



The Salt Watch Community Science Initiative

Abby Hileman

Salt Watch Coordinator

Izaak Walton League of America

August 6, 2024







Goals of Salt Watch

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

It only takes
1 teaspoon of salt



to permanently pollute 5
gallons of water



IMPACTS



Wildlife



Infrastructure



Drinking Water



Habitat



Pets



Shovel

Clear walkways before snow turns to ice.



Scatter

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



Sweep

Sweep up excess salt and reuse it!





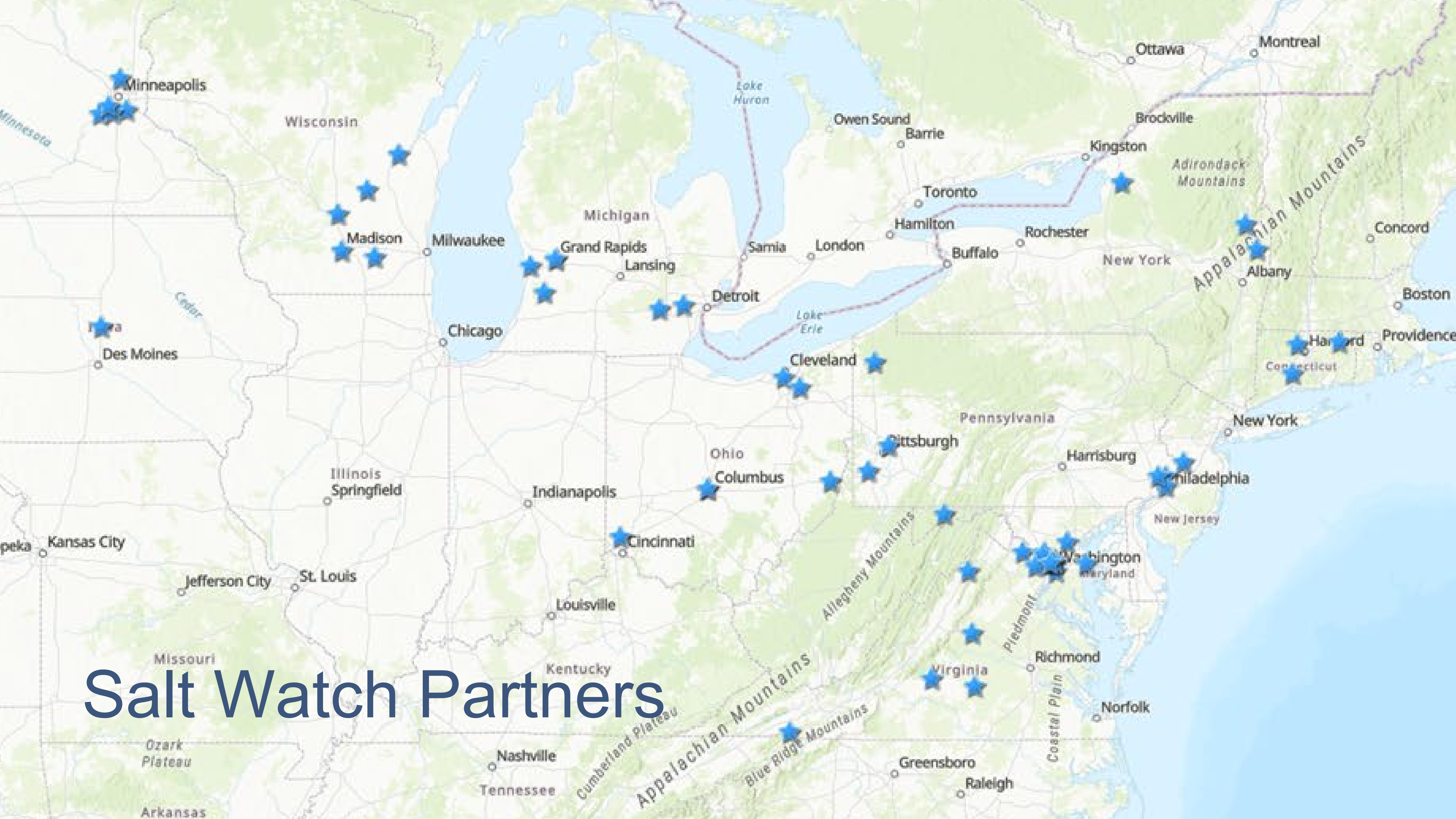
Salt Watch Kit

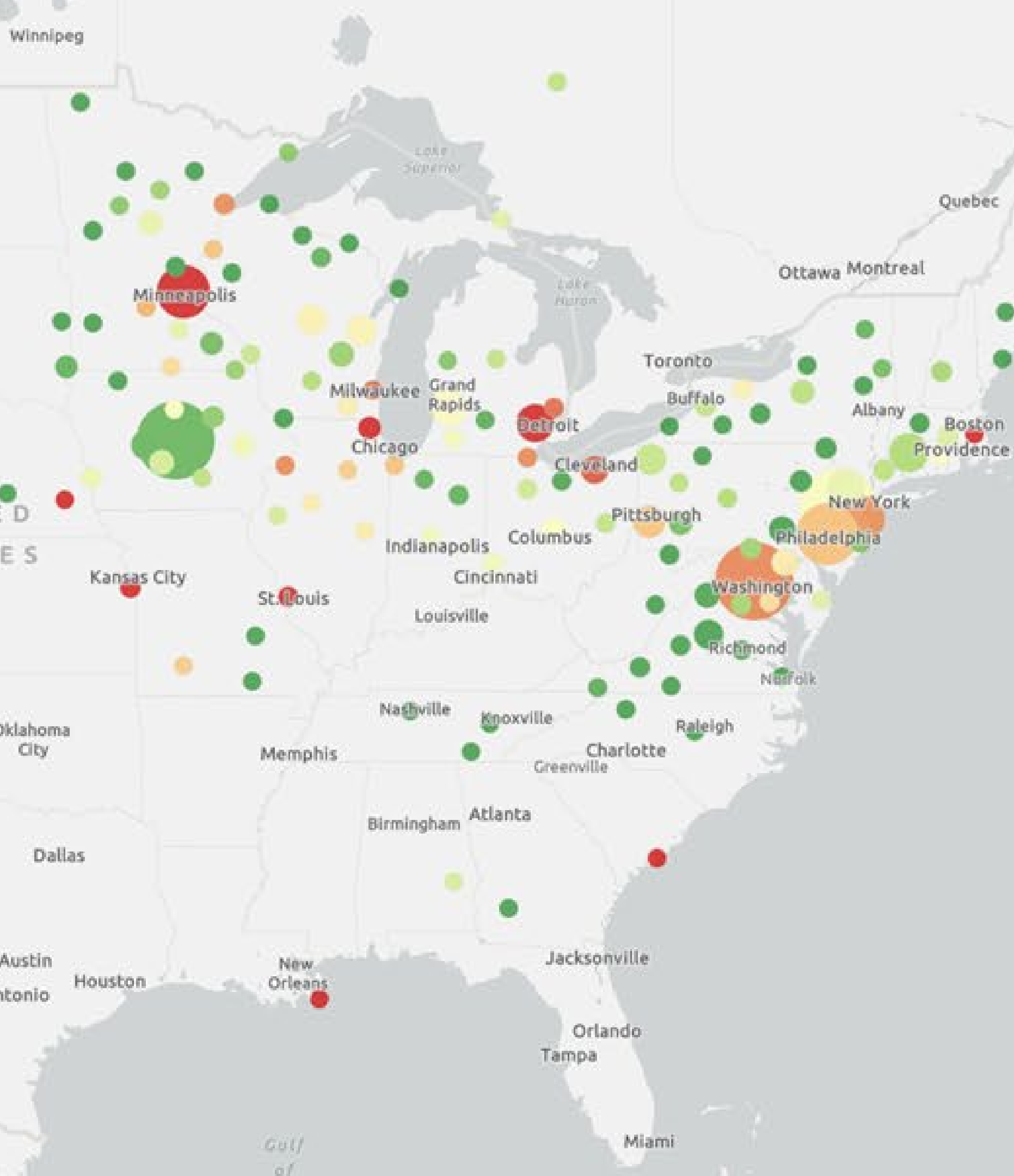
Includes:

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



Salt Watch Partners





2018-2024 National



21,584 Data Points



27% Samples "Excellent" (between 0-30ppm)



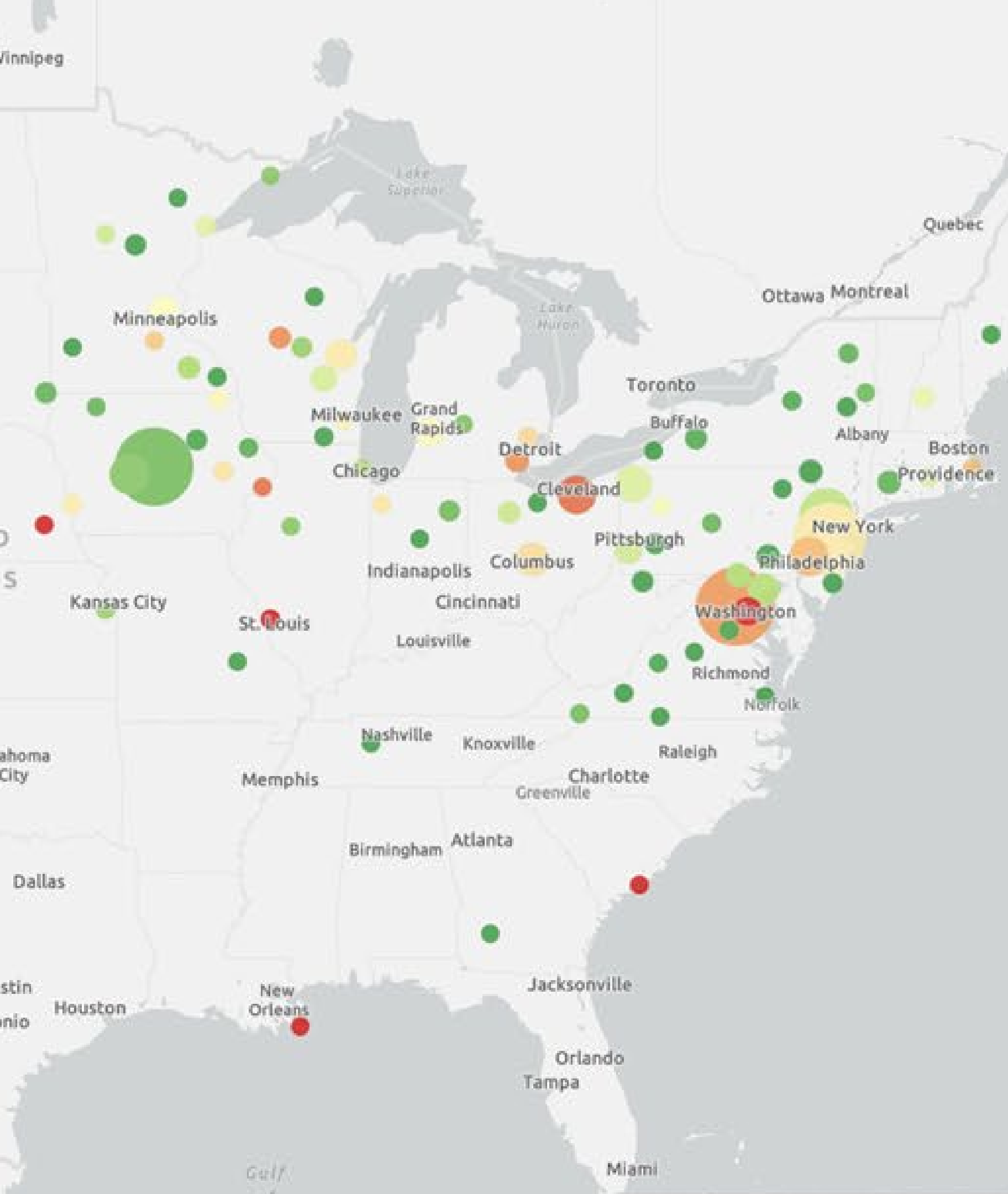
41% Samples "Fair" (between 30-100ppm)



19% Samples "Poor" (between 100-230ppm)



13% Samples "Toxic" (230+ppm)



2023-2024 National



6,648 Data Points



23% Samples "Excellent" (between 0-30ppm)



50% Samples "Fair" (between 30-100ppm)



17% Samples "Poor" (between 100-230ppm)

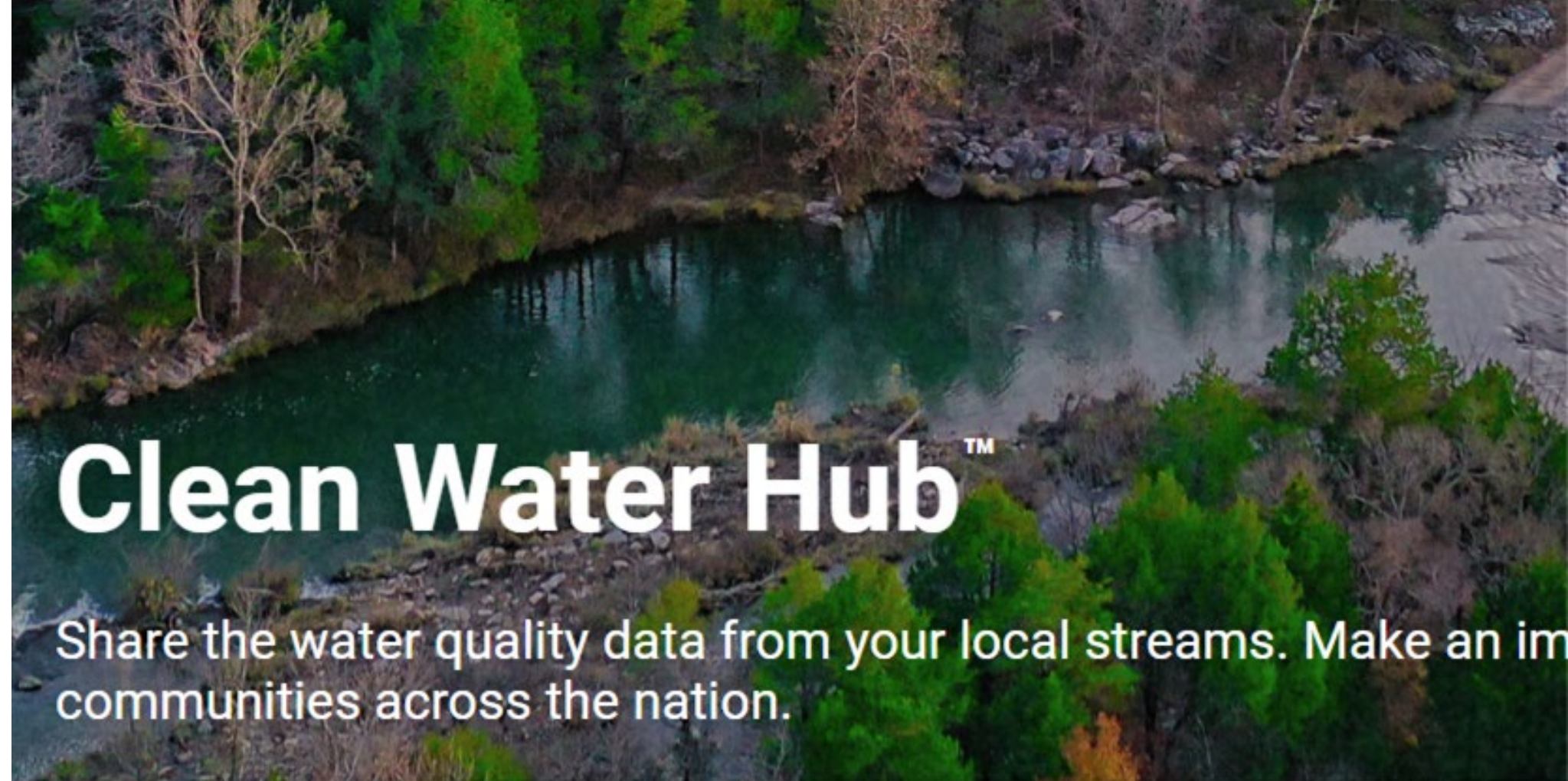


10% Samples "Toxic" (230+ppm)

Clean Water Hub

www.CleanWaterHub.org

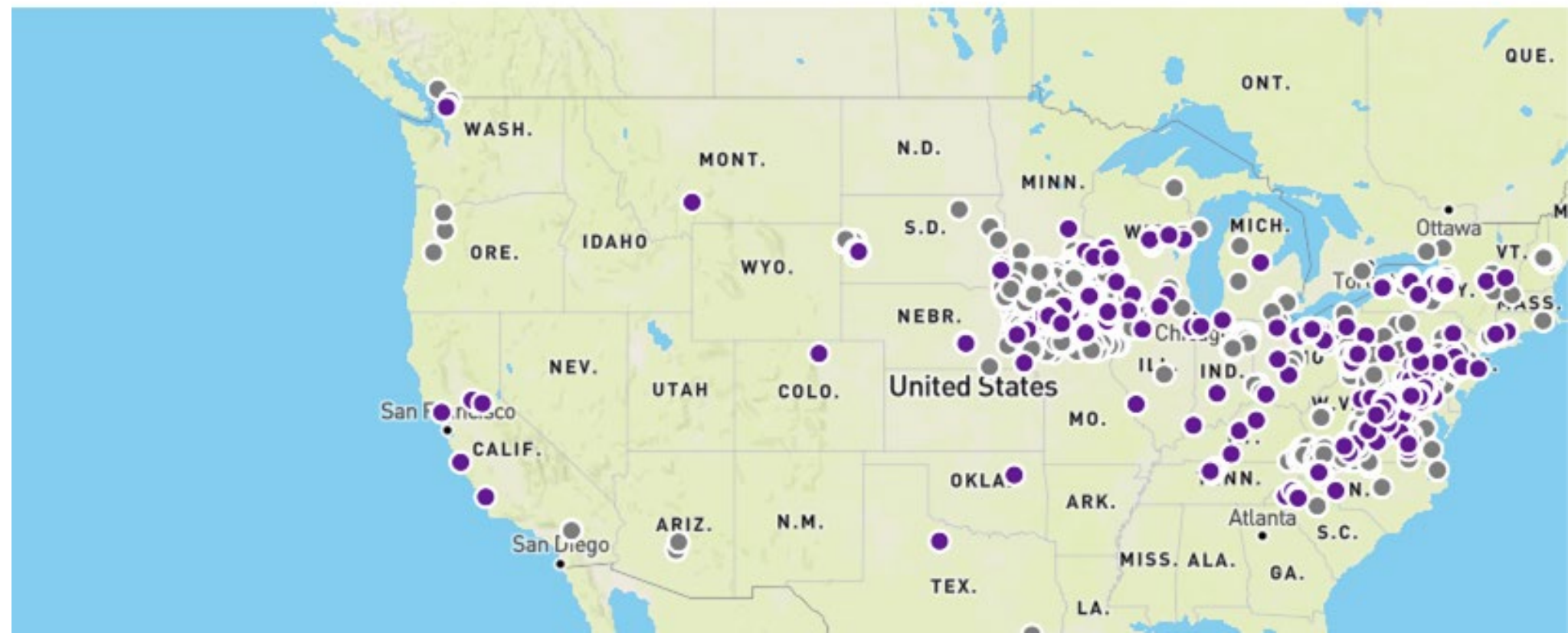
- National water quality database
- Publicly accessible
- Created with usability in mind
 - Data is meant to be easy to access, understand, and share
- Color-coded, interactive maps



SIGN UP

SIGN IN

EXPLORE THE MAP



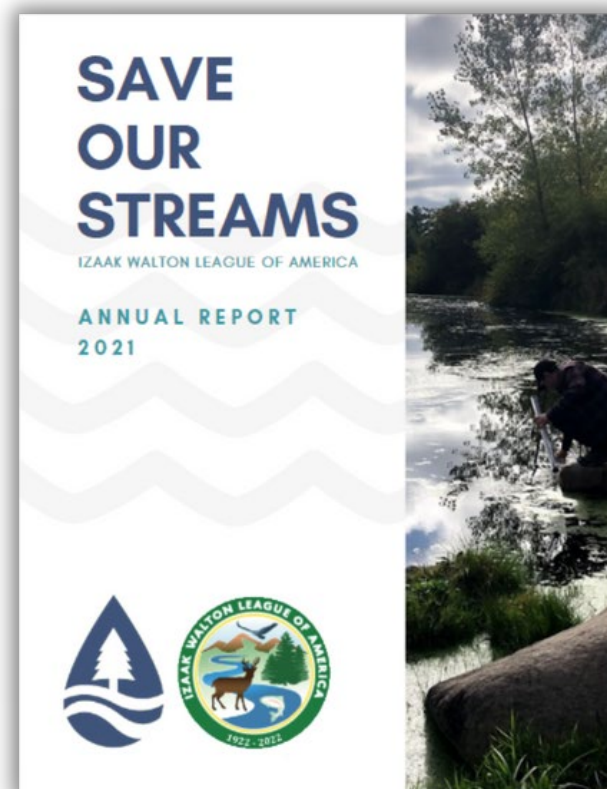
Data Use

Government Agencies

- Shared with US EPA annually
- Available to government agencies and water quality organizations to...
 - identify areas in need of further study, restoration
 - track impact of BMPs
 - track progress of restoration

IWLA Clean Water Team

- Annual report
- Updates to volunteers
- Outreach to media sources



Clean Water Advocates

- Letters to the editor
- Contacting local representatives
- Educating community members



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!

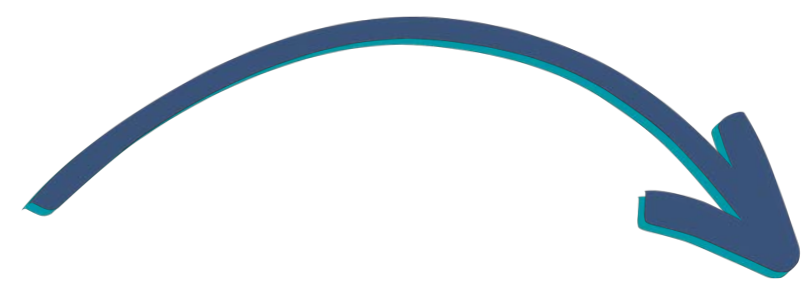
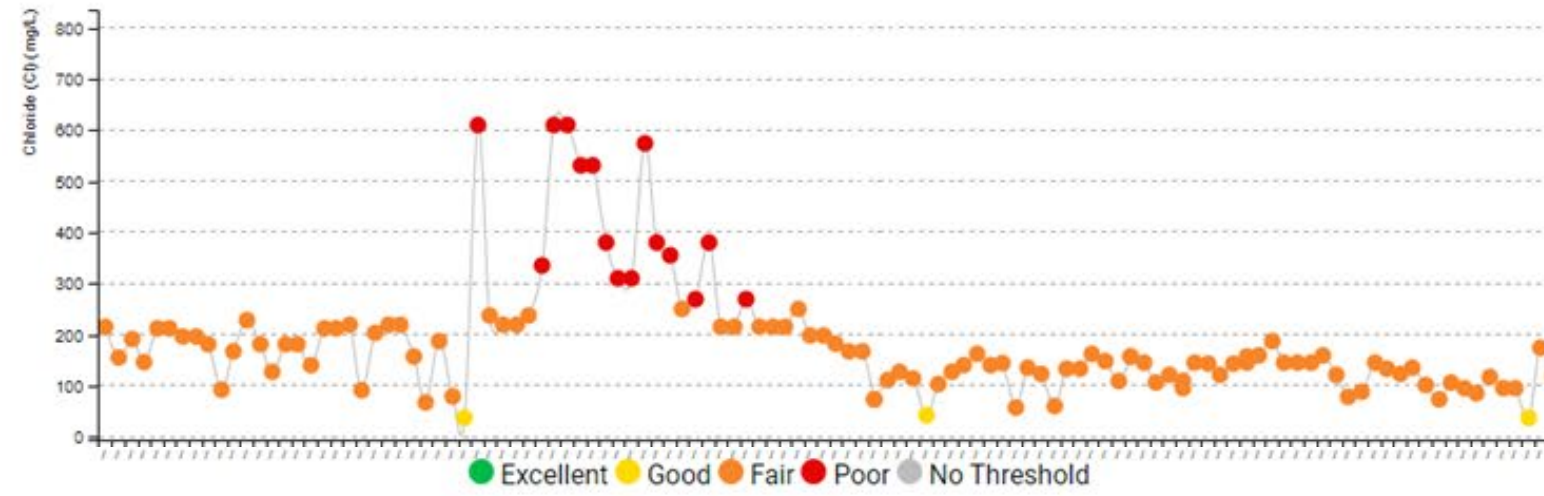
Do your own salt application?

- 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



Data Action

TTF Streamkeeper Testifies at Philadelphia City Council about Road Salt

Jamilee Hoffman
Mar 17, 2022



Opinion: The true cost of salt on the D.C. area's roads



An Annapolis city employee spreads salt on the downtown sidewalks as a slow-moving winter storm dumped snow and ice across the region in February 2021. (Jonathan Newton / The Washington Post)
By Karl Van Neste
January 19, 2022 at 2:45 p.m. EST



Keep freshwater fresh for future generations!

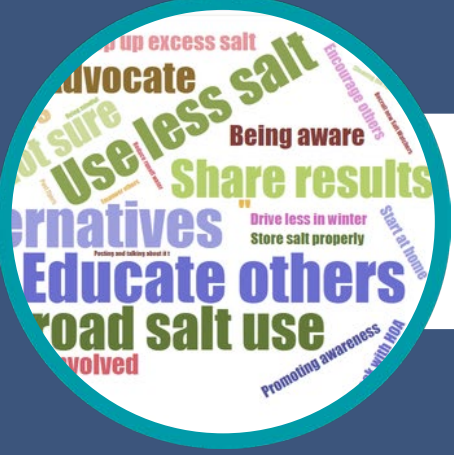
Abby – Stand up for clean water in Minnesota by reducing salt pollution! In many areas of the United States, road salt is used in the winter to create safe travel conditions, but excessive salting is a growing problem. Excess road salt ends up in our waterways, creating toxic conditions for aquatic life and threatening human health.

You can take action on this pervasive problem! [Let your state representatives know that you would like to see reduced road salt pollution in Minnesota.](#)





Business Outreach



Virtual Webinars



Farmers Market Tabling



Regional Outreach Workgroup



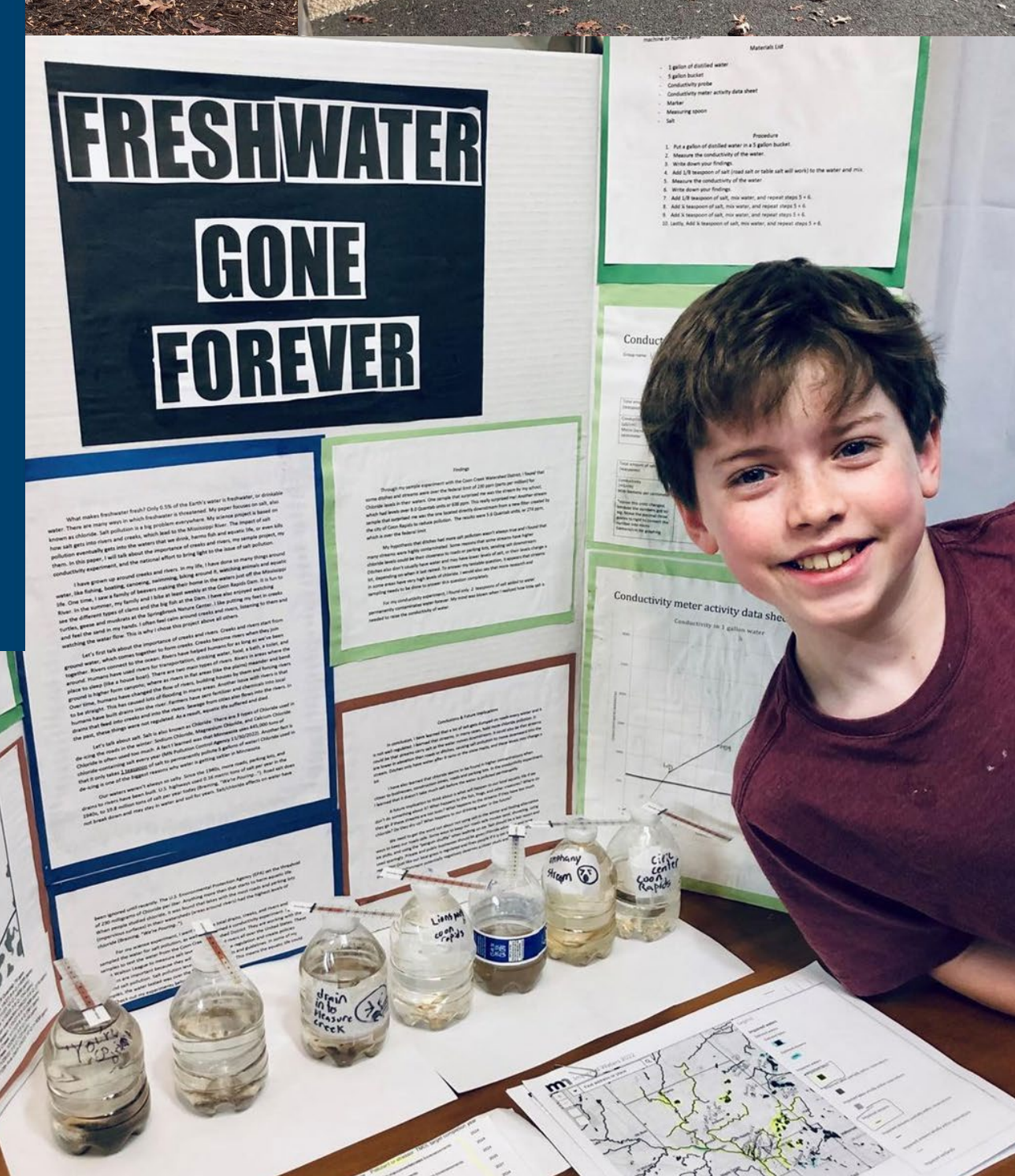




BE SMART

www.SaltWatch.org

NOT SALTY



Resources

SALT WATCH™
IZAAK WALTON LEAGUE OF AMERICA

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.

250 mg/L

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.

SALT WATCH™
IZAAK WALTON LEAGUE OF AMERICA

Wisconsin Salt Wise

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

Flyers

How to Start a Salt Watch Campaign in Your Community

SALT WATCH™
IZAAK WALTON LEAGUE OF AMERICA

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]

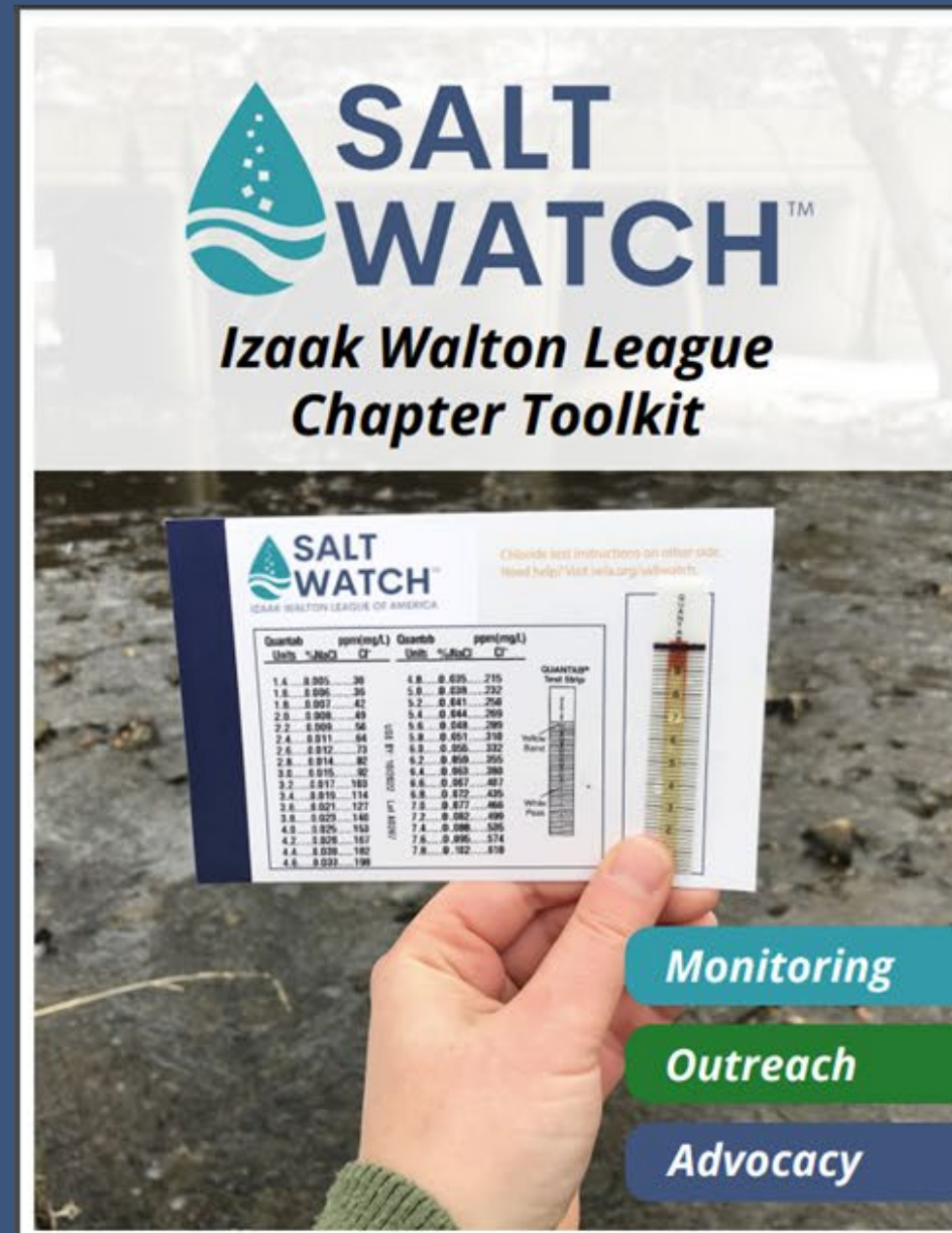
[Your Name]

Template Letters

Toolkits



Faith-based
Communities



IWLA Chapters



Event Toolkits



Paint the Plow



Outreach

NO CLEAN WATER



NO GOOD BEER

City of Gaithersburg Presents

Oktoberfest



Tabling Events



**Walk in the Woods:
Let's be Smart
about Winter Salt**

JOIN OUR HIKE
SATURDAY,
OCTOBER 28
AT 10AM



REGISTER HERE!

Hiking Events

**MONTGOMERY COUNTY
SMART SALT
APPLICATOR TRAINING**

This training will help management-level property managers, salt applicators, business owners, and municipalities improve salt application effectiveness & reduce chloride pollution while keeping roads, parking lots, and sidewalks safe. Participating organizations have been able to reduce their salt use by 30 to 70% - helping to prevent damage to our infrastructure and threats to our drinking water and local freshwater ecosystems.



Thursday October
3 9 am - 2 pm
Virtual or In-Person



Thanks to funding from the Montgomery County DEP and the Chesapeake Bay Trust, the course is **FREE** for all participants.
Spots are limited, so register soon!



To Register:
Visit www.saltwatchmoco.org or
email SaltWatch@iwla.org



Trainings



When the chloride concentration is higher than 230 mg/L in a stream



Facebook: SaveOurStreamsIWLA

Instagram: @saveourstreams

Pollution on pavement when it starts to rain



MORE SALT DOES NOT EQUAL MORE MELTING

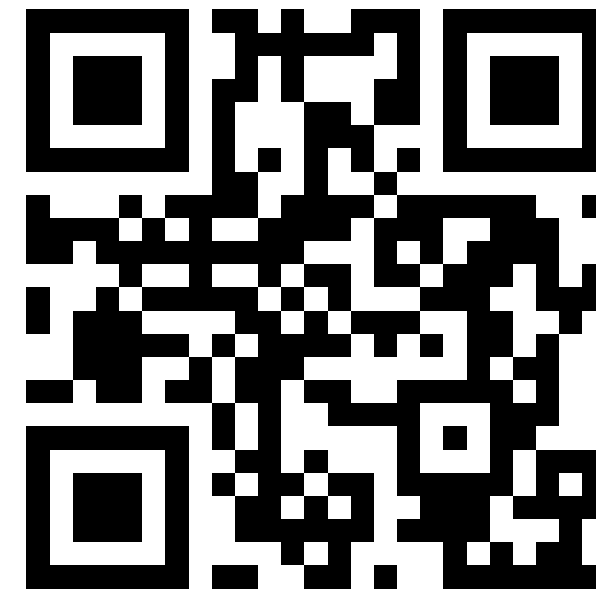


Trying to track down nonpoint source pollution like:





Read the Salt Watch Final Report:
iwla.org/saltwatch2024



FINAL REPORT

2023-2024

saltwatch@iwla.org
www.saltwatch.org

SALT RESPONSIBLY



Visit:

www.saltwatch.org

Email:

saltwatch@iwla.org