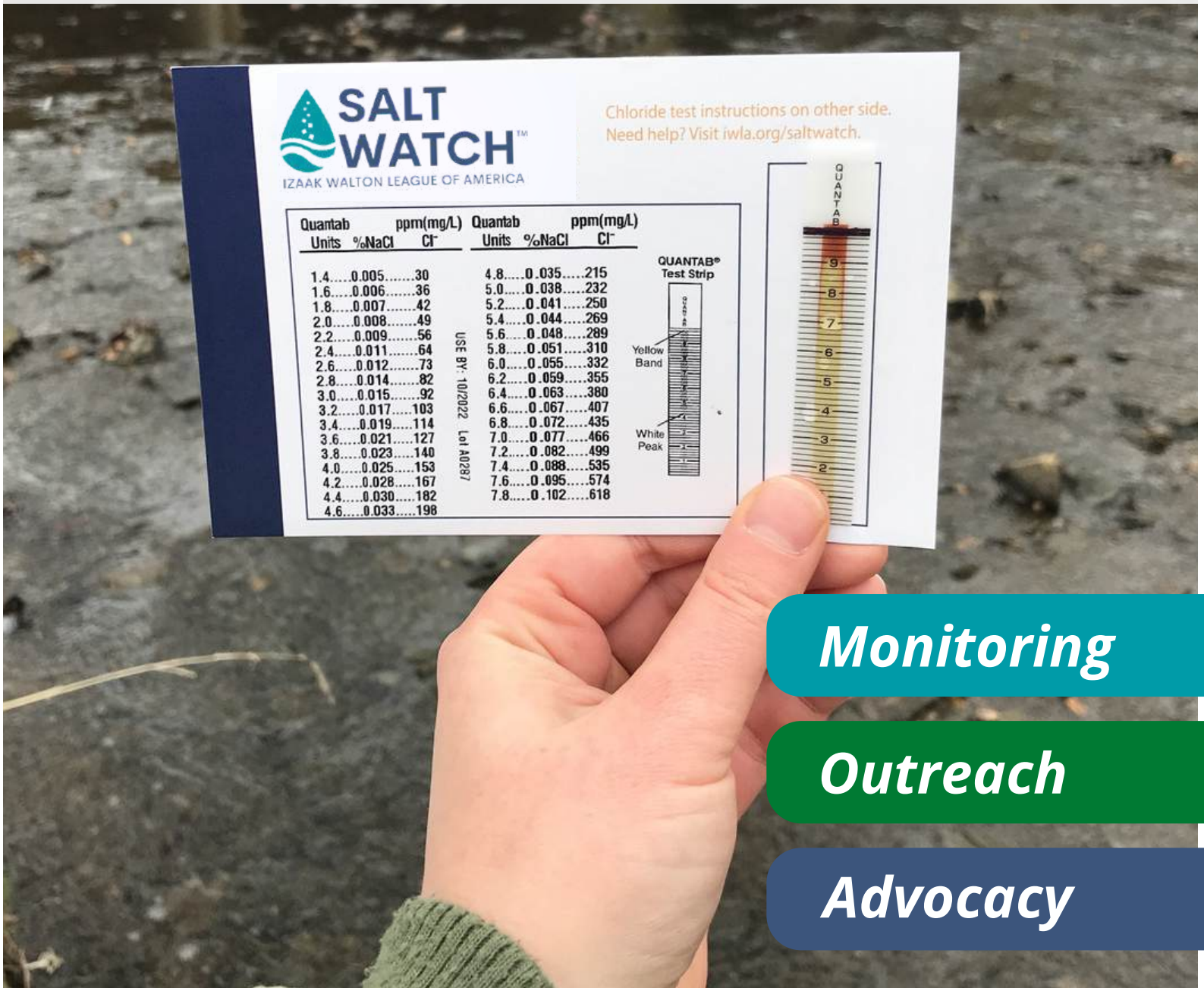
SALT WATCH®

Izaak Walton League Chapter Toolkit



Monitoring

Outreach

Advocacy

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INTRODUCTION

The goal of this Toolkit is to provide Izaak Walton League members with the information and resources necessary to help engage their chapters and their communities in Salt Watch.

Additional information about Salt Watch can be found on our website, **www.saltwatch.org**.

If you have questions, please reach out to **saltwatch@iwla.org**.

This toolkit contains clickable links to websites and downloadable resources. For this reason, **it is best viewed on a computer** or other internet-connected device.

BACKGROUND

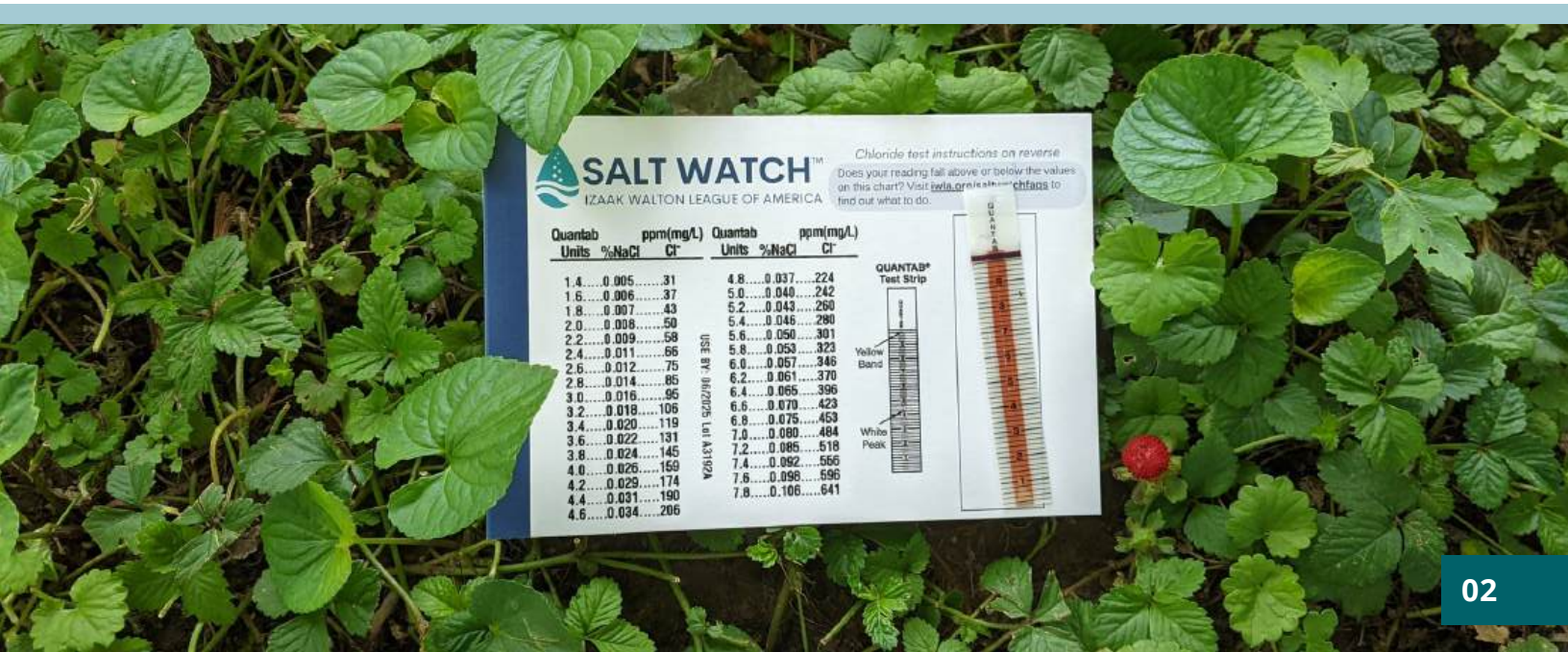
WHAT IS SALT WATCH?

Salt Watch is a crowd-sourced community science project of the Izaak Walton League of America. This program mobilizes volunteers across the country to monitor chloride levels in the waterways they care about.

The goals of Salt Watch are:

- **Raise awareness** in the general public about the connection between salt pollution, stream health, and public health.
- **Identify hotspots** of chloride pollution.
- **Advocate for solutions** and smarter application of road salt by sharing results with private landowners and local and state agencies.

www.SaltWatch.org



BACKGROUND

WHAT IS CHLORIDE POLLUTION?

Chloride occurs naturally in the environment. It's found in underground aquifers and coastal saltwater spray, for example. However, road salt application, water softener discharge, sewage effluent, processing plants, fertilizers, and saltwater intrusion have led to increasing chloride concentrations in waterways nationwide.

When excess chloride is delivered to bodies of freshwater, it can harm the environment, pose a threat to human health, and cause costly damage to infrastructure.

ENVIRONMENTAL IMPACT

In the environment, chloride can dry out and kill vegetation, compact soil and become toxic to freshwater aquatic life. Because organisms that live in freshwater aren't adapted to sudden chemistry changes (especially those that make water salty), increased chloride in waterways can be deadly to aquatic life.

In general, larger organisms like fish seem to be less sensitive to chloride than smaller organisms including macroinvertebrates and daphnia (sometimes called water fleas). Those smaller organisms play a vital role in the health of the ecosystem by controlling algae and being a food source for larger organisms. If they are removed from the environment due to road salt pollution, the entire food web can be destabilized and algae can be left unchecked, leading to eutrophication events that deplete waterways of oxygen.

HUMAN HEALTH IMPACT

Additional salt in drinking water poses a threat to public health. A 2023 study[1] published in *Nature Reviews Earth & Environment* describes the "cascading direct and indirect human health impacts associated with salinization," ranging from hypertension to cancers.

When chloride concentrations in source water used for drinking reach or exceed 250 mg/L (250 ppm), the Environmental Protection Agency (EPA) requires public water suppliers to reduce chloride below this level before supplying it to the consumer. This puts a huge strain on public water utilities, as chloride cannot simply be filtered out of our water with standard filtration equipment and processes. Chloride must be removed through a specialized process like reverse osmosis, which is incredibly expensive and requires specialized equipment.

Additionally, the corrosive nature of salt triggers the release of lead and other harmful chemicals in pipes that carry drinking water. This was a factor in the toxic levels of lead in the drinking water in Flint, Michigan, which became a public health emergency.

There is no safe level of lead in drinking water. The EPA reports that lead in water poses cardiovascular, kidney, and reproductive health risks to adults. In children, even low levels of lead can result in behavior and learning problems, lower IQ, hyperactivity, slowed growth, hearing problems, and anemia.

1. Kaushal, S.S., Likens, G.E., Mayer, P.M. et al. (2023). **The anthropogenic salt cycle**. *Nat Rev Earth Environ 4, 770–784*. https://doi.org/10.1038/s43017-023-00485-y

INFRASTRUCTURE IMPACT

Chloride can corrode metal, concrete, bridges, vehicles, drainage systems, highway fixtures and drinking water pipes. Water treatment facilities deal with corrosion regularly, and the problem worsens as chloride concentrations increase. As salt accelerates the corrosion of pipes in our water systems, it allows for the leaching of metals, including dangerous metals like lead, into our drinking water.

This damage to infrastructure is expensive. A 2014 report[2] from Fortin Consulting (now Bolton and Menk, Inc.) estimated that each ton of road salt used in the U.S. costs about $800-$3,300 annually in infrastructure damage. The U.S. uses approximately 20 million tons of road salt each year, making the long-term associated costs of road salt pollution between $16-$66 billion annually.

HAVE MORE QUESTIONS ABOUT CHLORIDE POLLUTION?

Find more answers using the following Izaak Walton League resources:

- Salt Watch FAQs
- Salt Watch Advocacy Resources
- Salt Pollution in Our Fresh Water: A Costly Crisis for Human Health, Infrastructure and Aquatic Life (Outdoor America 2023 Issue 4)
- Webinar: How Road Salt Impacts Our Health and Infrastructure
- Blog: Road Salt and Stream Health

Still have questions? Send us an email - saltwatch@iwla.org

2. Fortin, C., et al. (2014). **The real cost of salt use for winter maintenance in the Twin Cities Metropolitan Area**. *Fortin Consulting*. Prepared for Minnesota Pollution Control Agency. www.pca.state.mn.us/sites/default/files/wq-iw11-06bb.pdf

MONITORING

REQUESTING YOUR KIT

To participate in Salt Watch, you'll first need to request a kit. Salt Watch kits are free as supplies allow.

Head to **www.saltwatch.org** and complete the kit request form.

Kits are sent via USPS and should arrive within approximately 1-2 weeks of receiving your request.

KIT CONTENTS:

- 4 chloride test strips
- sample testing instructions
- data uploading instructions
- conversion chart

To request multiple kits, email saltwatch@iwla.org.
Bulk kit requests are fulfilled on a case-by-case basis as supplies allow.

MONITORING

The postcards in each Salt Watch kit include the following instructions:

USING YOUR CHLORIDE TEST STRIPS

- Find a clean small glass or plastic cup. Using water from the stream, rinse out your cup 3 times.
- Fill the cup with about an inch of stream water. (Note: The test will not work if the top half of the test strip is submerged.)
- Place the chloride test strip into the cup with the "quantab" label at the top.
- Leave the strip sitting in the cup until the horizontal orange line at the top turns a dark blue or black (can take up to 10 minutes).
- To read the test strip, locate where the tip of the white peak falls on the scale. You can convert these units to parts per million (ppm) with the table included in your Salt Watch kit.

Note: Each batch (or “lot”) of chloride test strips has its own unique quantab conversion chart. Make sure to only use the comparison chart that came with your Salt Watch kit.

SUBMITTING YOUR RESULTS

- Navigate to www.cleanwaterhub.org/saltwatch. Log in to the Clean Water Hub or create a new account.
- Click on CREATE SALT WATCH READING
- Select a site from the dropdown menu or click "Create a New Site"
- Fill out the form for your site.
- Double-check all fields and click SAVE CHANGES when finished.

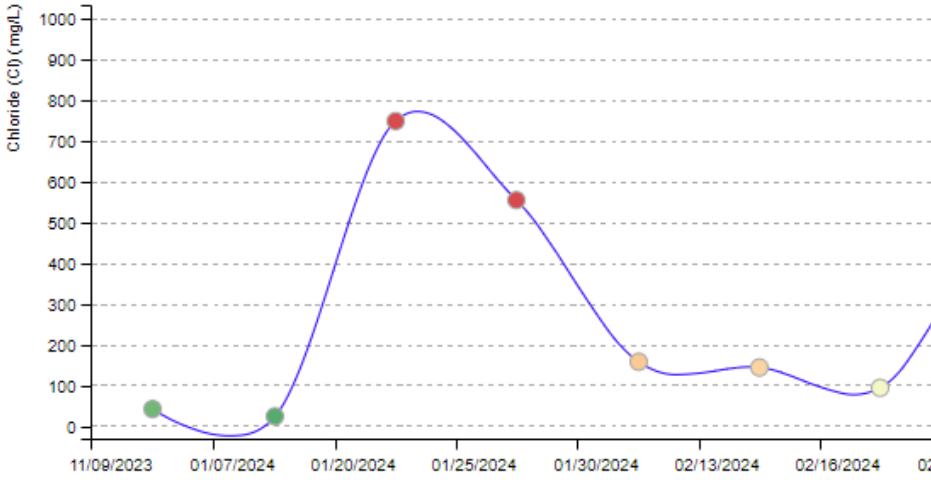
MONITORING

THE CLEAN WATER HUB

www.cleanwaterhub.org

The Clean Water Hub is a water quality database created by the Izaak Walton League and used by over 200 organization across the country. It houses volunteer-reported data for projects including Save Our Streams, Salt Watch, and Nitrate Watch.

The Clean Water Hub was created to be a place where organizations and individuals can easily share their data, track changes in water quality, and display their results in meaningful ways.



Data is summarized in color-coded graphs and interactive maps. In most cases, data can be easily viewed and downloaded, even without needing to create an account on the Hub.

Want a place where all the data reported by your chapter can be viewed and downloaded? **Fill out this form** and we will create an organization for your chapter in the Clean Water Hub.

OUTREACH

SHARING SALT WATCH WITH OTHERS

Whether they are hosting an event, inviting people to use their facilities, or simply talking to their neighbors, Izaak Walton League members and chapters are constantly interfacing with their communities. We encourage Ikes and their chapters to see these occasions as opportunities to introduce others to the League's clean water programming - like Salt Watch!

In this section, you'll find resources to help get the word out about Salt Watch programming.

OUTREACH

MESSAGING GUIDE

It is important that we are consistent in the ways that we communicate about Salt Watch and the issue of chloride pollution. Please review this messaging guide and incorporate it into your communications surrounding Salt Watch.

Smart Salting Reminders:

We do not support a ban on road salt.

- We know that road salt is important for helping people travel safely in the winter and we are not pushing a "salt ban." We hope that salt can be used in smarter ways and in smaller quantities moving forward.

Salt does not "disappear" after a storm event.

- When snow and ice melt, road salt is washed into local streams (some of which feed into drinking water supplies) or is absorbed into the soil. From the soil, salt can end up percolating into groundwater or washing into streams with future precipitation.
- It takes only **one teaspoon** of salt to permanently pollute **five gallons** of water.

There is no perfect alternative.

- Alternatives to road salt, like beet juice or cheese waste, are often not salt-free. They simply offer alternative ways to get salt to stick to the road so less salt is needed or add color to the salt so it is easier to see.
- Acetates like CMA (Calcium Magnesium Acetate) can be good alternatives, as they are less corrosive than ice-melting products that contain chloride. However, these alternatives are also typically more expensive.
- Sand is a common replacement for road salt. Sand provides traction without adding chloride to the environment, but it introduces the potential for increased sedimentation in streams and stormwater systems.

OUTREACH

MESSAGING GUIDE

continued

Want to avoid salt pollution? Shovel, Scatter, Sweep.

- **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 (about 3 inches) between the grains. A 12 oz coffee mug of salt is enough to treat an entire 20 foot driveway, 10 sidewalk squares, or two parking spaces.
- **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.

You do not have to feel "the crunch" for salt to do its job.

- Salt lowers the freezing temperature of water so snow and ice can be more easily removed. Putting more salt on a surface does not make snow and ice melt faster or eliminate the need for plowing or shoveling.

Beware of package labels.

- There is no regulation around road salt packaging. Deicers labeled "eco-friendly" or "pet safe" might still contain chloride. Read the product label closely. If there is sodium chloride, magnesium chloride, calcium chloride, or potassium chloride, it still contains salt!

Chloride pollution is not just a winter problem.

- Research finds that road salt can continue to pollute streams in the summer, and that aquatic life may be even more sensitive to salt in warmer weather.

Learn more about salting best practices from our partners:

- Wisconsin Salt Wise
- Minnesota Pollution Control Smart Salting

OUTREACH

OUTREACH RESOURCES

The following resources are available to Izaak Walton League members and chapters to aid in their outreach efforts.

Outreach Postcards (5"x7"):

Ideal for distributing at outreach events or having onsite at your chapter's facilities.

We can send you postcards (as supplies allow)! Use this form to request up to 100 postcards from the Izaak Walton League National headquarters: **https://forms.gle/du1fRtnT9y3LtCBP9**

Want to print your own? Click to **download the design as a PDF in English** and **in Spanish**.

Front

Back

Salt Watch outreach postcards are also available **in Spanish**. You can request these translated materials in the request form.

OUTREACH

OUTREACH RESOURCES

Salt Watch stickers:

4"x2.5"

3.5"x3"

Stickers are ideal for distributing at outreach events.

We can send you stickers (as supplies allow)! Use this form to request up to 50 stickers from the Izaak Walton League National headquarters: **https://forms.gle/du1fRtnT9y3LtCBP9**

Tabling Sign:

Promoting Salt Watch at an outreach event? Use this sign to draw people to your table or booth.

Click to download as a PDF.

OUTREACH

OUTREACH RESOURCES

Yard Sign Template:

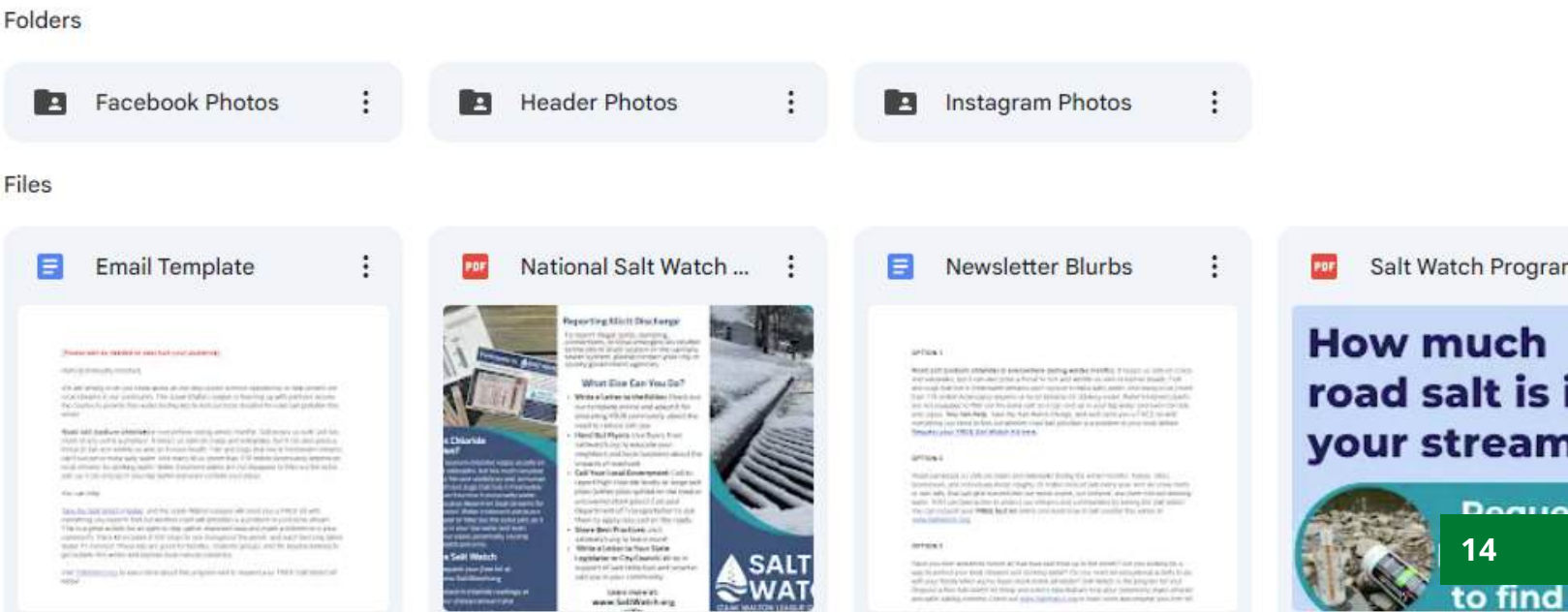
Use this template to create yard signs to inform your community about road salt pollution.

[Click to access the Salt Watch yard sign template]

Media Kit:

The Salt Watch media kit includes sample text and graphics that can be used for outreach via email, social media, newsletters, and more. It also includes the Salt Watch logo, which can be used if creating your own outreach materials.

[Click to access the Salt Watch Media Kit]



OUTREACH

OUTREACH RESOURCES

Trifold brochures:

We've created brochures to help educate your community about road salt pollution and what to do.

Click to download as a PDF:

- **In English**
- **In Spanish**

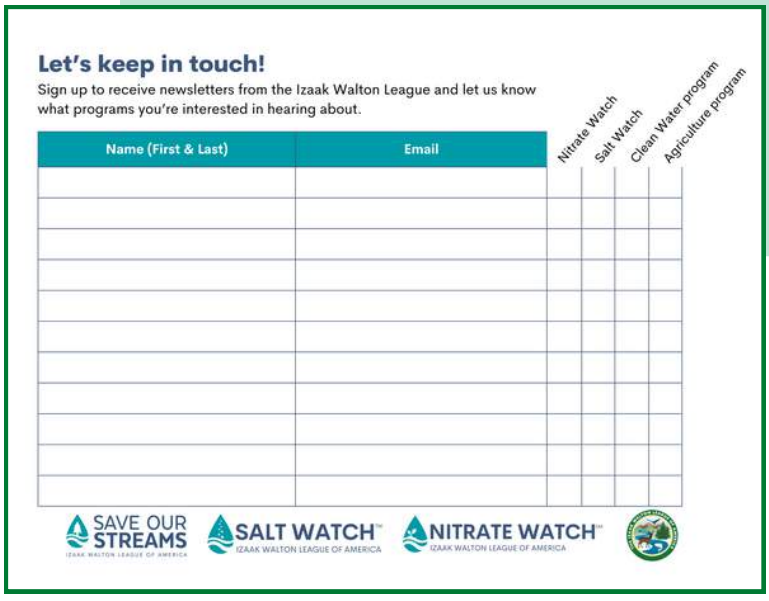
After your outreach event, send a photo/scan of your newsletter sign-ups to **sos@iwla.org** and we will add folks to newsletter lists.

Newsletter Signup Sheet:

Use this newsletter signup sheet when you are tabling to give people a way to stay up-to-date on Izaak Walton League news.

Edit the columns to suit your needs - add a column for your chapter newsletter, if you have one!

Click to download as a word document.



OUTREACH

OUTREACH RESOURCES

Salt Watch Presentation:

This presentation is a great tool to use if you're interested in introducing Salt Watch to others. It includes a detailed notes section, making your job as a presenter easier.

Click to access the presentation on Google Slides.

Salt Watch intro video:

This brief video explains the impacts of salt pollution and how to get involved with Salt Watch. It is a great resource to help educate others and recruit new volunteers.

View the video: Hold the Salt. the Winter Salt.

Hold the Salt, the Winter Salt

OUTREACH

OUTREACH RESOURCES

Fact Sheets:

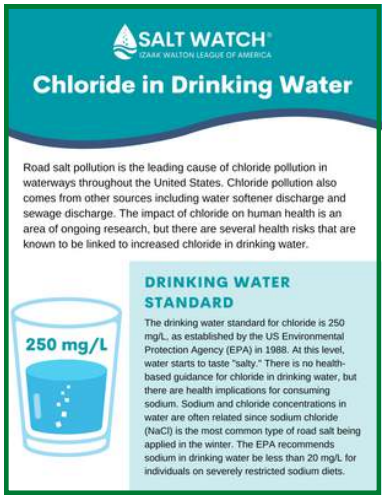
Use these flyers to educate your community about chloride pollution.

Click on the name of a fact sheet to download it.

Fact sheets can also be found on the Salt Watch **'Take Action' page.**

Chloride and Infrastructure

Chloride in Drinking Water



How Much Salt to Use

'Be a Smart Salter' - for neighbors

'Be a Smart Salter' - for businesses

These fact sheets are also available **in Spanish**. Click the links to access Spanish versions:

- Chloride and Infrastructure
- Chloride in Drinking Water
- How Much Salt to Use
- 'Be a Smart Salter' - for neighbors
- 'Be a Smart Salter' - for businesses

ADVOCACY

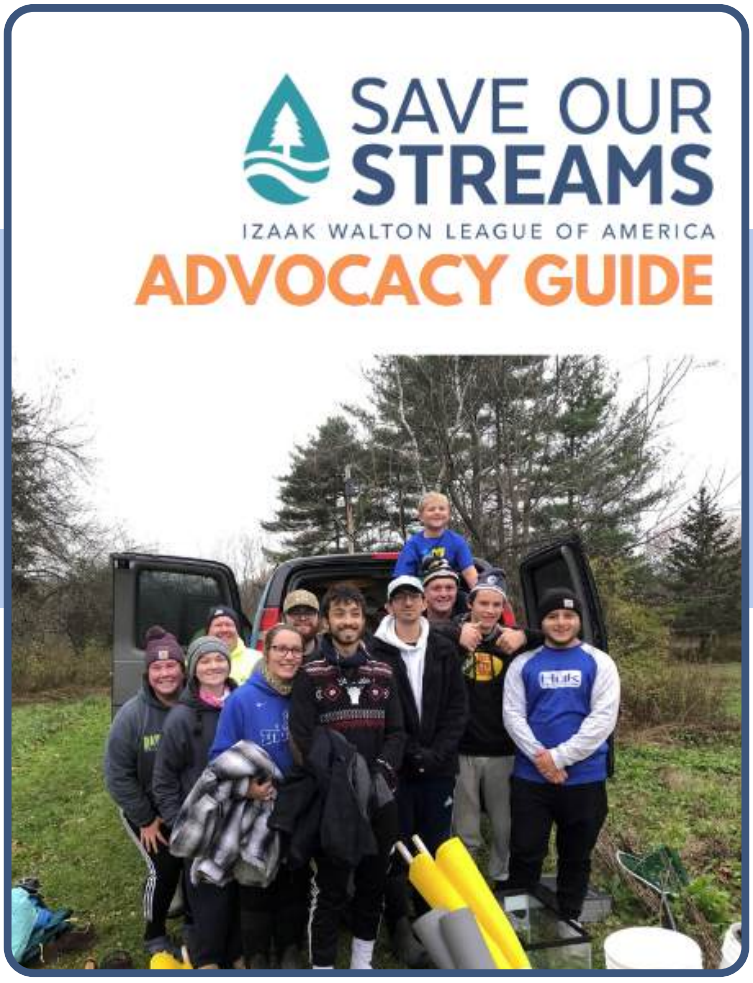
SPEAKING UP FOR CLEAN WATER

Advocacy, by definition, is the support or recommendation of a particular cause or policy. With federal, state, and local governments as integral players in the protection of natural resources, it is vital that individuals advocate for what matters to them.

In this section, you'll find tips and resources to help you advocate for clean water that is free from unsafe levels of nitrate.

This section includes excerpts from the Save Our Streams Advocacy Guide.

Click to view the complete Save Our Streams Advocacy Guide.



ADVOCACY

WATER QUALITY COMMUNICATIONS

Here are some important things to keep in mind as you hone your message and communicate about water quality issues:

- **Use your data.** The data you collect can bolster your cause. Being transparent with your data gives your credibility, but manipulating or hiding data will harm that credibility.
- **Understand community needs.** Every community has unique needs and concerns. Is your community concerned about development? Agriculture? Road salting? Identify where your mission can align with existing environmental concerns.
- **Identify reasonable asks.** Not every campaign or action is appropriate for every audience. Figure out what actions your audience can take, and what actions they can't. An individual landowner can't stop a salt truck, but they can sign a petition to reduce road salt use and attend public meetings.
- **Build partnerships.** It's likely there are already other watershed or environmental groups in your area. Find ways they can help amplify your voice and how your data can help their cause. Partnerships will help you reach a wider audience and show the breadth of your issue.
- **Educate.** Many people may not know about local threats to clean water. Don't assume that everyone has the same level of knowledge as you. Likewise, don't assume that they are uninterested or don't care.
- **Listen.** Most importantly, listen to the citizens, businesses, and committees you reach out to. Everyone is entitled to clean water for all kinds of reasons, from access to drinking water to outdoor recreation. The reasons that are important to you may be different from your neighbors. By listening to and acknowledging the views of your community, you can identify effective ways to make positive change.

ADVOCACY

LOOK FOR COMMON GROUND

There are so many forces influencing water quality and we all view environmental issues through a unique lens. Our perspectives on water quality issues may be shaped by our upbringing, educational background, career, and more.

This diversity of perspectives can be difficult to navigate, but it also creates ample opportunities to find common ground when communicating about water quality issues. If your audience is wary of pinpointing climate change as a contributing factor to water quality issues, they may still be receptive to discussing the effects of urbanization on water quality. Maybe your audience is not inspired to take action based solely on the environmental impact of water pollution, but the human health impacts are more compelling.

Approaching water quality issues from many angles can help rally audiences with varying perspectives around the common goal of cleaner water.

ADVOCACY

INFLUENCING LOCAL POLICY

Get in touch at a local level

Your local elected officials and government agencies are there to work for and listen to you. Their job is to listen to concerned residents and respond accordingly. You can write or call your local leaders, or you can show up to a meeting like a city council or a local planning board. In towns and small cities, decisions are often made by the few people who put in the effort to be involved in local politics and decision making. Showing up to meetings in person can give you the opportunity to have your voice heard.

Advocate for your cause

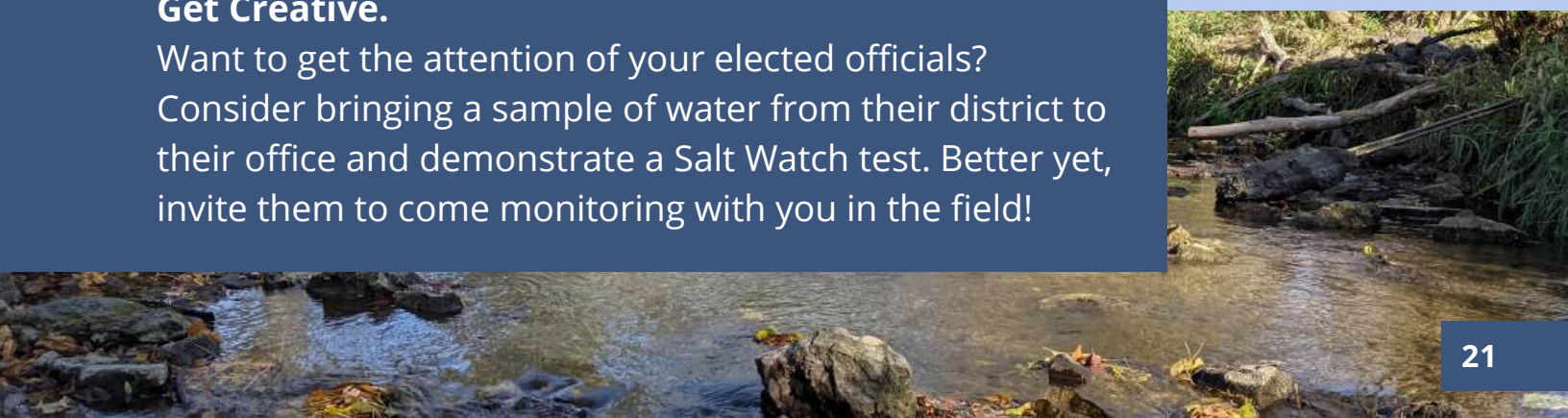
Many local policymakers are dealing with a wide range of issues. If you can come and clearly share why a water quality issue is important to you, it can make a big difference. They might not know about local water quality, and educating them can help them make more informed decisions.

Are they still not listening to you?

If you get brushed off or boxed out, you can put in the work to become one of those decision-makers yourself! While you might not want to become a local government employee, there are often openings on local boards that always need more people involved. You could become one of those people and amplify your voice on water quality.

Get Creative.

Want to get the attention of your elected officials? Consider bringing a sample of water from their district to their office and demonstrate a Salt Watch test. Better yet, invite them to come monitoring with you in the field!



ADVOCACY

INFLUENCING STATE AND FEDERAL POLICY

Get in touch

Your elected officials may seem hard to pin down, but they are meant to listen to your needs. They often have staff and at least one local office in your district if you cannot get in touch with them directly. You can write or call your representatives, and potentially get a meeting with a staff member, if not the representatives themselves. Learn who represents you and how to contact them here: **ballotpedia.org/Who_represents_me**

Advocate for your cause

There is strength in numbers. One comment or one letter about a cause from one person may not make much of an impact, but working with others can amplify your efforts. Find out if there are people already advocating for your interests and join them! If you are the first to take action, or the most driven, you can start to organize like-minded people. Get a group to call or write to your representatives' offices. Specific legislation that you support or oppose can make advocating simpler by defining a clear ask for your representatives: a vote.

ADVOCACY

TAKING ACTION AS A COMMUNITY

A group of united voices is more powerful than a single voice. Mobilizing your community to take action for clean water is one of the best things you can do to protect your local waterways. Once you have worked with a community and gotten community buy-in, you can use your collective voice to effect change.

- **Make it fun!** The best and most engaging advocacy groups engage new people at events that are meant to be fun, such as state fairs, public events, brewfests, and more!
- **Build community partnerships!** Partnerships with local businesses and organizations can help make an event more attractive and reach a new audience. Think outside the box! Diverse partners will help reach a more diverse audience and strengthen community buy-in.
- **Don't forget to ask.** With busy lives, many folks are hesitant to commit to a cause or event unless explicitly asked to do so. Make sure to ask folks for their support or participation, and clearly set expectations for what you are asking them to do.
- **Collect signatures.** Gathering signatures and testimonials from your community will amplify your message and gather more attention from decision and policymakers.
- **Get involved with outreach events.** Host or attend public events to educate the community.
- **Get boots on the ground.** Some people prefer to commit to a one-time tangible action. Activities like trash cleanups, restoration days, invasive species removal, or water quality monitoring provide a chance for people to contribute to the cause, and it gives you a platform to engage them in discussion and education. You could develop long-time community partners!

ADVOCACY

HOW TO RESPOND TO A SALT SPILL

Call your city or county Department of Environmental Protection, Stormwater Division, or applicable environmental agency to report high chloride levels or large salt piles (e.g. piles spilled on the road, uncovered stockpiles). Provide the date you observed the spill, pile, or high chloride level as well as the exact location. Make sure to follow up with whomever you contacted until the situation is resolved. Accidents happen, but road salt dissolving from a spill or pile can have a big impact on infrastructure and local water quality.

If the spill or uncovered pile is at a business, you may want to get the contact information of the business owner or manager to also notify them of the issue. The business owner/manager will then likely notify their snow removal company of the issue.

It is also a good idea to monitor nearby waterways (e.g. storm drains, drainage ditches, small streams, nearby creeks, etc.) before and after the salt spill/uncovered pile is dealt with. By making note of any changes in chloride levels, you can help elucidate how waterways might be impacted from the event.

ADVOCACY

ADVOCACY RESOURCES

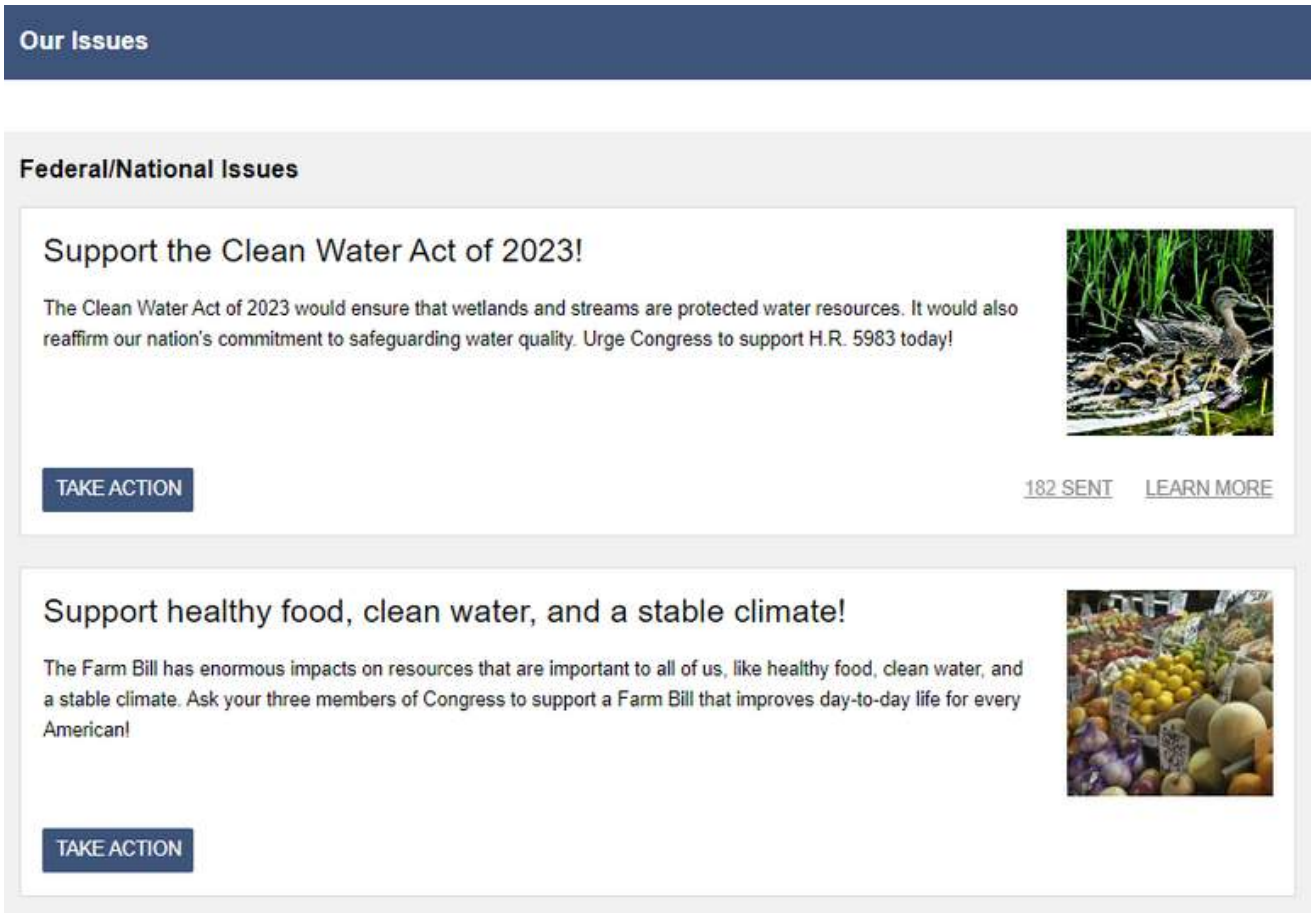
The following resources are available to Izaak Walton League members and chapters to aid in their advocacy efforts.

Action Alerts

www.iwla.org/actionalert

On the Izaak Walton League of America website, you can find Action Alerts for current issues, often related to protections for clean water. These Action Alerts make it easy to contact your representatives about timely conservation issues.

To be notified about new Action Alerts, you can subscribe to email updates on our website. Click **Get involved > Sign up, Stay Informed.**



ADVOCACY

ADVOCACY RESOURCES

The following resources are available to Izaak Walton League members and chapters to aid in their advocacy efforts.

Letter to the Editor Template

We've created a template letter that you can use as inspiration for a letter to the editor of your local paper. Make this template your own by adding information about the impact of salt pollution in your community. Including data from your Salt Watch testing is a great way to make your letter unique!

Find the letter template on the **Salt Watch "Take Action" page**.

Letter to Representative Templates

We've created sample letters to help volunteers write to their representatives in support of salt reduction and smarter salt use.

Find template letters and links to find your legislators on the **Salt Watch "Take Action" page**.

Contact Local Officials

Contact Your Local Government

Call your city or county Department of Environmental Protection to report high chloride levels or large salt piles (either piles spilled on the road or uncovered stockpiles). Call your Department of Transportation to ask them to apply less salt on the roads.

Call Your Local Environmental Agency

Contact your Department of Natural Resources or Department of Environmental Quality to report consistently high chloride levels in surface water (rivers, lakes, streams).

Share Your Advocacy Actions

Let us know how you've taken your water quality monitoring to the next level.

"Advocacy" can mean lots of things – sharing your water quality data with community members, writing a letter to the editor, contacting local leaders, handing out flyers, cleaning up trash in your stream, and so much more. If you've taken any actions, big or small, to try to improve water quality in your community, we want to hear about it!

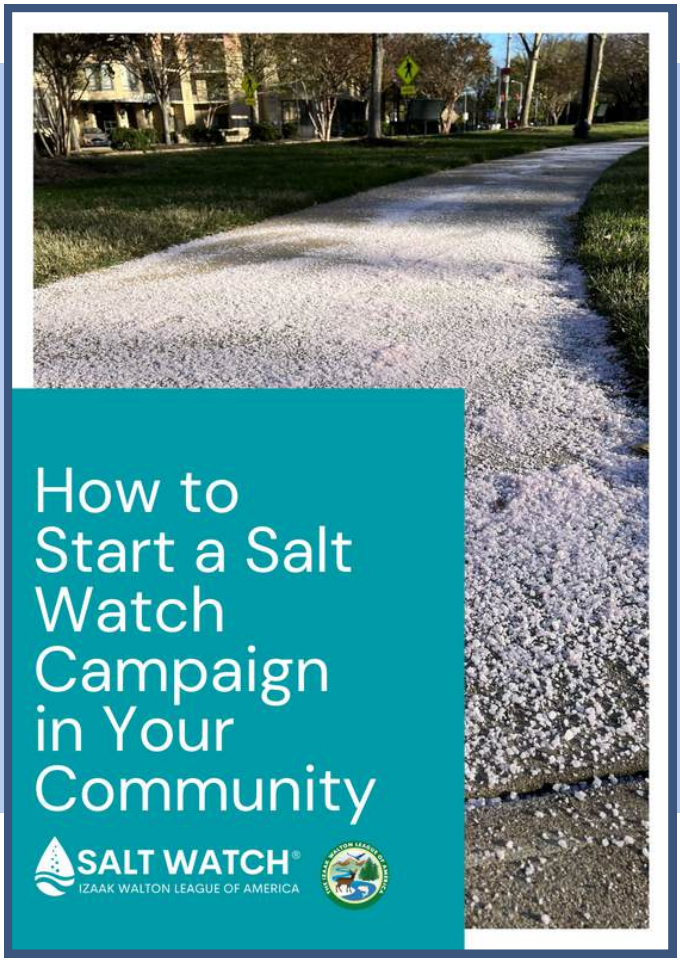
Share with Us

ADVOCACY

SALT WATCH ADVOCACY GUIDE

Looking for more information about how to start a Salt Watch campaign in your community?

The **Salt Watch Advocacy Guide** includes information about different road salt applicator groups, guidance about how to approach them, and case studies of individuals who have made a difference by reducing road salt pollution in their communities.



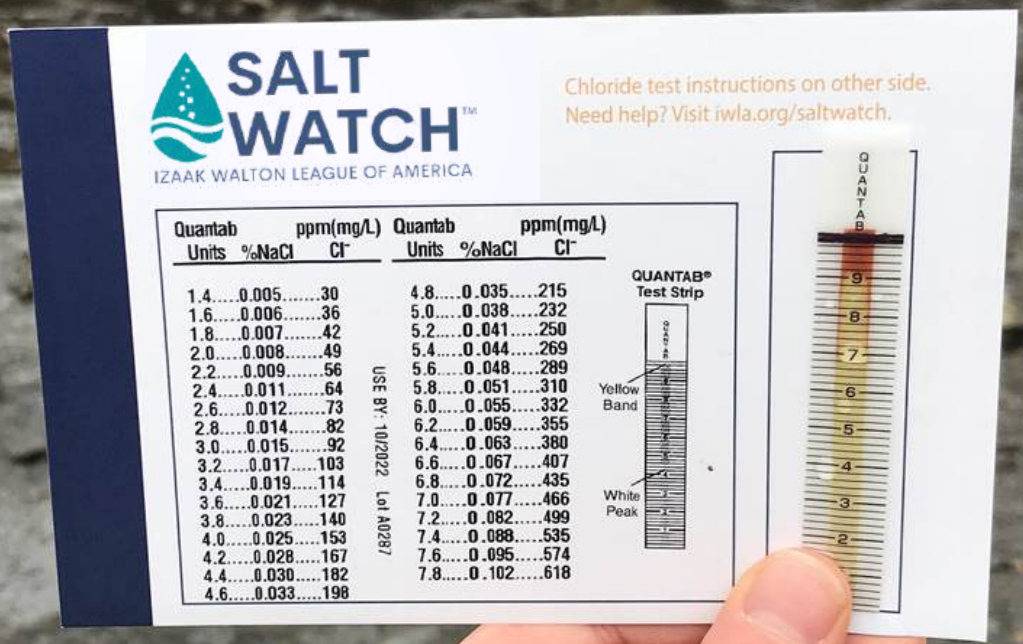
Click to download the **Salt Watch Advocacy Guide**.

You can also view a webinar exploring this resource in detail: **Starting a Salt Watch Advocacy Campaign in Your Community**

QUESTIONS?

Visit our website, **www.SaltWatch.org**

Shoot us an email at **saltwatch@iwla.org**



SALT WATCH®
IZAAK WALTON LEAGUE OF AMERICA