



# Keep it Fresh: The Salt Watch Community Science Initiative

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Salt Watch Coordinator  
Izaak Walton League of America

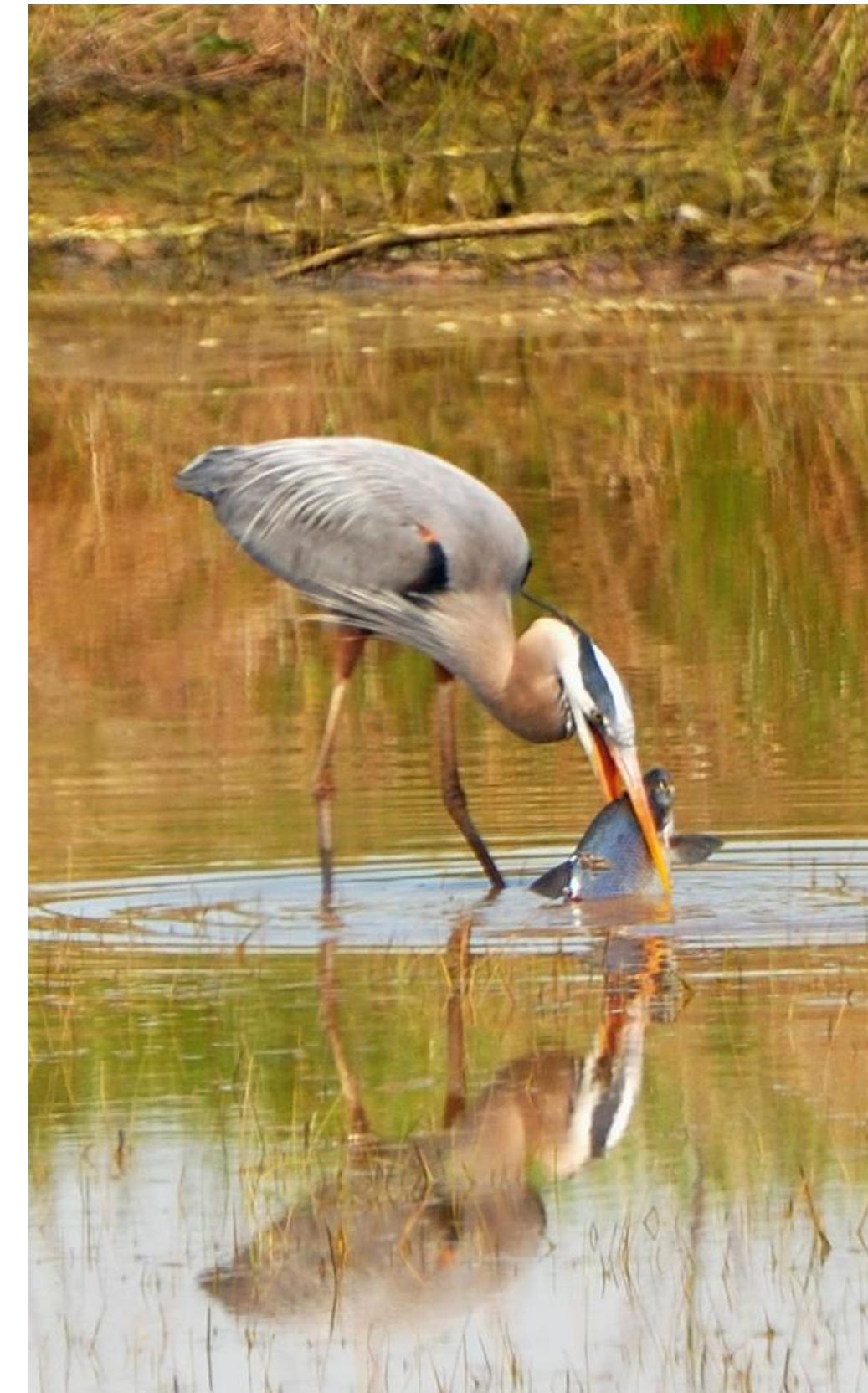


# Izaak Walton League of America

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

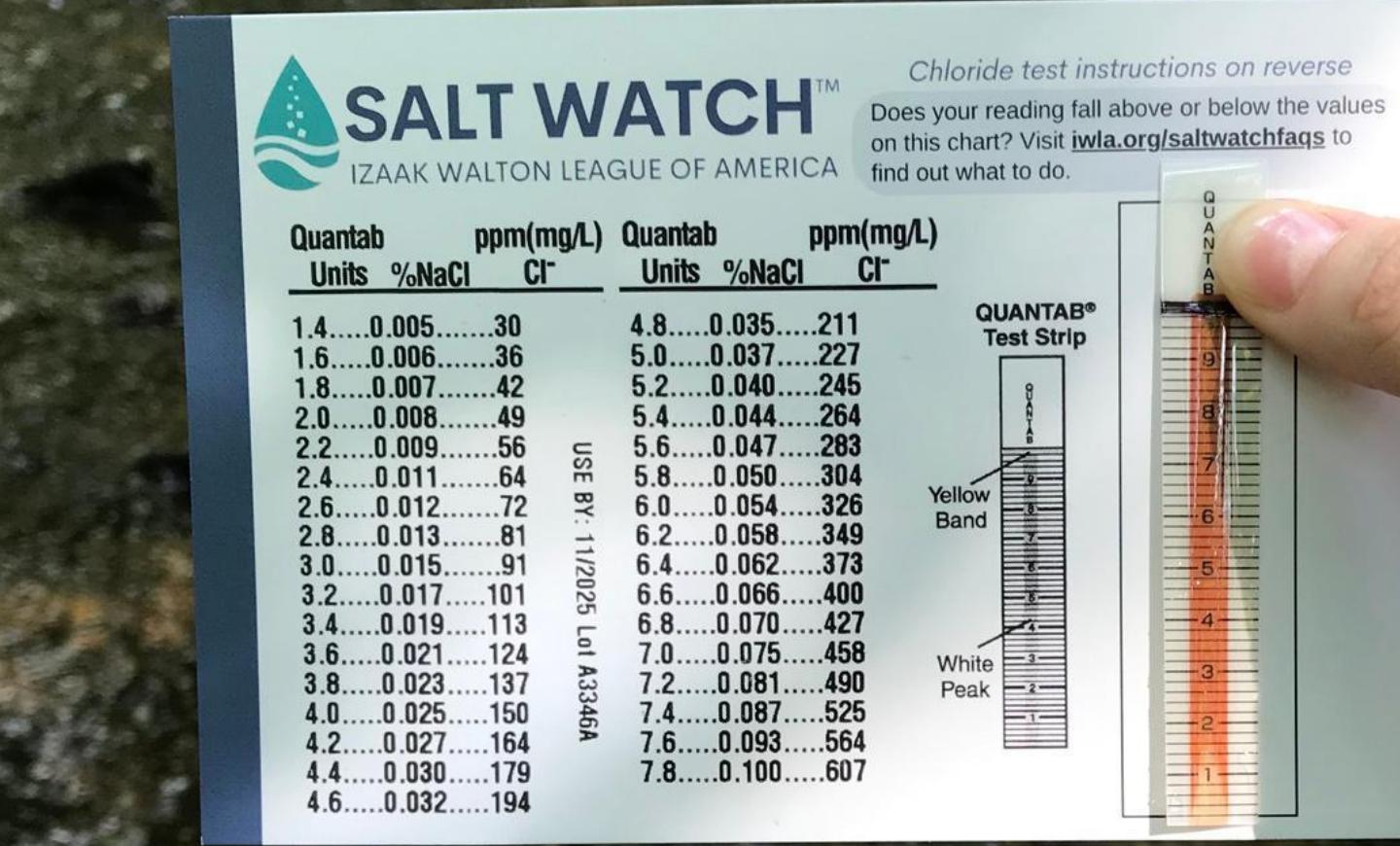




# Salt Watch

[SaltWatch.org](https://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





# WHAT IS ROAD/WINTER SALT?

$\text{NaCl}$  - Sodium Chloride

$\text{KCl}$  -Potassium Chloride

$\text{MgCl}_2$ - Magnesium Chloride

$\text{CaCl}_2$ - Calcium Chloride

# HOW IS SALT APPLIED?





It only takes  
**1 teaspoon of salt**



to permanently pollute  
**5 gallons of water**



# IMPACTS



Wildlife



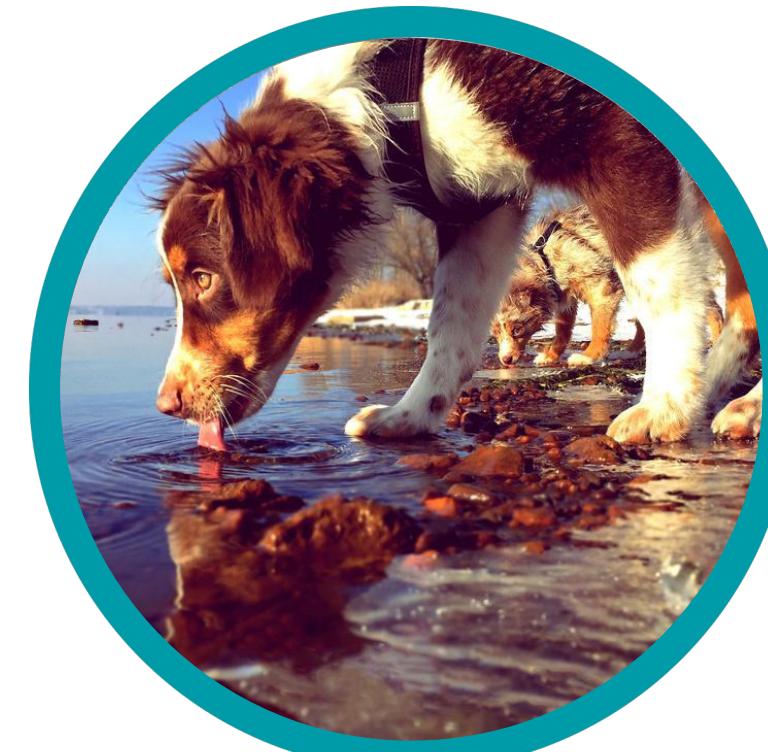
Infrastructure



Drinking Water



Habitat



Pets



## Increase in Salt (Chloride) in the Potomac River Over the Past 30+ Years



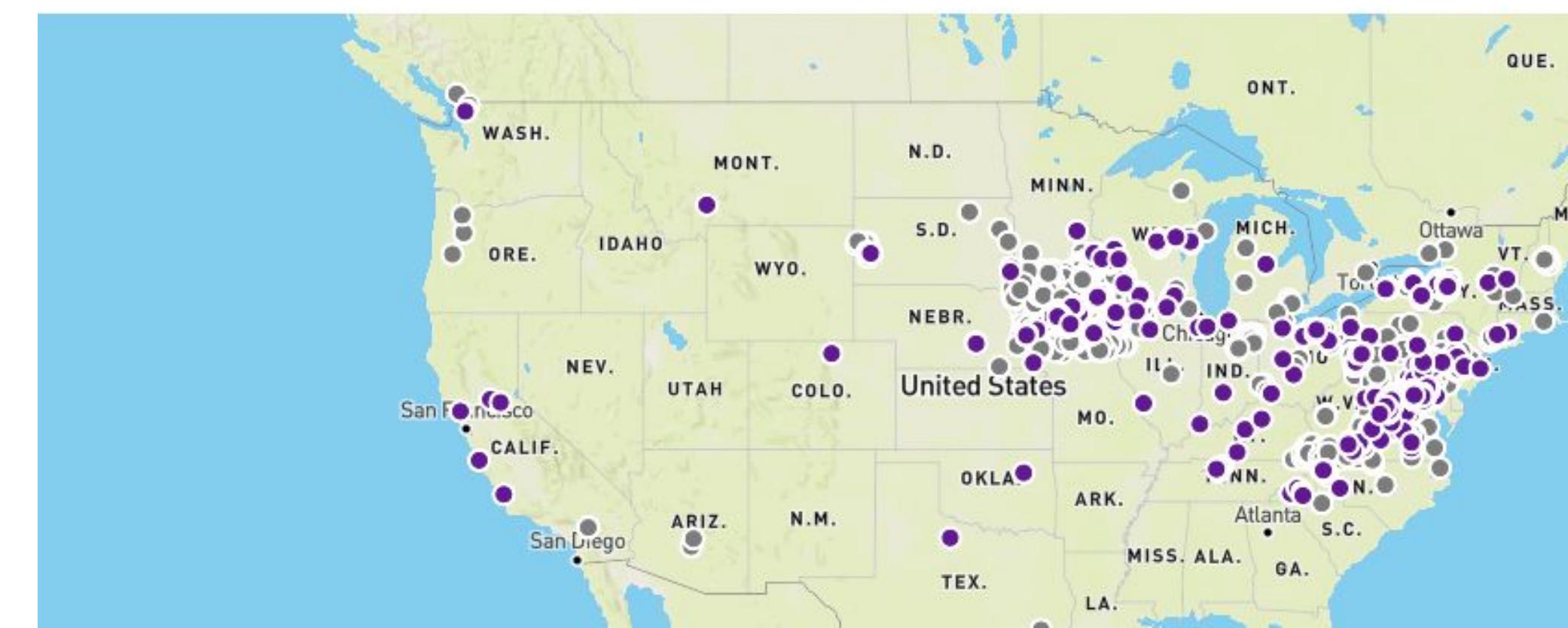
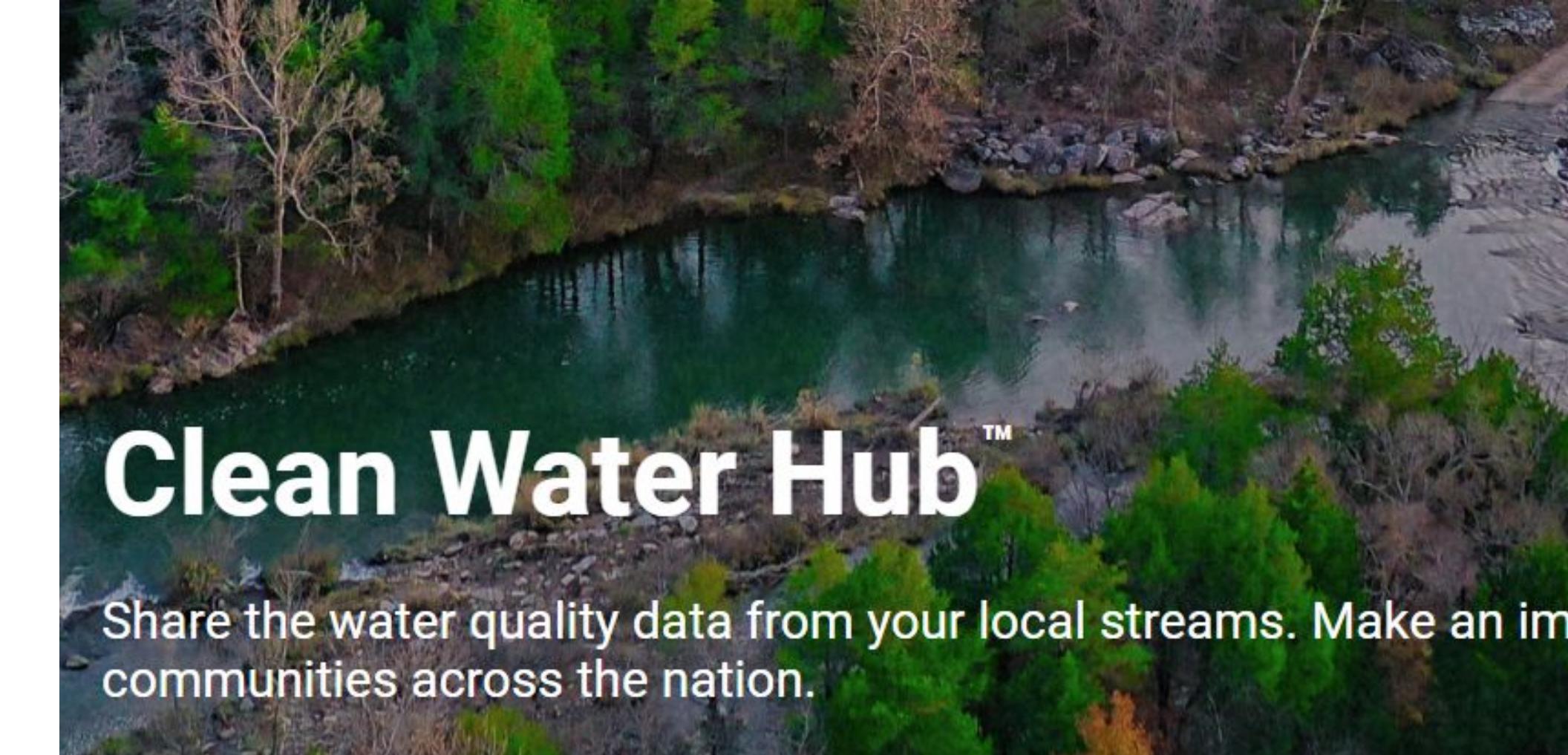
## Increase in Salt (Chloride) in the Patuxent River Over the Past 30+ Years



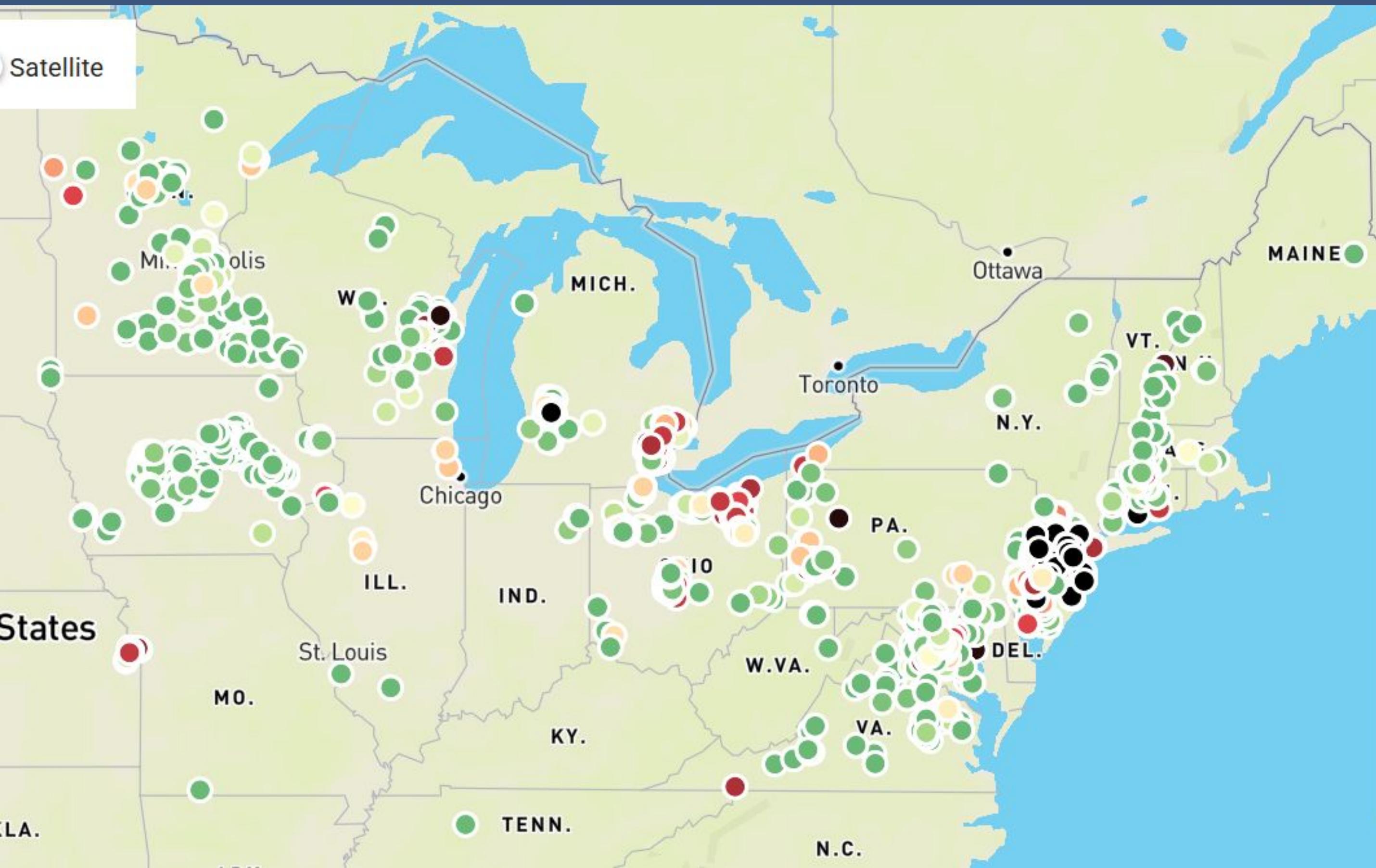
# Clean Water Hub

[www.CleanWaterHub.org](http://www.CleanWaterHub.org)

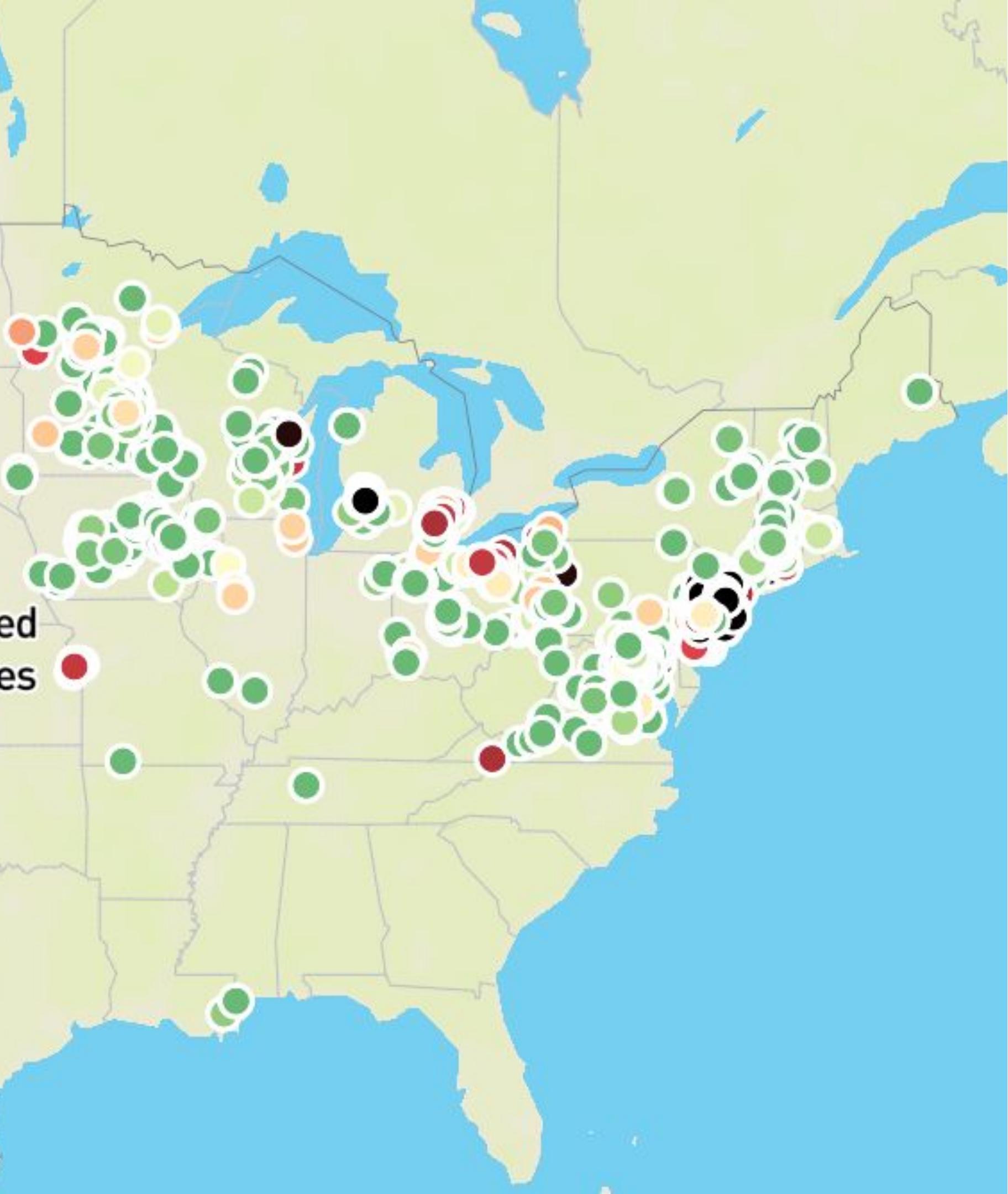
- National water quality database
- Publicly accessible
- Created with usability in mind
  - Data is meant to be easy to access, understand, and share
- Color-coded, interactive maps



# 2024-2025 National

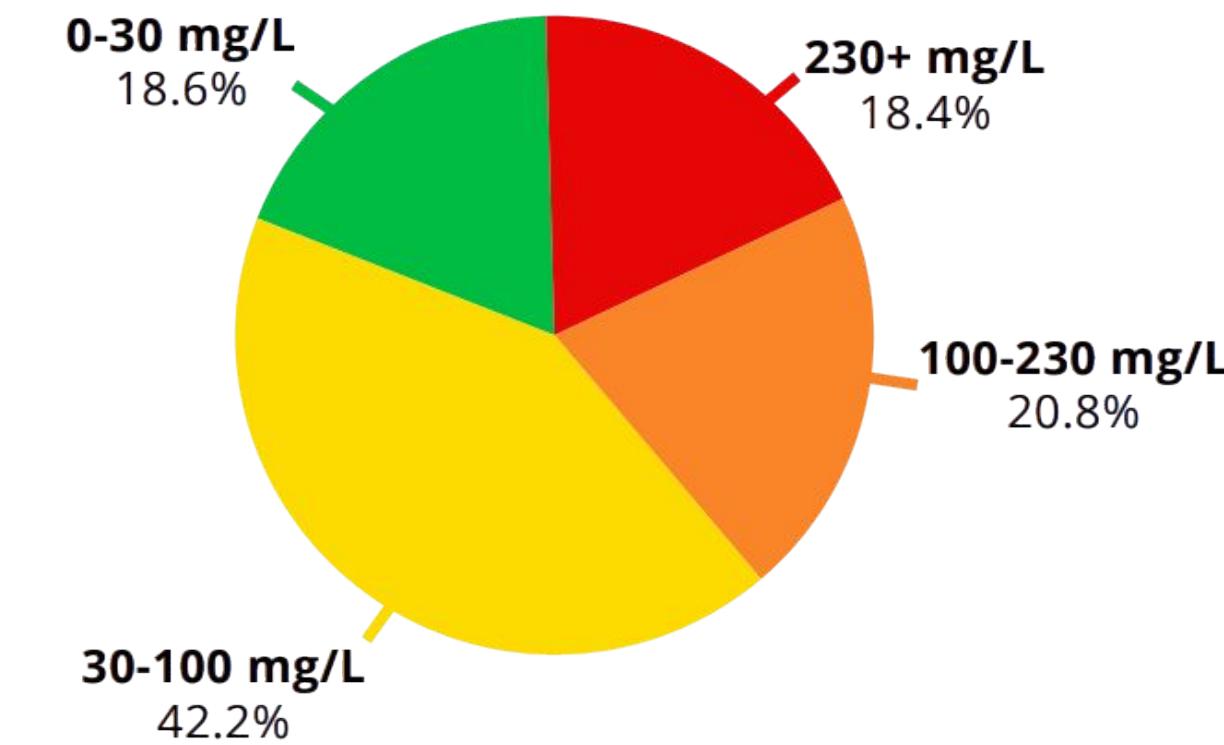


# 2024-2025 National

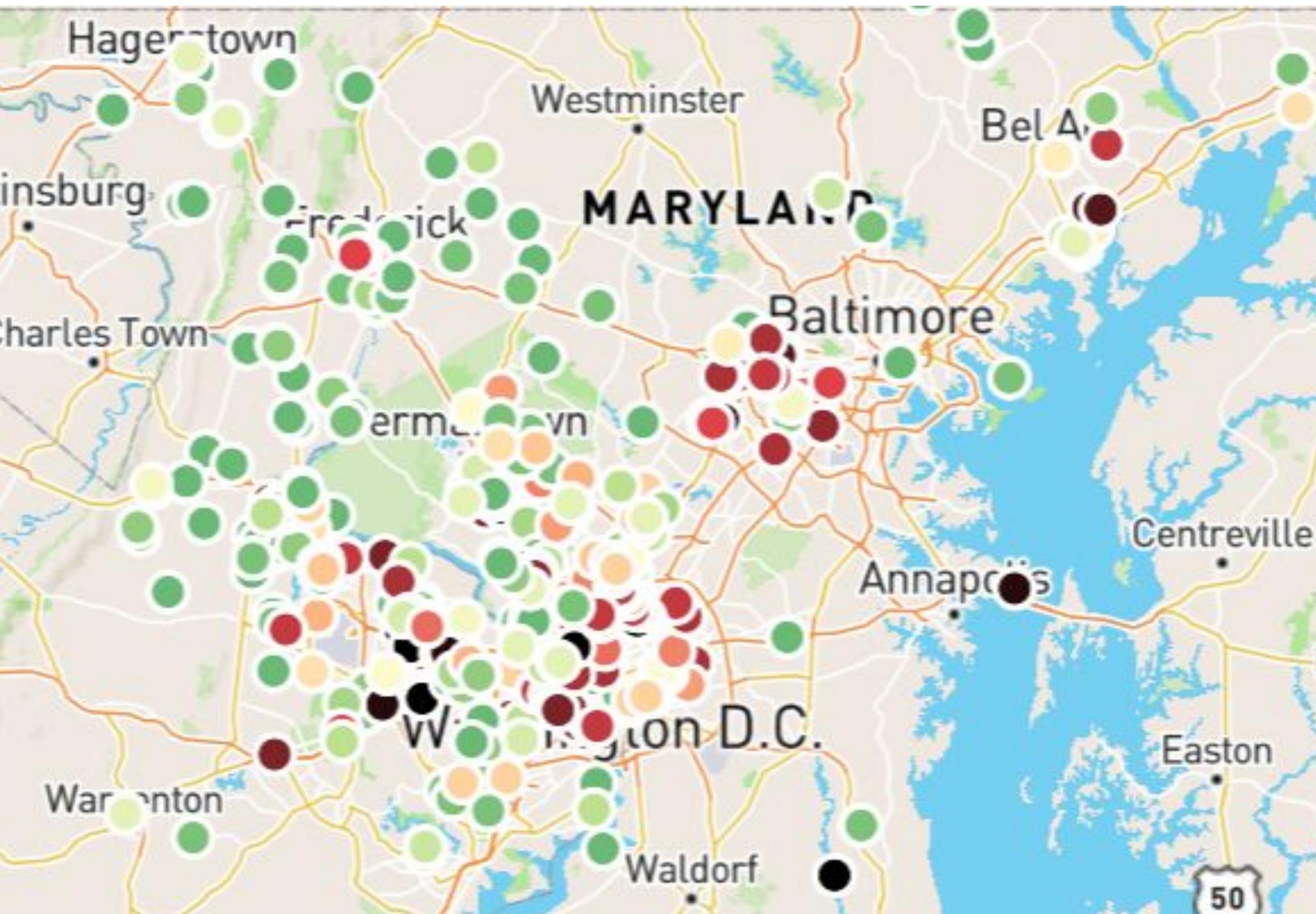


Total chloride readings: **8,689**

- 0-30 mg/L: **1,617**
- 30-100 mg/L: **3,663**
- 100-230 mg/L: **1,811**
- 230+ mg/L: **1,598**

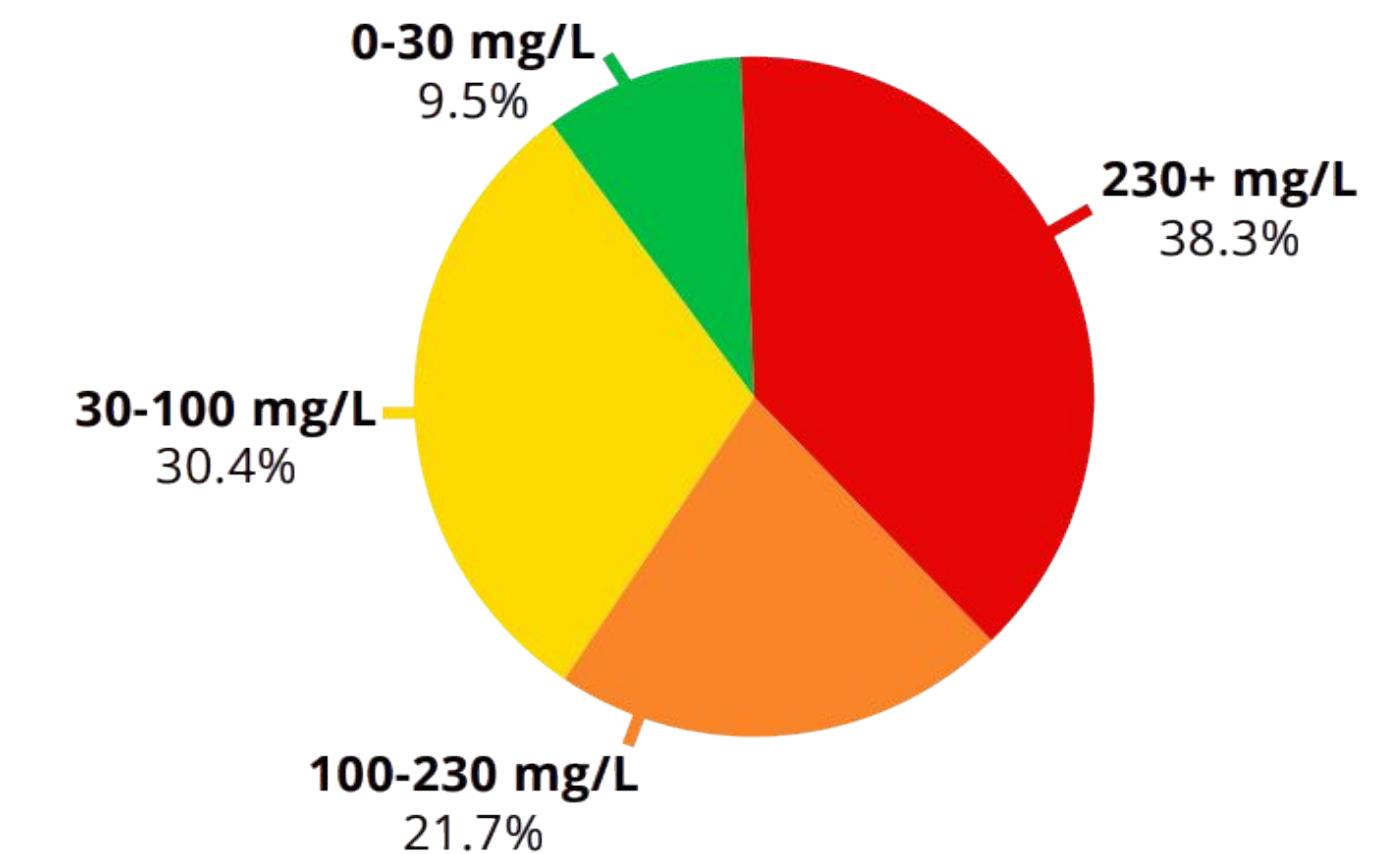


# 2024-2025 Maryland

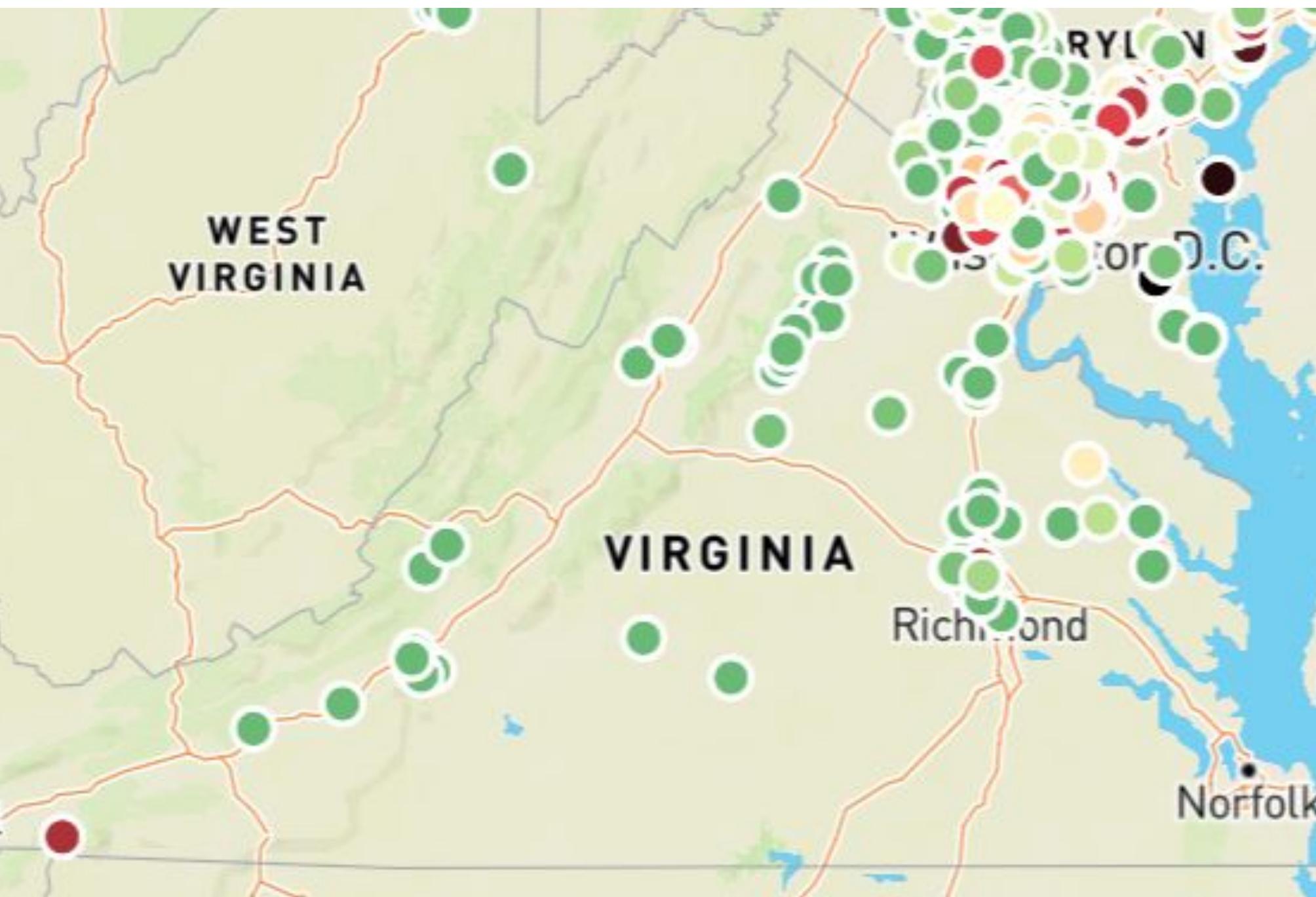


Total chloride readings: 1,437

- 0-30 mg/L: 137
- 30-100 mg/L: 437
- 100-230 mg/L: 312
- 230+ mg/L: 551

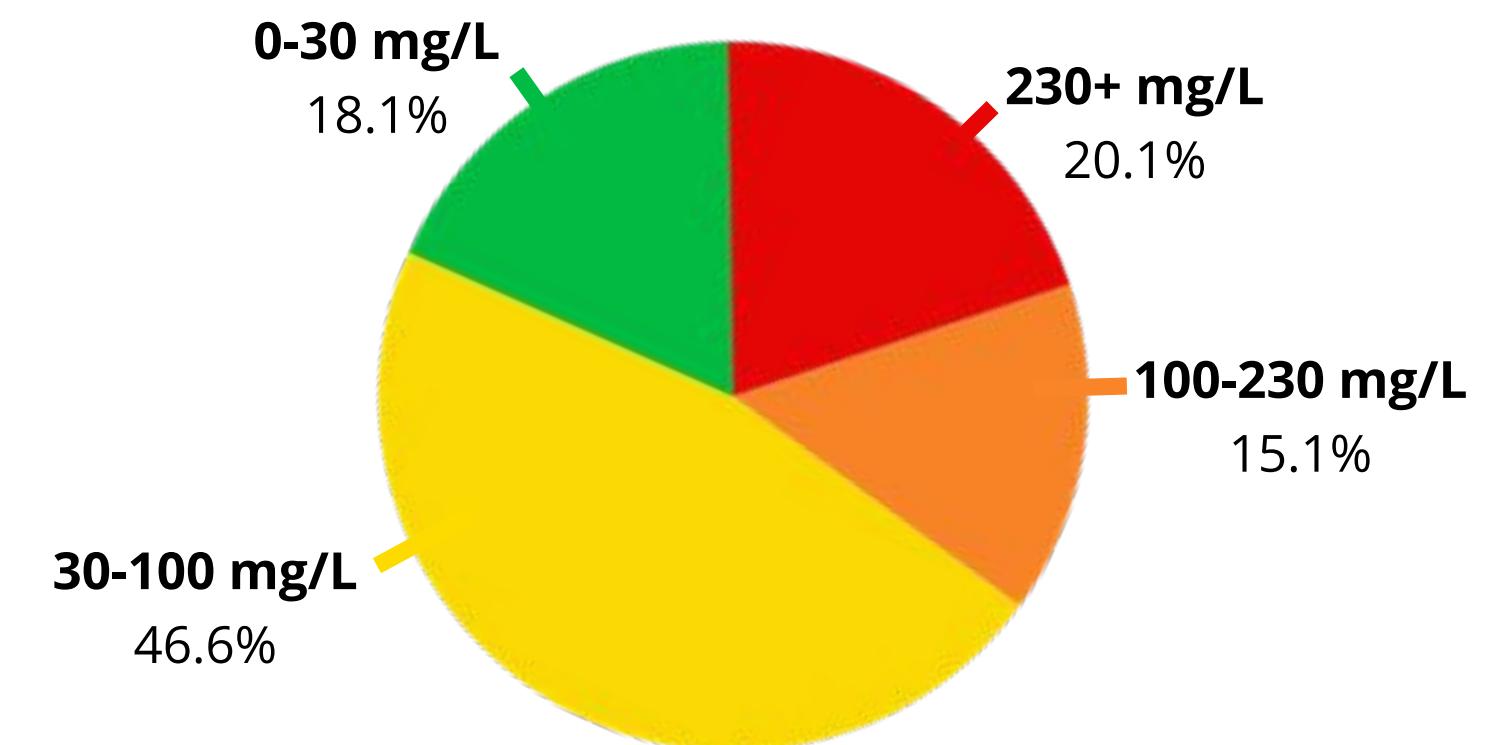


# 2024-2025 Virginia



Total chloride readings: 1,182

- 0-30 mg/L: 214
- 30-100 mg/L: 551
- 100-230 mg/L: 179
- 230+ mg/L: 238





# Data Use

## Government Agencies

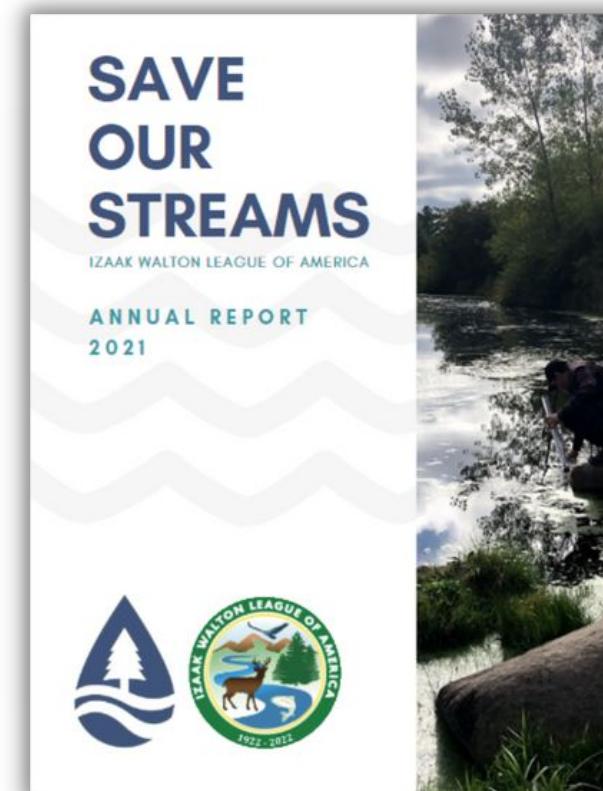
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- Available to government agencies and water quality organizations to...
  - identify areas in need of further study, restoration
  - track impact of BMPs
  - track progress of restoration
- Integrating into the Chesapeake Monitoring Cooperative

## IWLA Clean Water Team

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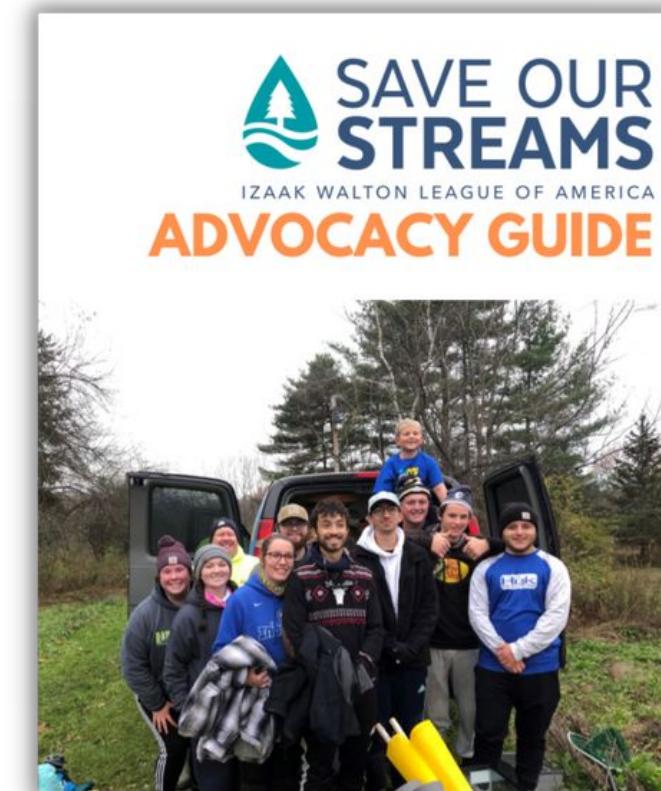
- Annual report
- Updates to volunteers
- Outreach to media sources



## Clean Water Advocates

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- 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.



Americans use 20 million tons of road salt every year.



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.

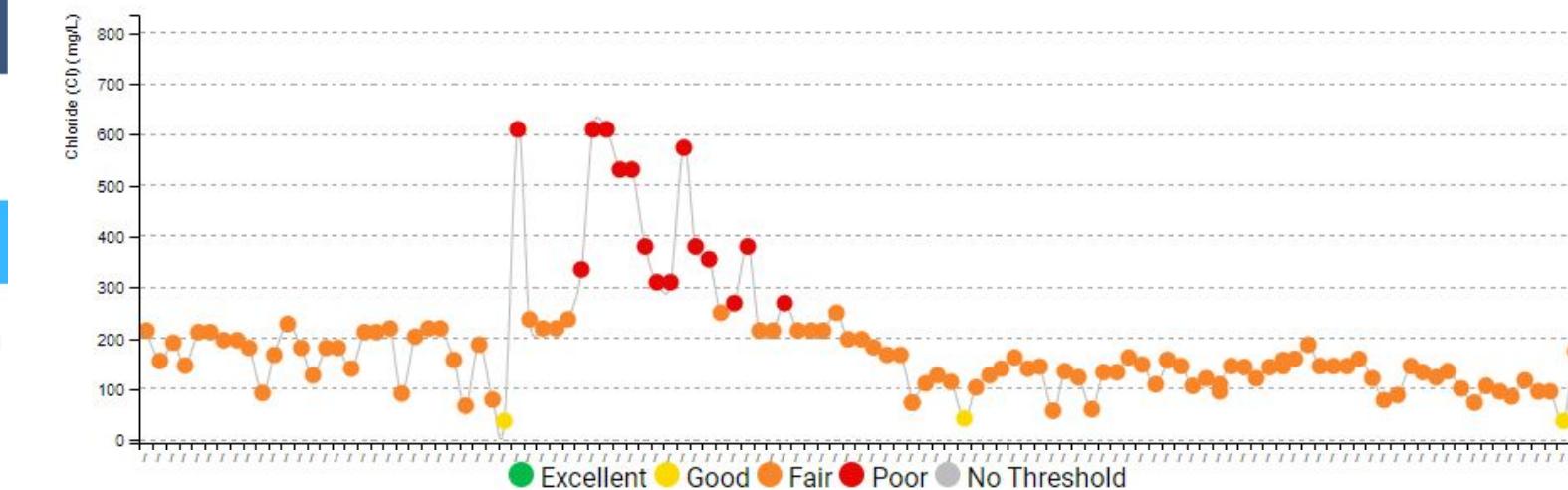
#### 4. Switch

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](http://www.saltwatch.org)!



# Data Action

**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 2:46 p.m. EST

## TTF Streamkeeper Testifies at Philadelphia City Council about Road Salt

Jamilee Hoffman  
Mar 17, 2022



01/18/2019



## ACTION ALERT



### 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.](#)

# Resources

## Fact Sheets

**SALT WATCH™**  
IAAK 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**



**SALT WATCH™**  
WISCONSIN SALT WISE

## Flyers

### 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.

Reduce your salt use to protect our water!

Do your own salt application?

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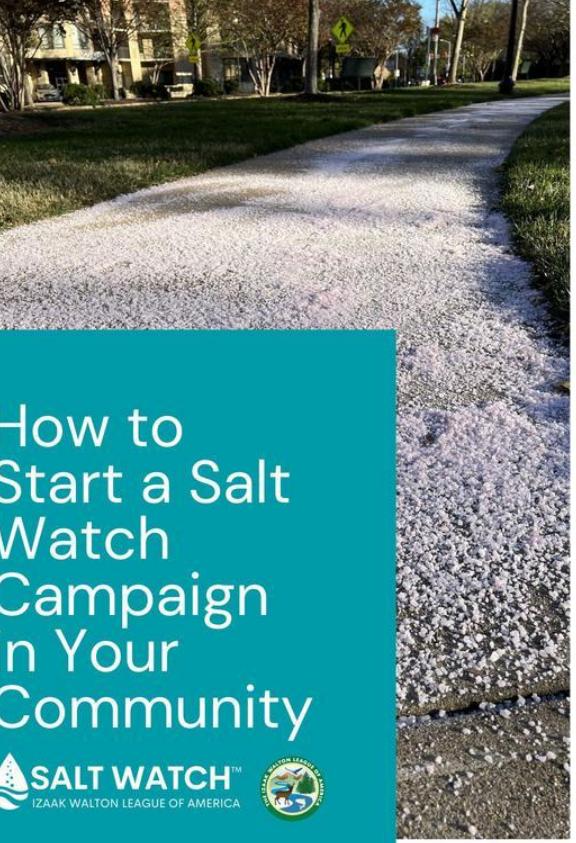


**SALT WATCH™**  
IAAK WALTON LEAGUE OF AMERICA

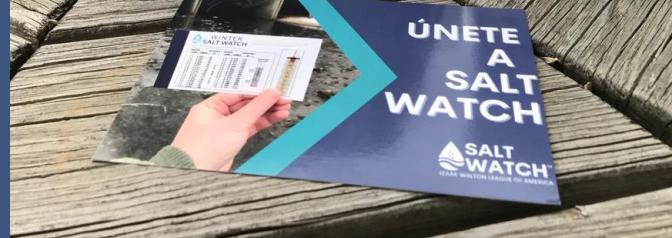
## Advocacy Guide

### How to Start a Salt Watch Campaign in Your Community

**SALT WATCH™**  
IAAK WALTON LEAGUE OF AMERICA



## Spanish Resources



**¿Cuánta sal de carretera hay en sus arroyos?**

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

[www.SaltWatch.org](http://www.SaltWatch.org)

**SALT WATCH™**  
ESPAÑOL

## Template Letters

**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.

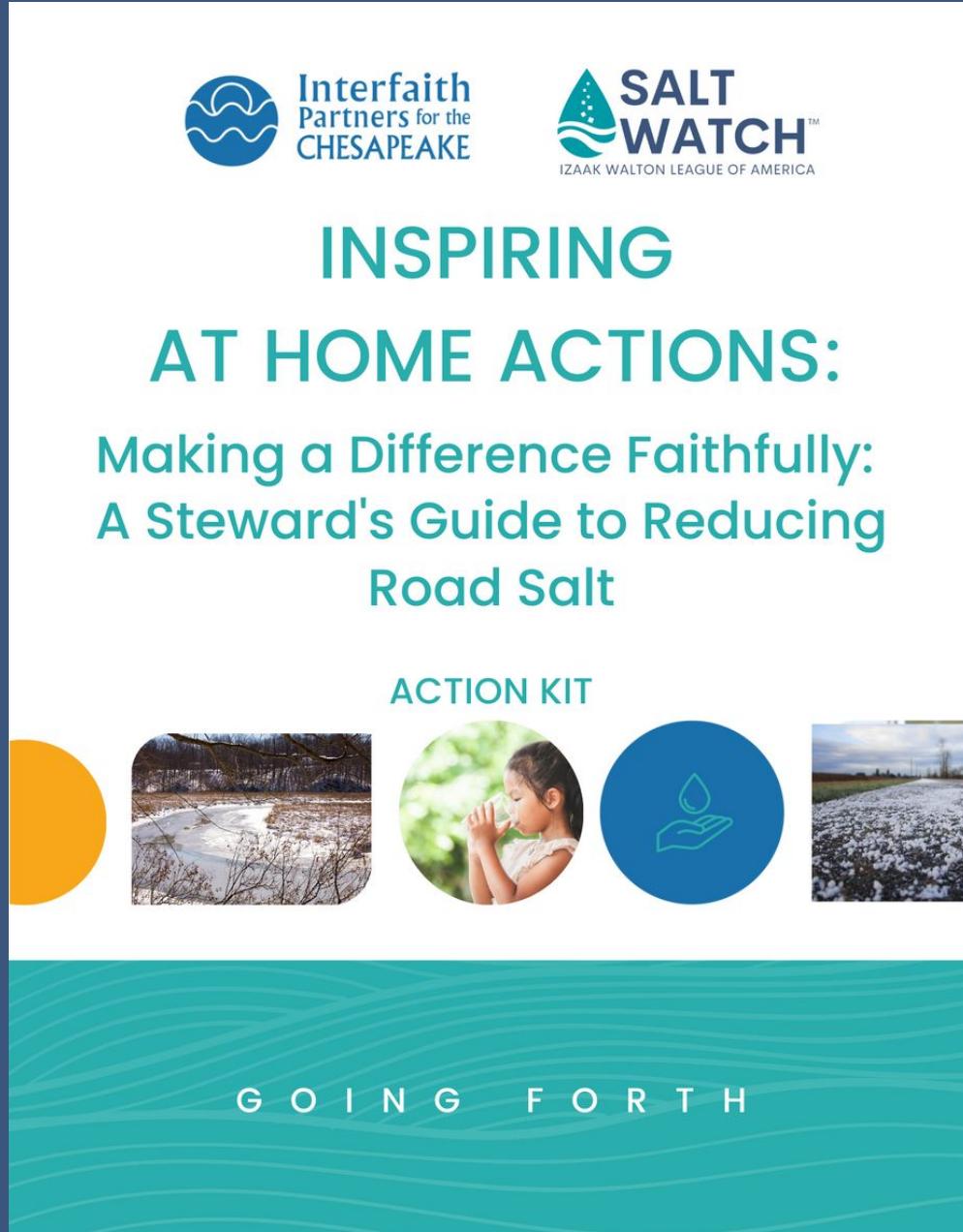
Road salt threatens our water quality in multiple ways, by contaminating drinking water, corroding pipes and leaching metals into our water. High levels of chloride are dangerous to human health, especially for people with pre-existing conditions such as high blood pressure. Chloride is also toxic to 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/lawyers/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]

# Toolkits



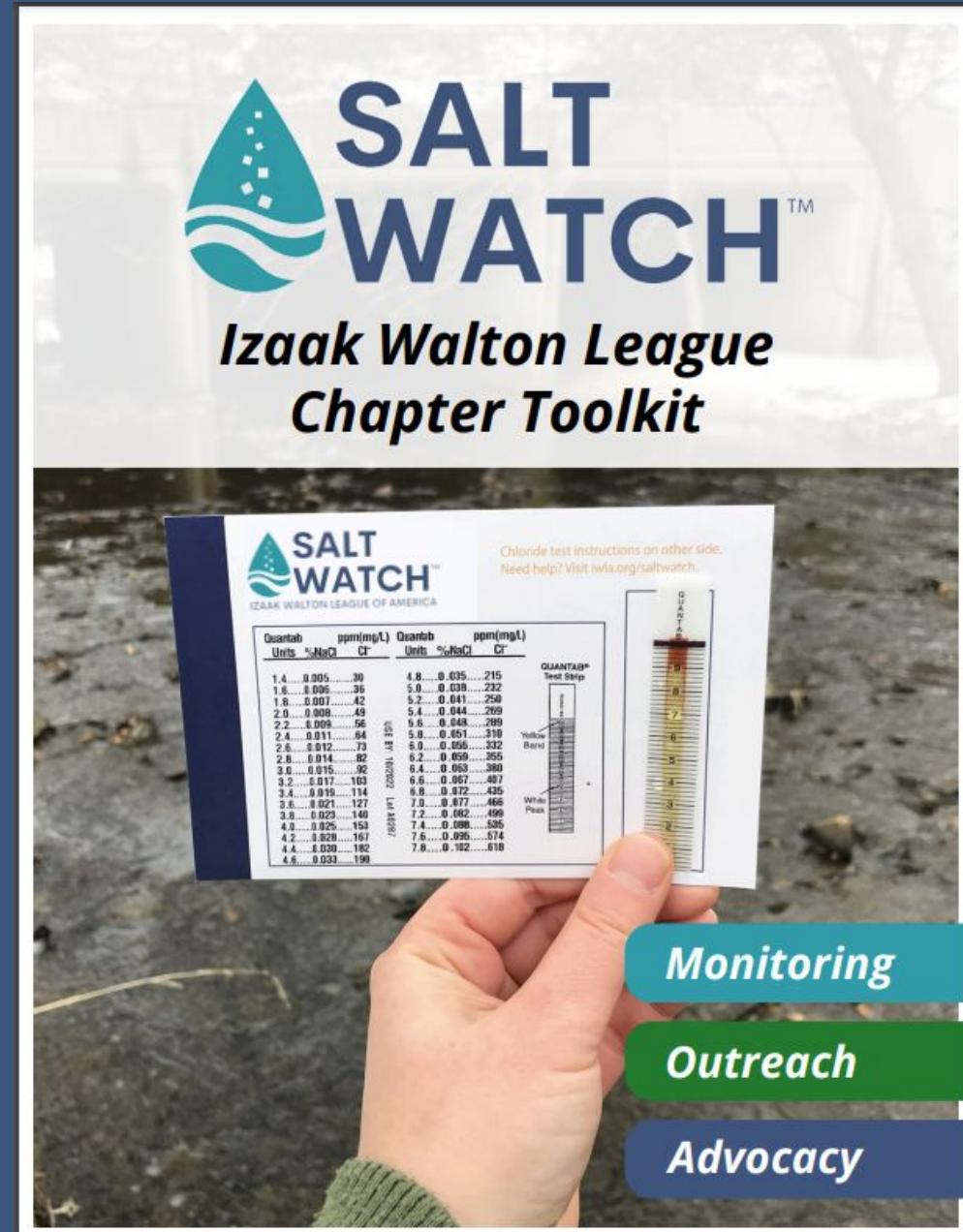
**INSPIRING  
AT HOME ACTIONS:**  
Making a Difference Faithfully:  
A Steward's Guide to Reducing  
Road Salt

**ACTION KIT**

GOING FORTH

Interfaith Partners for the CHESAPEAKE  
SALT WATCH™  
IZAAK WALTON LEAGUE OF AMERICA

Faith-based  
Communities



**SALT WATCH™**  
*Izaak Walton League  
Chapter Toolkit*

**Monitoring**  
**Outreach**  
**Advocacy**

Conc. (ppm(mg/L) NaCl)	Conc. (ppm(mg/L) Cl <sup>-</sup> )	Units (%NaCl)	ppm(mg/L) Cl <sup>-</sup>		
1.4	0.005	30	4.8	0.035	215
1.6	0.006	36	5.0	0.039	235
1.8	0.007	42	5.2	0.043	255
2.0	0.008	49	5.4	0.044	269
2.2	0.009	56	5.6	0.048	289
2.4	0.011	64	5.8	0.051	310
2.6	0.013	71	6.0	0.053	322
2.8	0.014	82	6.2	0.059	359
3.0	0.015	92	6.4	0.063	388
3.2	0.017	101	6.6	0.067	417
3.4	0.019	114	6.8	0.072	435
3.6	0.021	127	7.0	0.077	466
3.8	0.023	140	7.2	0.082	499
4.0	0.025	153	7.4	0.087	532
4.2	0.028	167	7.6	0.095	574
4.4	0.030	182	7.8	0.102	616
4.6	0.033	199			

IWLA Chapters



**SALT WATCH™**  
IZAAK WALTON LEAGUE OF AMERICA

## HOW TO

Run a Successful  
Paint the Plow Event

**WALTON LEAGUE OF AMERICA**

**SALT WATCH**

IZAAK WALTON LEAGUE OF AMERICA

Paint the Plow



## 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!



# Winter Salt Week

## January 26-30, 2026

*[www.wintersaltweek.org](http://www.wintersaltweek.org)*



# SALT RESPONSIBLY



Visit:  
[www.saltwatch.org](http://www.saltwatch.org)

Email:  
[saltwatch@iwl.org](mailto:saltwatch@iwl.org)