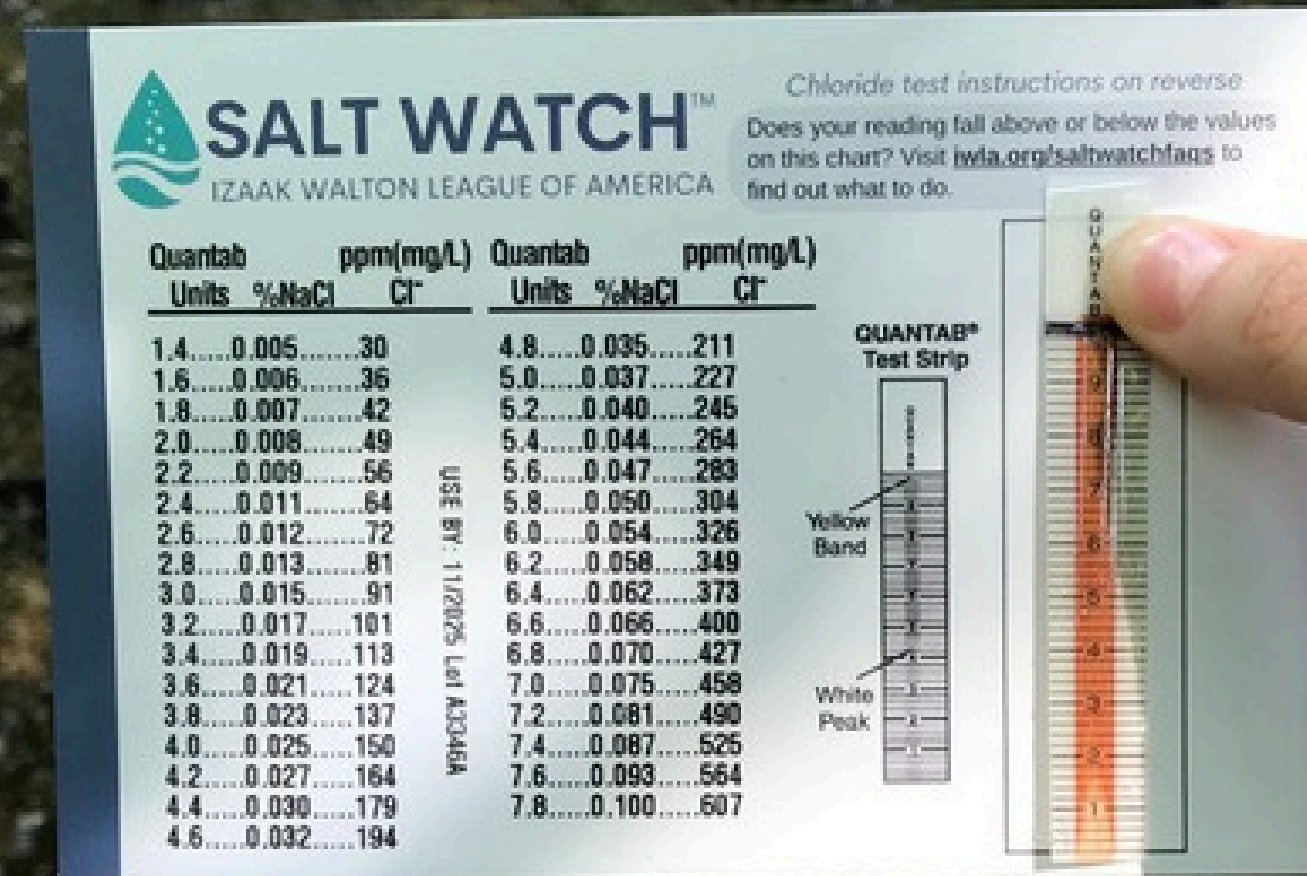
The Izaak Walton League of America has been advocating for more than 100 years.



Salt Watch

SaltWatch.org

- Launched 2018
- Mobilizing community scientists to monitor chloride levels in streams
- **Goals:**
 - **Raise awareness** about the connection between salt and stream health
 - Identify chloride **hot spots** in freshwater
 - Advocate for **smarter application** of road salt





NARRATIVE STRATEGY

AUDIENCE

Residents-
Single Family
Homes

Applicators
and
Contractors

HOA Boards

Property or
Portfolio
Managers

Business
Owners

MOTIVATOR

- Safety
- Judgement from neighbors
- Perception
- Need to get out/get to work

- Need to meet contract expectations
- Customer's needs
- Liability
- Equipment constraints (cost)

- Community needs
- Liability
- Ease of service
- Expense
- Protecting freshwater

- Quick snow and ice removal
- Reducing liability and unsafe conditions
- Reducing property damage

- Need to be open for business
- Make money
- Customer safety
- Customer expectations

MESSAGE FOCUS

1. Protecting Fresh Water
2. Smart Salting Actions

1. Large Scale Implementation
2. Necessary Tools and Resources

1. Public Safety
2. Protecting Fresh Water
3. Cost Savings

1. Maintaining quality of service
2. Protecting community assets
3. Safeguard against liability claims

1. Safeguard against liability claims
2. Cost savings
3. Maintaining quality of service



Learn about the issue.

- You don't need to be an "expert"
- Look at the data
- Collect data
- Share your data-don't keep it in a black box



Learn about your community.

- Where does your water come from?
- Who salts your streets?
- What is the "hook"? What do people care about?



Remember, change takes time.

- Be persistent
- Follow-up
- Keep it positive

MAKING YOUR ADVOCACY IMPACTFUL #1

Report Oversalting

- Take photos
- Determine who's jurisdiction it is to salt in that region
- Report the oversalting (even if it is on private property)
- Consider providing the business or property owner with smart salting hand outs and information
- Be persistent! Real change takes time



MAKING YOUR ADVOCACY IMPACTFUL #2

Letters, Emails, & Fact Sheets

- Use of bolding to express main points
- Clear, concise language
- Graphics and photos
- Solutions (short term and long term)
- Contact information for point of contact



Friends of Sligo Creek
P. O. Box 11572
Takoma Park, MD 20913

January 27, 2025

Dear Director Monger, Director Conklin, Director Dise, Director Figueredo, and General Manager and CEO Powell,

I am writing to deliver a tough message on behalf of Friends of Sligo Creek (FOSC), a nonprofit community organization dedicated to protecting, improving and appreciating Sligo Creek, the surrounding park and watershed.

Despite your great success in providing safe travel conditions throughout Montgomery County in bad weather and the various Salt-Wise campaigns, your salt management is failing in its critical mission of environmental stewardship. Our testing suggests that winter salt treatment in Montgomery County and Prince George's County is degrading the water quality of our freshwater streams:

- **Chloride levels measured by our 27 member FOSC Salt Monitoring Team¹ throughout Sligo and Long Branch Creeks jumped sharply when the January 5-6, 2025 winter storm pretreatment began.** Readings persisted at extremely toxic levels for over two weeks - well above the EPA criterion for acute toxicity (860 parts per million or ppm). As of this writing, most sites have remained above the EPA chronic toxicity criterion of 230 ppm, although chloride levels for some sites have increased sharply again, following treatment for the January 19-20 winter storm event. Shockingly, we are measuring toxic levels of chloride *everywhere* throughout Sligo Creek - not just at spots that drain major highways or salt-treated areas around the many WSSC water main breaks. Of particular note, chloride readings have exceeded the 6000 PPM high test strip maximum at the Wheaton Branch Storm Water Ponds, the Takoma Branch, Forest Glen, and Blueridge Avenue (headwaters) sites. Many other spots have been above 2,000 ppm for an extended period.
- **Conductivity has also been extremely elevated.** Consistent with the chloride strip test results, conductivity (a widely accepted proxy for salinity) has also been dangerously elevated over an extended period, as measured by our all-season testers, independent researchers, and the USGS via its real-time Monitoring Station on Sligo Creek in Takoma Park. Overall, the creek waters chronically exceed the EPA's proposed criterion for conductivity.
- **Excessive salt has been reported throughout the watershed.** FOSC has received numerous reports of excessive salt applications on both public and private property.² We suspect this problem is grossly underreported. Photos of examples are attached. **It has become clear that many applying salt have been anything but "Salt-Wise", including contractors working for public or private entities.**
- **Problems did not just occur over the past few weeks.** We also found toxic chloride levels last winter. In fact, according to IWLA's Salt Watch [Report](#) for 2023-24, our area and nearby spots were among a handful of places in their national network with toxic test results on average. Moreover, chloride levels have been trending up in

¹ For the 4th consecutive season, FOSC has created its own Salt Monitoring Team as part of the Izaak Walton League of America's (IWLA) Salt Watch program. DEP is partnering with IWLA in this program. FOSC has chosen to augment the IWLA Salt Watch Program by purchasing and using high range Hach Quantab strips (300 to 6000 ppm chloride) when the normal range strips distributed by IWLA (0 to 600 ppm chloride) have maxed out.

² We have encouraged people to request salt removal through the County's 311 system or the SHA. It is not clear if this approach is working. Some requests may have been misinterpreted as salt addition, not removal.

MAKING YOUR ADVOCACY IMPACTFUL #3

Phone/Zoom Calls

- Remember to be passionately polite
- Ask them how they prefer you to contact
- Provide your contact information and request a response
- Have a list of bullet points prepared- their time is limited
- Always leave a message with contact information
- Make sure you know what you are asking for



MAKING YOUR ADVOCACY IMPACTFUL #4

Office Visits

- Call and request a visit with your senator or rep
- You will almost always be meeting with staff
 - They are often the content experts you want to talk to anyway
- Make sure you bring prepared remarks with you
- Also bring any information, graphs, data, or other materials with you
- Outline the problem and the solution
- Make sure you know what you're asking for



MAKING YOUR ADVOCACY IMPACTFUL #5

Create Memorable Advocacy



MAKING YOUR ADVOCACY IMPACTFUL #6

Meet people where they are



Tabling Events



Hiking Events



Trainings



Door-to-Door

MAKING YOUR ADVOCACY IMPACTFUL #7

Find Your People: Workgroups

Members bring:

- New ideas
- New people
- New audiences
- More resources
- And...

One Voice




Special thanks to Renee Bourassa (ICPRB) for her workgroup input and expertise!

Things to Remember

- 📍 *What time do you have to commit? Low hanging fruit?*
- 📍 *Find your people. Who are your partners? Who is missing?*
- 📍 *Find the “hook” for your message*
- 📍 *Remember that ripples make change*
- 📍 *Keep it **POSITIVE***




Resources



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.

Fact Sheets

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.

Americans use 20 million tons of road salt every year.



Reduce your salt use to protect our water!

Do your own salt application?

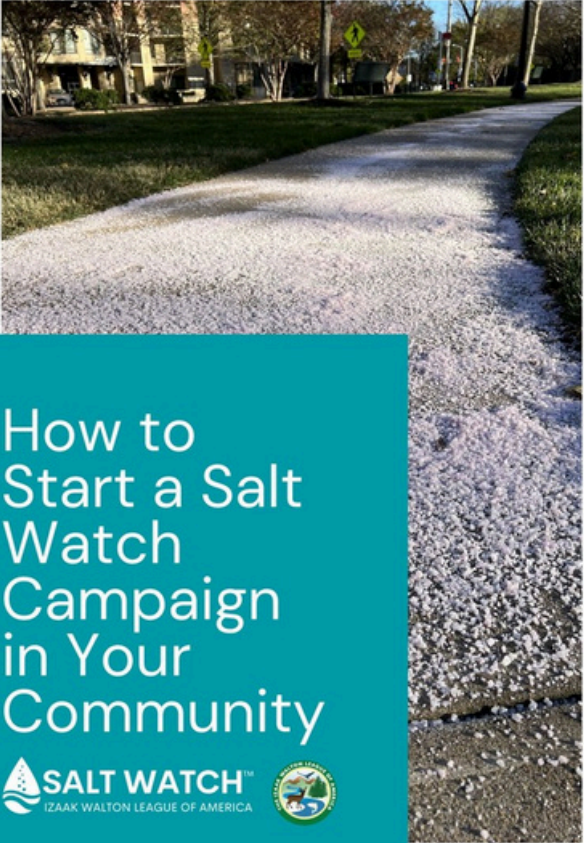
- Shovel**
Clear snow from sidewalks and parking lots before it turns to ice. The more snow you remove, the less salt you'll have to use - and the more effective it will be!
- Scatter**
If you use salt, scatter it so there's space between the grains. A coffee mug of salt is enough to treat an entire 20 foot driveway!
- 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.
- 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

Flyers



How to Start a Salt Watch Campaign in Your Community



Advocacy Guide



¿Cuánta sal de carretera hay en sus arroyos?

¡Solicite un kit de prueba GRATIS para averiguarlo! Ideal para estudiantes y científicos comunitarios de todas las edades.

www.SaltWatch.org

SALT WATCH
Español

ÚNETE A SALT WATCH

Spanish Resources

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.].

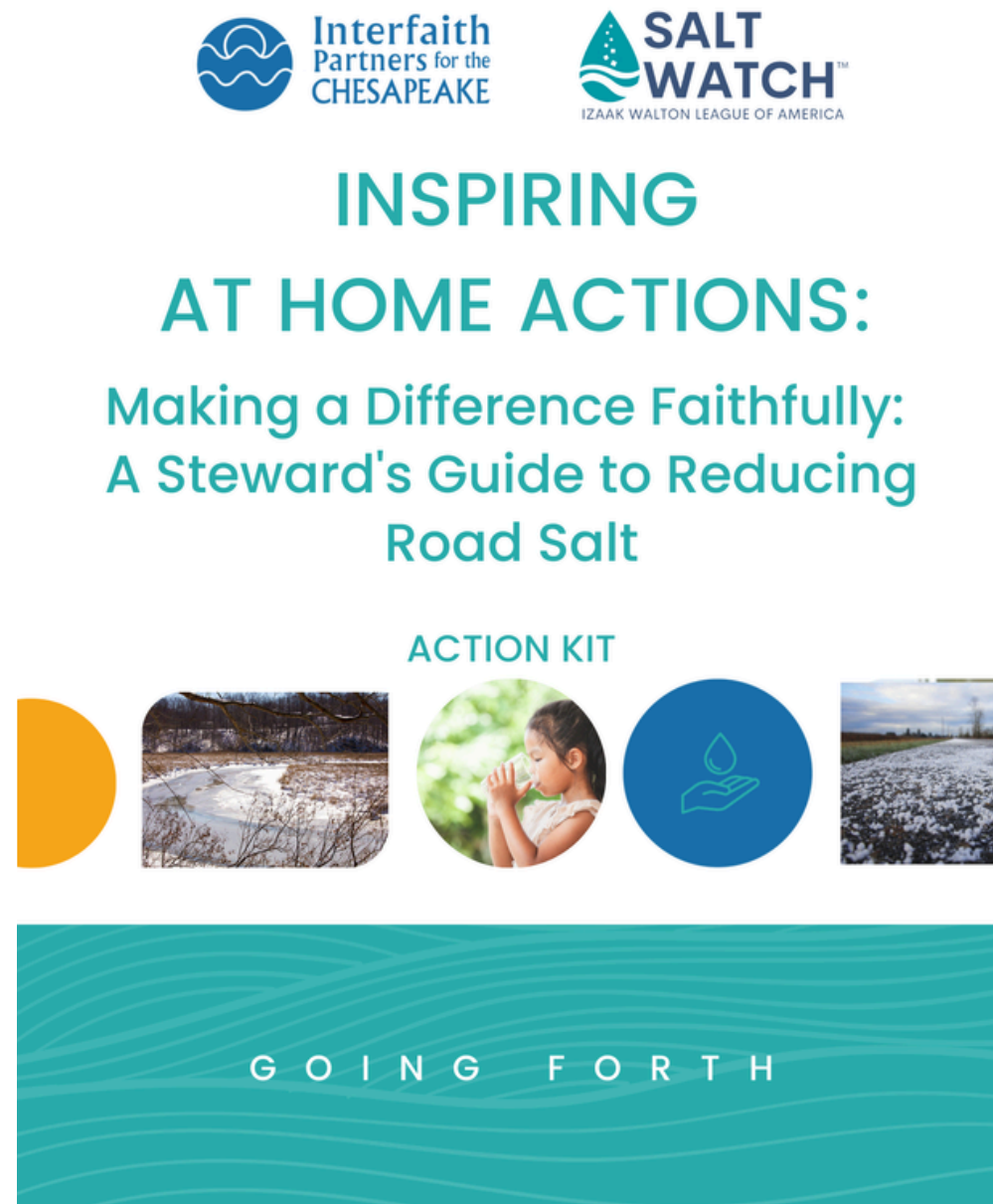
Sincerely,

[Your Signature]

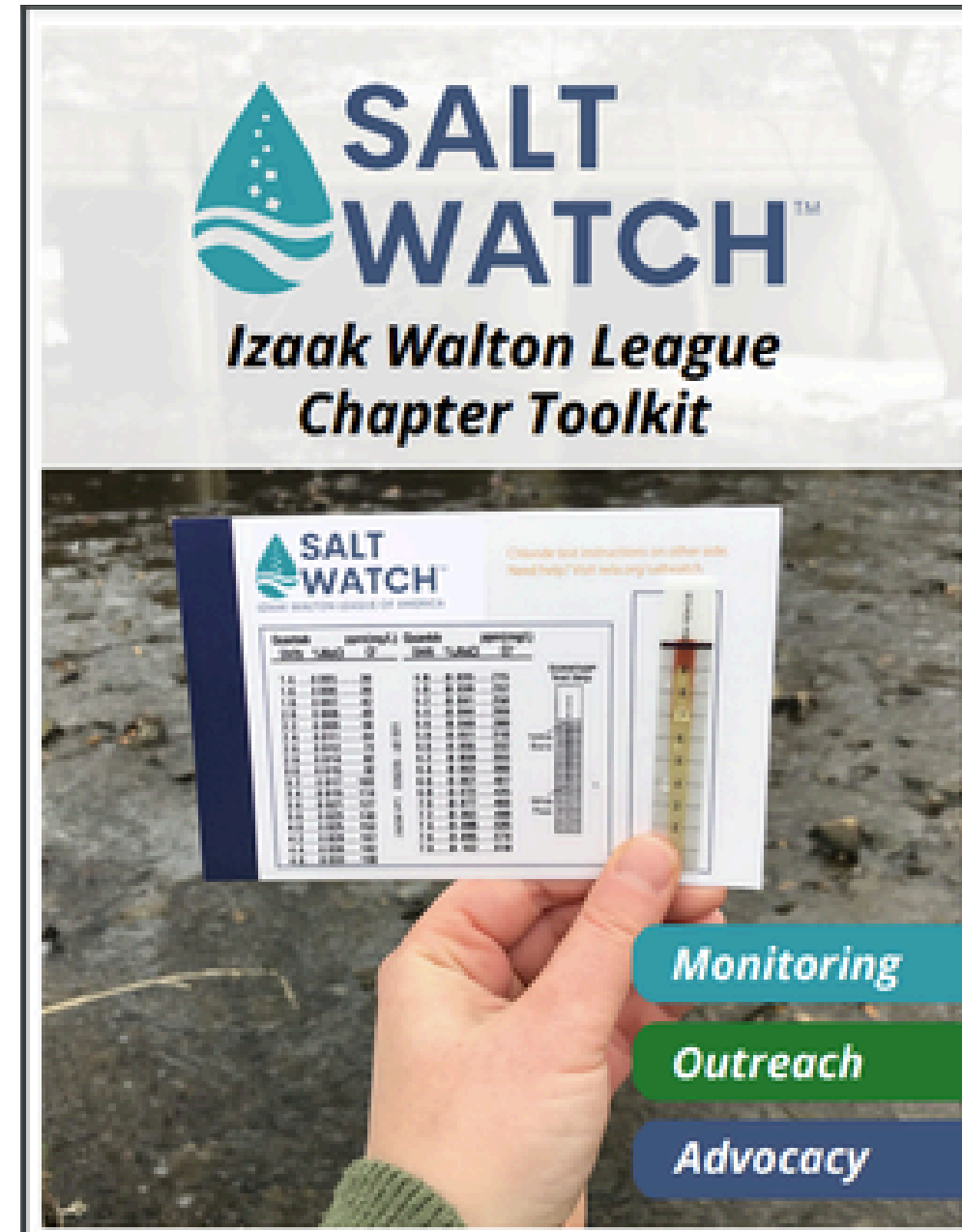
[Your Name]

Template Letters

Toolkits



Faith-based
Communities



IWLA Chapters



Paint the Plow

Salt Watch Resources

Check out the Resources Library!

www.saltwatch.org



Special thanks to our funders and individual donors!



Raines Family Fund



**HORNE FAMILY
FOUNDATION**



**Change Happens
FOUNDATION**

To donate to Salt Watch:



SALT RESPONSIBLY



Visit: saltwatch.org

Email: saltwatch@iwla.org



Newsletter
signup!

Mobilizing and Collaborating to Champion Smarter Winter Maintenance

Mary Rooney

President, LLWS

Coordinator, PA Road Salt Action WG



Hello,

I am Mary Rooney from the PA Road Salt Action group here in PA. I was asked to present to you today because we have developed a great grass roots organization in PA to address the excess winter salt use that is affecting the water quality all over the state.

My background: I am the head of LLWS, a watershed group, and for 26 years have owned an environmental engineering consulting firm. I love the outdoors and have been enjoying the recent snows on both my downhill and cross-country skis.

Agenda

- Background of Little Lehigh Watershed and Effects of Chlorides
- PA Road Salt Action (PARSA) Working Group
- Examples – Hospital and Property Manager Outreach
- Suggestions

I came to the salt issue from my own watershed work. I will talk briefly today about our watershed and its chlorides pollution. I will cover how we began the PA road salt action group. I will end with two slides on the outreach I have done and suggest some tips for you to do the same. Chlorides data can be found in last few slides.

Little Lehigh Watershed

Little Lehigh Creek &

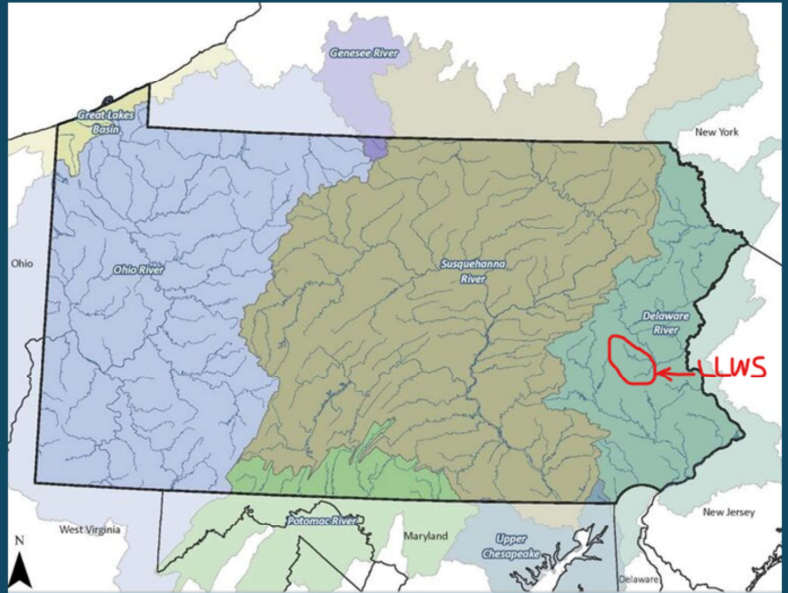
Jordan Creek

19 municipalities

Variety of land use

230,000 residents

Based map - by weconservepa.org



The Little Lehigh Creek is in eastern PA. Its waters support drinking water for Allentown, a larger city and the surrounding community. We have many land uses from mountains, farms, and the normal urban sprawl. Our watershed supplies many heavy water using industries,

Little Lehigh and Salt

Shout out to Jennifer Latzgo

LLWS actions

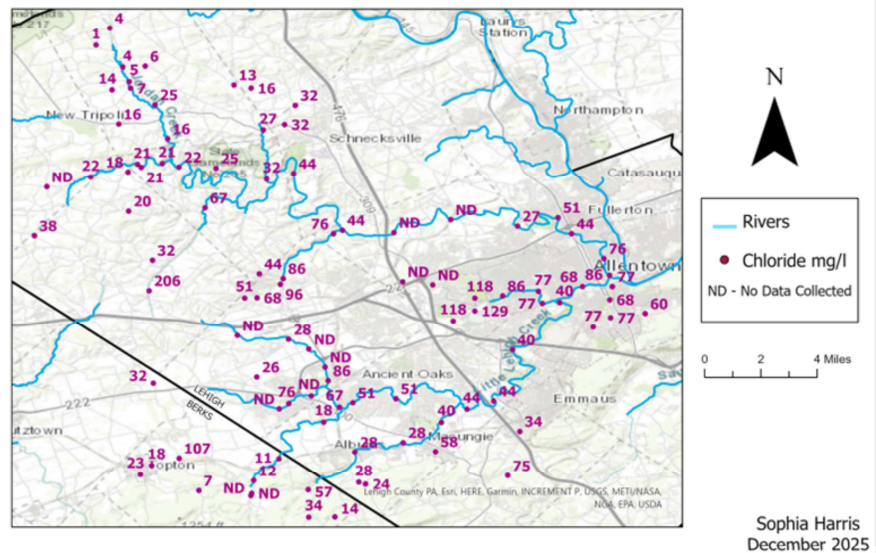
“Salt Snapshot” sampling

Local outreach

Graphing Chlorides

USGS Chlorides data

Little Lehigh and Jordan Creek Chloride Levels in October 2025



I want to take a moment to recognize Jennifer Latzgo. She’s been my partner in so much of our salt-reduction work and serves on the Little Lehigh Watershed Board. Jennifer became deeply invested in understanding salt use and its impact on our watershed back in 2022, and she hasn’t slowed down since.

In 2023, she led our team through our first-ever watershed-wide chloride sampling effort. That project, and the eye-opening results that came from it, became the spark that ignited our local outreach to municipalities, universities, newspapers, and hospitals.

After putting so much time into collecting our own data, we wanted to know whether communities had to start from scratch, or if broader chloride data already existed. And it turns out, it does. The USGS has compiled extensive chloride data for rivers and streams across the country, offering a powerful resource for people to advocate locally. At the end of this presentation, I have a few slides that show what chloride trends look like in our watershed and trends we have quickly developed from USGS data. I suspect many of you will see patterns that feel very familiar. The USGS data is there for anyone to access.

We also learned that our local water authority collects monthly chloride data and generously shared it with us, giving us an even clearer picture of what’s happening close to home. Local water authority data could be another source of local data for you.

What Moved Us to Start PARSA

- PA has no regulations that govern salt applications or applicators
- Groups working solo with no results.
- Salt is applied on our local roads by local people.



Once we knew we had a problem, we started working locally but quickly realized this was not a local problem. As we reached out to watershed groups across the state, we kept hearing the same story: most groups were struggling to make meaningful progress against excess salt use on their own.

Those conversations were a turning point. Hearing how many people were fighting the same battle in isolation made it clear that working solo wasn't enough. We needed to come together, compare notes, and build on each other's successes and failures.

Jennifer and I often said, "We may not be able to solve climate change or eliminate plastics, but surely we can influence how much salt is applied by people in our own communities." That belief that local and statewide action matters, became the spark behind PARSA.

If you're thinking about doing something similar in your own region, my biggest piece of advice is: don't go it alone.

- Find a partner who will challenge you, support you, and keep you moving forward.
- Connect with organizations that share your mission.
- And most importantly, be an enabler. It's tempting to do everything yourself, but real change happens when you empower others to lead alongside you.

PARSA- What We Do

- 10,000 conversations are needed
- Share the science, follow volunteer's direction.
- Focus on long term change
- Distribute power and decision making
- Leadership through Action

<https://www.littlelehigh.org/salt-deep-dive>

PA Road Salt Action Working Group

LLWS hosted a statewide meeting in January 2025 with POWR (powwatersheds.org). From that meeting the PA Road Salt Action Working Group formed to focus on reducing excess Road Salt use and educating the public about the impacts of winter salting. The group meets frequently.

With few regulations in PA to curb excess salting and the impact of chlorides in our waterways, reducing excess winter salt use in PA will require many volunteers speaking out and thousands of conversations. Will you join this effort? Contact us to work locally and statewide. [Volunteers in Action - That is who we need](#)

LLWS has made available some documents for those interested in working collaboratively. Use Buttons below to explore.

- Working Group meeting minutes, slides and followup documents
- Chloride concentrations in waterways in multiple counties in PA. Present these to show growing impacts of winter salting.
- Slide Decks on the Impacts of excess Road Salt that you can use
- Sample Facebook posts on winter salt use that your group can post.
- Documents you can use to talk with commercial property managers and your local municipality about salt use.

Contact Us to Join Our Efforts

Working Group Documents

Recent W.G. Meeting Video

Chlorides in Waterways Trend Graphs

Slide Decks for Salt Education

Resources you can use in outreach

Property Manager Resources

Fall Conference Summaries

Tons of Road salt purchased by Mun

	Total
	2022
Allegheny County	127,561
Butler County	124,201
Westmoreland County	109,221
Washington County	69,068
Luzerne County	68,357
Lehigh County	63,525
Erie County	58,659
Lackawanna County	58,239
Philadelphia County	52,322
Indiana County	46,057
Chester County	45,825
Northampton County	40,689
Jefferson County	40,585
Montgomery County	39,145
Bucks County	38,639
Cambria County	37,538
Berks County	37,460

How we got started

We kicked things off by coordinating a statewide conversation hosted with the aid of the POWR. The response from that January 2025 meeting made one thing clear: there was real momentum to form a group—so PARSA was born.

Our approach

We've taken what I like to call a "spaghetti-on-the-wall" strategy. No one has cracked the chloride problem in Pennsylvania, so we're trying multiple paths and seeing what sticks.

- Change will take 10,000 conversations all over the state.
- We Ground everyone in the science, then follow the energy of the volunteers.
- We Keep a long-term mindset—real change takes time.
- We Share power & decisions making. Though Jennifer and I continue to lead the group, We remind ourselves often: this can't be the 'Jennifer and Mary' show.

Our philosophy

The best person to take action is the person willing to take action, not 'the expert'. A lot of people were waiting for someone to step up. So, we stepped up.

One year later

We've grown to 97 members, with about half actively involved.

- We helped advance a House bill on BMP's.
- We've had ongoing conversations with PennDOT and regulators.
- We're exploring ways to deliver winter-maintenance best practices to contractors.
- We've created resources to help you talk to commercial centers, municipalities, hospital systems—anyone oversalting.
- And we collaborate widely, sharing information across the state.

Lehigh Valley Hospital Outreach Example

Contacts

- Shared photos, conversations, emails.

Hooks

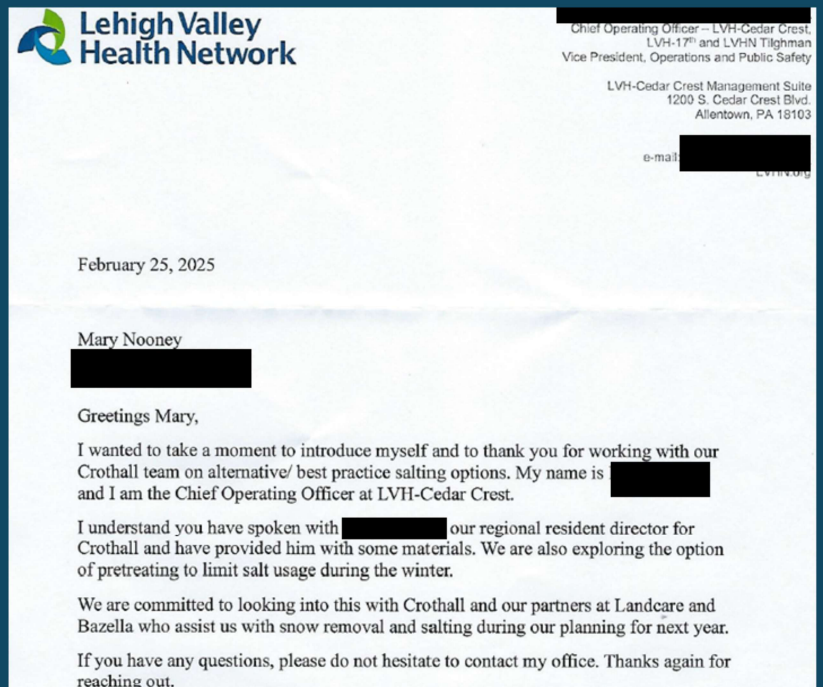
- Financial – BMP's save money
- Health - Doctors advise low sodium diets

Education

- Virtual meetings with property manager
- Provided training materials and resources

Results

- COO committed to reducing salt use
- Leadership attended best practices training
- New sidewalk salting equipment purchased
- Plan collaboration with parking lot team



Here is a success story.

In early 2025, my local hospital system spent hundreds of thousands of dollars on salt. I calculated they applied more than 6,000 tons directly into our watershed and upstream of our drinking-water intake.

I decided to push for change. What did it take?

Photos, in-person outreach, and follow-up emails. When the response was limited, I mailed a letter and included a simple idea: How can a hospital system spread thousands of tons of salt into our watershed while its doctors urge patients to follow low-sodium diets? That letter got a response commitment to investigate best practices.

Once we opened communication, I met virtually with the property-maintenance coordinator and shared materials tailored for property managers on reducing salt use (If you want to talk with hospitals there is a great one-hour Mayo Clinic video).

Link to Mayo Clinic Hold the Salt Video:

https://www.youtube.com/watch?v=T_AnOT7AG58

Results:

- The COO committed to working with contractors to cut salt use
- The maintenance team attended best-practices training
- They purchased new sidewalk-salting equipment and immediately reduced usage, which will save money long term
- I am advocating for conversations with the parking-lot team

Property Manager Outreach Example

Similar Contact Process

- Contacted PM and Anchor Store
- Followed up in different ways

Hook

- PM did not want to be seen as not responsive to Anchor Store's customer outreach.
- PM did not know about salt pile

Results

- PM discussed salt use with contractor
- Removed salt pile
- Considering conversation with other PM's

"How to talk to a PM" instructions available at PARSA website.

How to Talk with a Local Commercial Center About Over-Salting

Over-salting and poor salt stockpile management harm local waterways, groundwater, and drinking water supplies. If you regularly see excessive salt use at a commercial property, you can play an important role in helping reduce pollution. This guide walks you through how to speak up effectively, respectfully, and constructively.

1. Start by Documenting What You See

Take clear, close-up photographs.

Property managers often work in another state and may never see the site in person. Good photos help them understand the issue. (Sample photos on the last page.)

Include:

- Up-close images of excessive salting, stockpiles, salt dumps or salt washing away
- A photo of the commercial property's sign
- Any visible stockpile issues (uncovered piles, runoff, etc.)

After reviewing your photos, select the three images that best tell the story.

2. Speak with the On-Site Manager

Walk into the business and politely ask to speak with the manager.

During the conversation:

- Briefly explain that **more salt is being used than is necessary for safety**.
- Mention that **excess salt harms local waterways**.
- Identify yourself as part of a local watershed group (or other group) to show you are a credible, community-focused resource.

In January 2025, my local supermarket shopping center was dumping unbelievable amounts of salt. I even filmed myself kicking through a 4-inch-deep, 15-foot-long salt dump. So I reached out and asked for change.

What it took-

I visited the store several times, but the manager brushed it off as "not his issue." I contacted the property manager next, she listened, accepted the guidance materials, but made no commitments.

By December 2025, nothing had improved. So, I went higher. I reached out to the supermarket chain's corporate sustainability team, just a cold message through their contact form, and this time someone responded.

More photos, more follow-up, and I had a productive call with the property manager. She had no idea there was a large salt pile behind the building or the extent of the oversalting. She committed to making changes.

The salt pile is now gone, and I'm pushing to speak with other property managers in the company. Progress is happening, but it's always a work in motion.

My goal is these outreaches is not to make just one change but to educate multiple property managers who oversee many contractors. I hope use of BMP's will spread from this.

Resources are on our website if you want to try this approach in your own community. See Lets Talk Salt button.

My Suggestions

- Winter salting professionals are your allies
- Lack of Success is not Failure
- 10,000 conversations starts with talking to 10 people.
- 3 good photos
- Find the right Hook for each outreach
- DONE is better than perfect
- Municipalities face a lot of demands
- AI can be a great tool
- Persistence



What I have learned:

Winter salting professionals, property managers, and municipal staff are your allies. Treat them with respect—they're doing difficult, essential work. Tell them, you support salt use, as needed for safety.

Lack of success is not failure. Don't take silence personally. Your outreach itself is progress. There are countless reasons someone doesn't call back, and almost none of them are about you.

If you don't hear back, you have options:

- Try a different approach—share a training opportunity or useful resource
- Ask someone else to reach out
- Or simply move on to the next person who *is* ready to engage

Momentum grows through people. Ten conversations become a hundred, then a thousand, when you empower others to spread the message.

Use photos to document issues. Shoot some with and without the anchor store's name. The goal isn't public shaming; it's celebrating improvement and encouraging better practices.

Different groups respond to different motivators: environmental, financial, health, or customer pressure. Find the "hook" that resonates. Municipalities, for example, face

constant pressure to use *more* salt—your voice can help shift that expectation. Universities can be reached through student groups; one motivated student can spark big change.

My motto - “Done” is better than “perfect.” The belief that you should do more often stops people from doing anything.

Volunteers have freedom—no one is paying you, and mistakes are part of the process. Forgive them in yourself and your team, and keep moving forward.

Working with municipalities:

- Build relationships
- Engage with respect
- Identify internal partners (EAC, maintenance, commissioners)
- Look for win-wins—cost savings and salt reduction go hand in hand

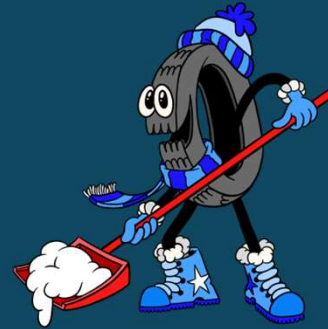
Using AI effectively:

AI can help draft respectful outreach, locate hard-to-find contacts, or polish your writing. But it only works well when *you* provide accurate starting facts. Use AI to refine—not to invent.

Above all: persistence and patience. This work is challenging, but every step forward matters.

What Can You Do?

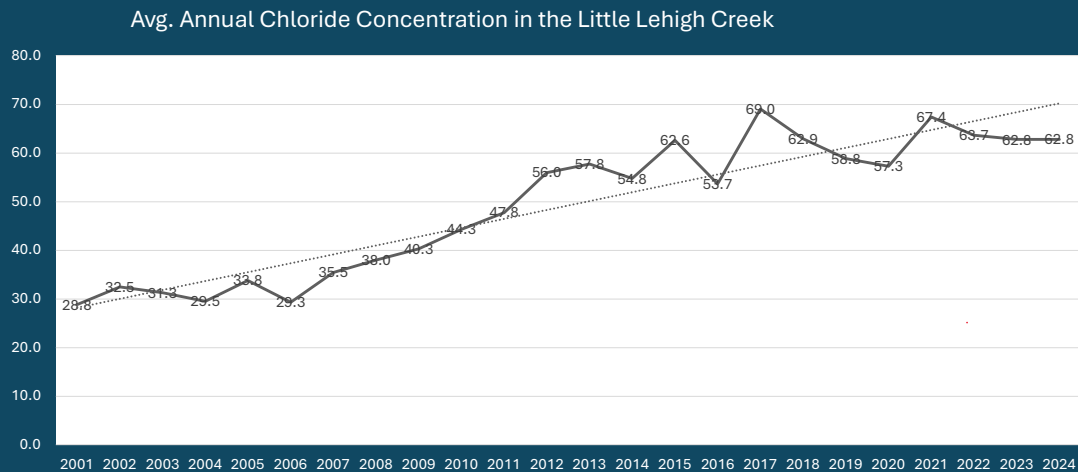
- ▶ Form a group of volunteers willing to advocated for smarter salting in your waterway.
- ▶ Ask winter maintenance team to consider additional salt reduction Best Management Practices and to train staff on salt impacts
- ▶ Raise awareness across organization of impacts of excess salting – don't go solo!
- ▶ Increase awareness of excess salt issues via social media. Help others do the same.



This slide presents some ways you can get started.

Our website has resources that you can use to make that first outreach when you see over salting.

Effects on Drinking Water in our Watershed

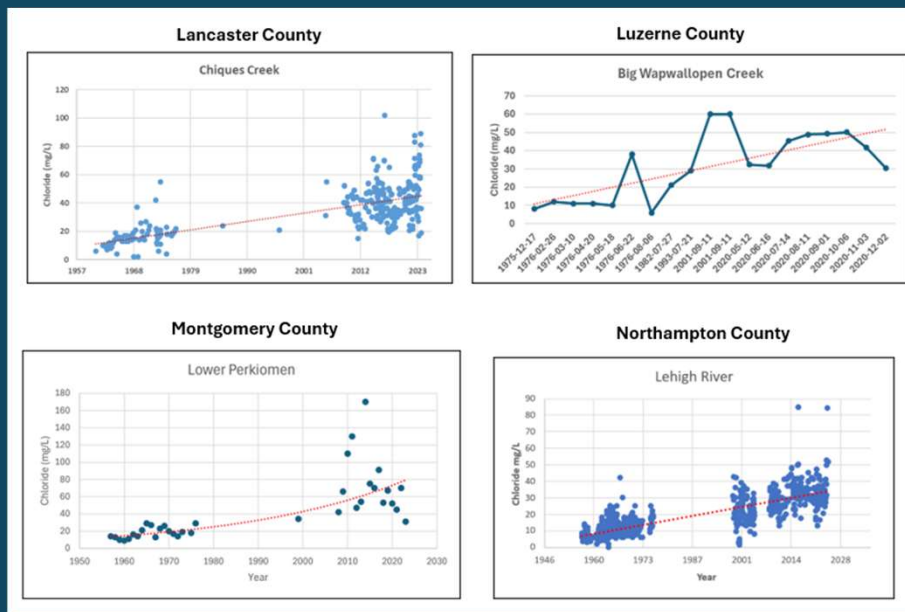


Our local water authority collects chlorides data monthly and shared it with us.

It shows the annual average chloride levels at their water intake on the Little Lehigh Creek in Allentown since 2001.

The dotted trend line notes a steady increase. The average concentration of chloride has more than doubled in 23 years.

Examples of USGS data for PA waterways



The USGS has a lot of compiled Chlorides data for rivers and streams all over the US.

Data present the annual average chloride levels over time. You can use data like this in your local presentation to demonstrate the long-term impacts

The dotted trend line notes a steady increase.

Background concentrations of chlorides in PA are generally less than 20 mg/L. Often you see the background concentrations in the 1970's are less than 20 mg/l and have been trending higher and higher. I have spoke to several research related institutions about the connection between these trends and road salt. The consensus is that in developed waterways, a trend of increasing chlorides in streams is primarily due to winter salting of roads and paved areas.

Our Findings

Big chlorides increase compared to 2024 values!

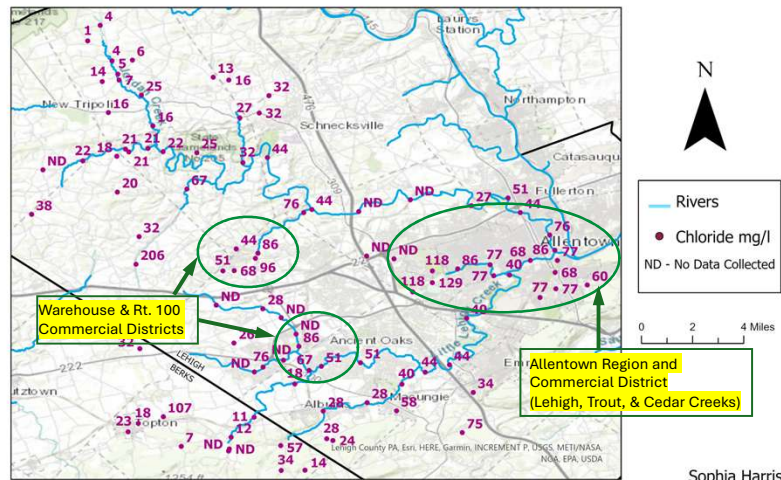
Lehigh Creek & Tributaries
50% of samples > 50 mg/l

High values concentrated near City of Allentown & warehouse district.

Jordan Creek & Tributaries
24% of samples > 50 mg/l

High values concentrated near commercial district.

Little Lehigh and Jordan Creek Chloride Levels in October 2025



This is our third year of collecting watershed wide chlorides samples. Samples were collected in early October during early fall low creek flows. During low flow times, the water in the creeks is primarily coming from groundwater.

This means that any chlorides found in October represent chlorides in our groundwater year-round.

So what were our findings? Winter salting has a year long impact! In our watershed the impacts are growing and spreading to additional waterways.