

Salt Watch Snapshot

Presented by: Patapsco Heritage Greenway

Diana Devers

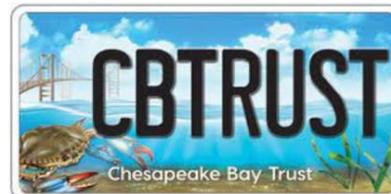
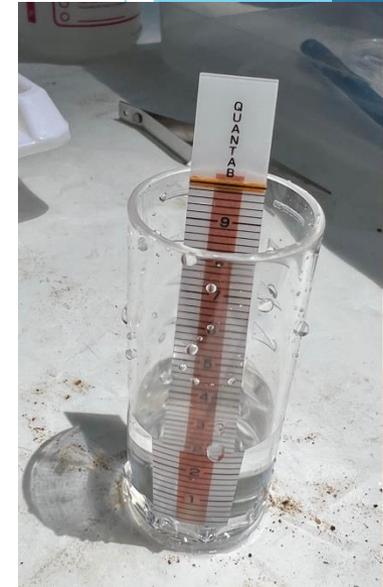
(Director of Environmental Programs and Engagement),

Mandy DeLeo

(Water Quality Program Manager)

& Hannah Emmons

(Community Programs Coordinator)



Mission



Patapsco Heritage Greenway (PHG) is dedicated to preserving, protecting, interpreting and restoring the environment, history, and culture of Maryland's most dramatic river valley for all.

Water Quality Watchers: Community Scientists

- Volunteers that collect observational data about water sources that you consider in your own “backyard”.
- Receive data card and training on methods to collect specific water quality data
- Asked to check their “backyard” 4 times a year



Volunteer Monitors

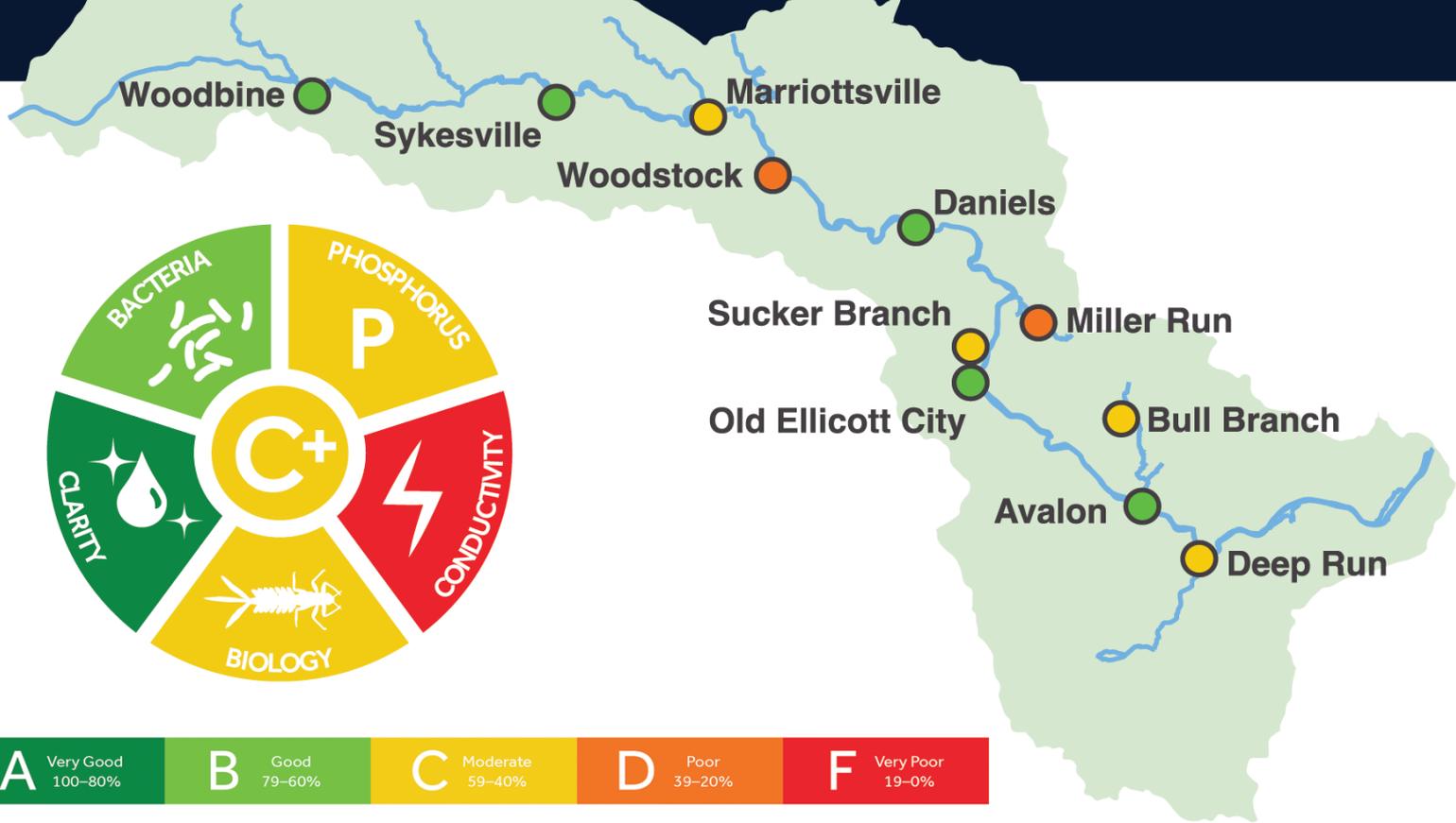
Collect data on the water quality within Patapsco River Watershed

- Bacteria
- Temperature
- Nitrite and Phosphorous
- Dissolved oxygen
- pH
- Conductivity
- Water clarity
- Macroinvertebrates



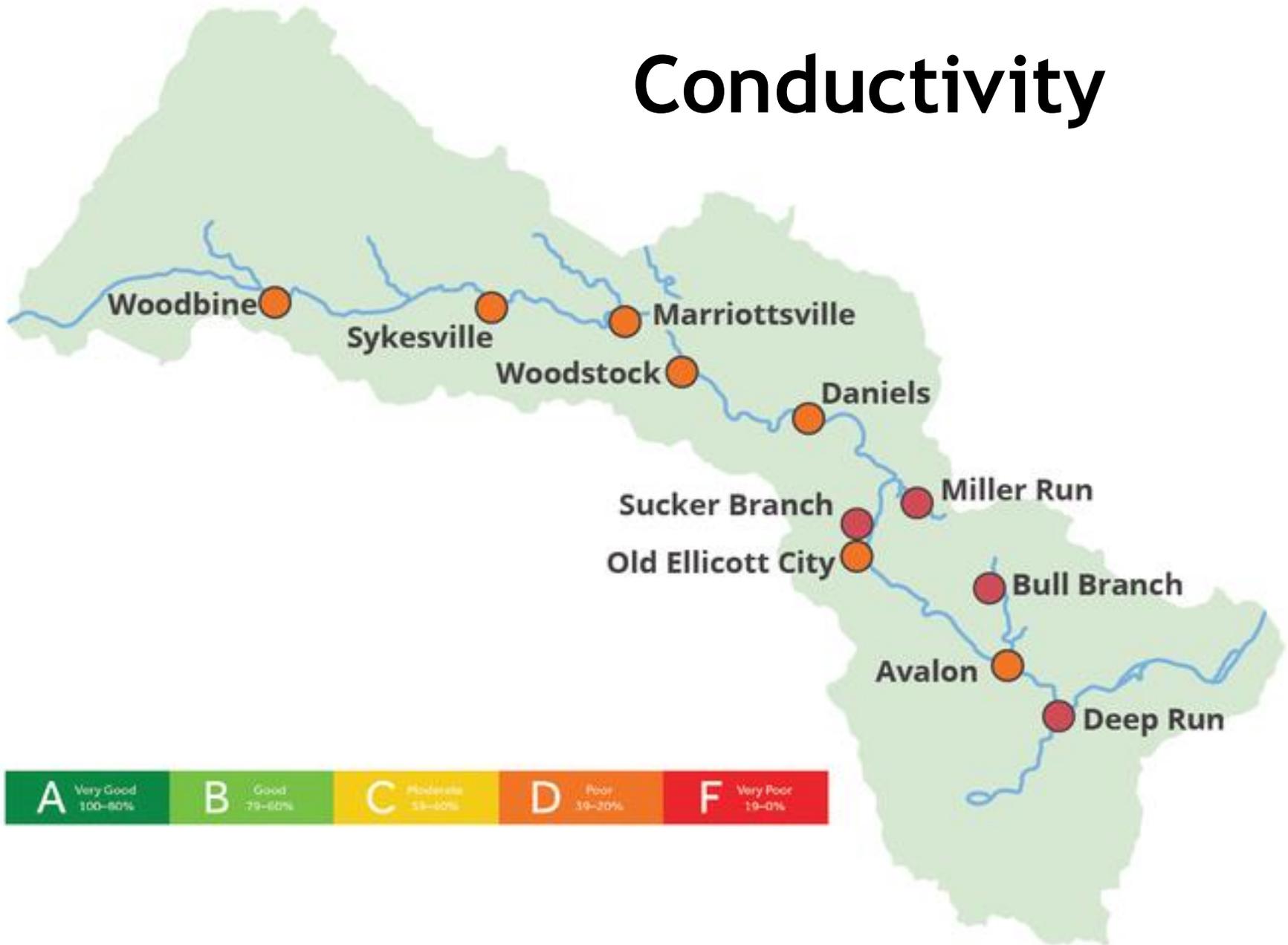
Patapsco River

2024 Report Card



A Very Good 100–80%	B Good 79–60%	C Moderate 59–40%	D Poor 39–20%	F Very Poor 19–0%
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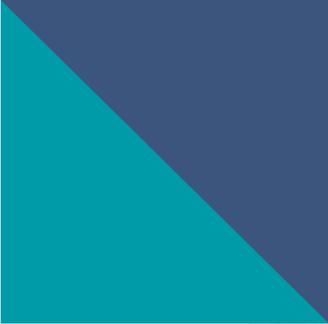
Conductivity





SALT WATCH™

IZAAK WALTON LEAGUE OF AMERICA



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





WHAT IS ROAD SALT?

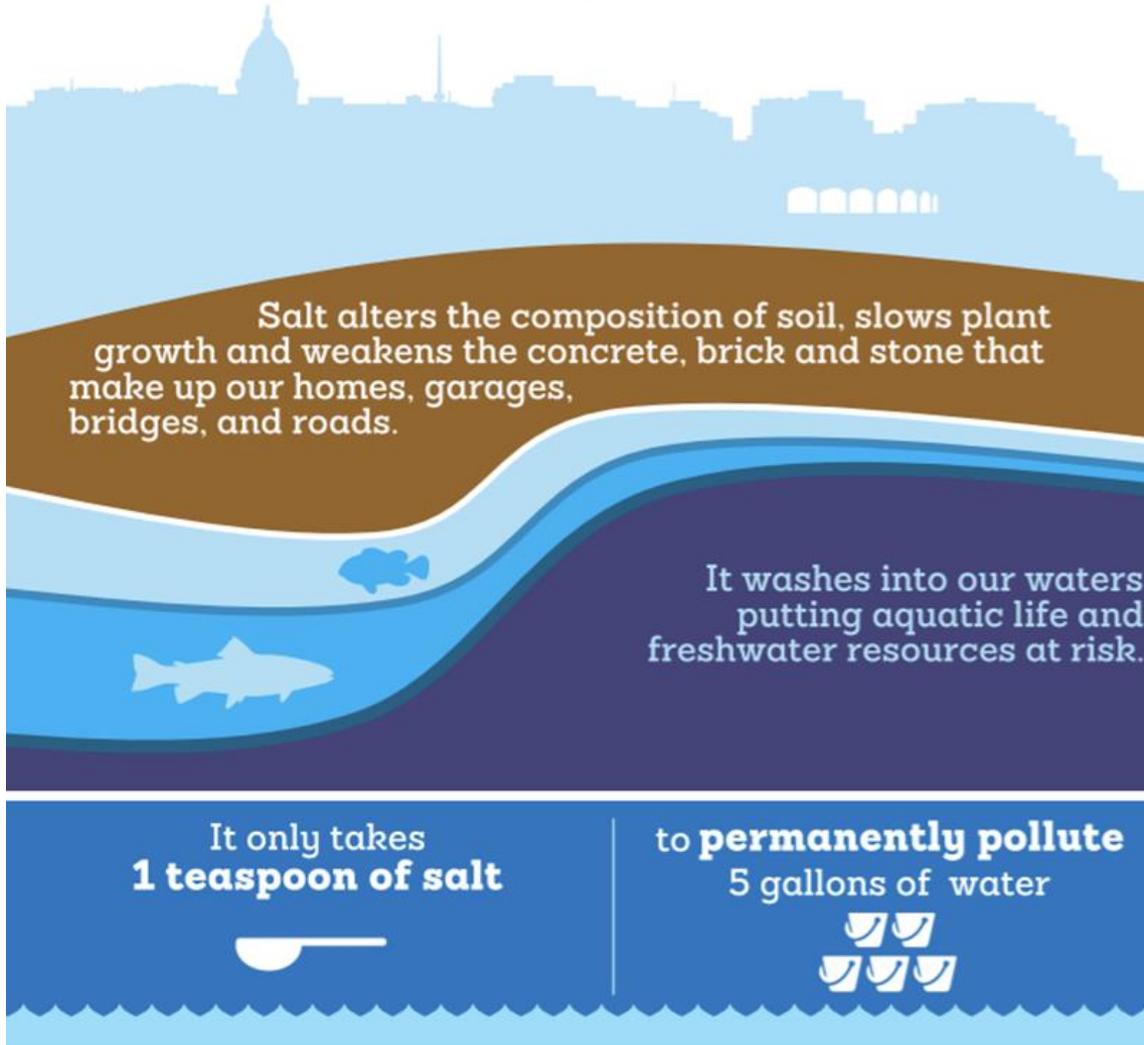
NaCl - Sodium Chloride

KCl - Potassium Chloride

MgCl_2 - Magnesium Chloride

CaCl_2 - Calcium Chloride

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



Wildlife Impacts

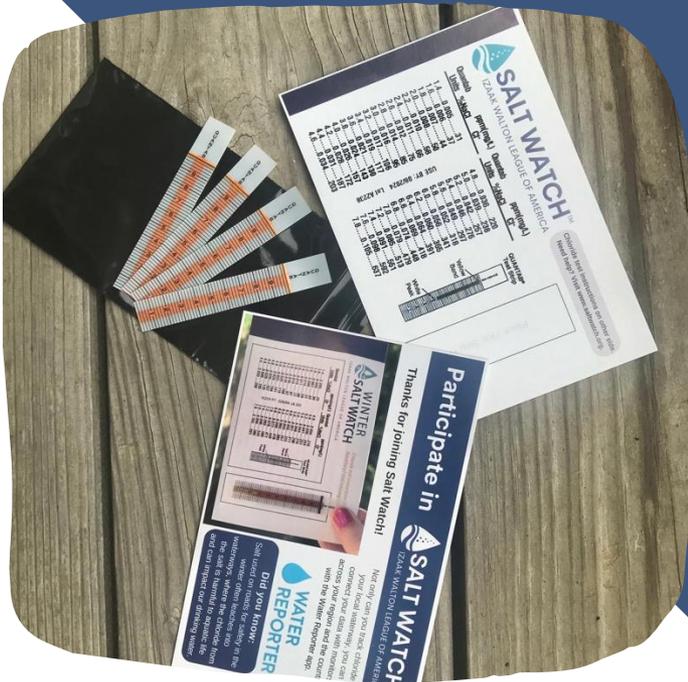
- Affects fish, but macroinvertebrates, plankton, and microbes may be even more sensitive than fish
- Vernal pools may be more intensely affected--as well as the organisms that spawn in them
- Mammals drinking from high chloride streams can be negatively impacted



Drinking Water Impacts

- Chloride is different than chlorine--does not disinfect water
- Chlorides not typically removed at water treatment plants due to high cost
- Can impact public health





Salt Watch Kit

Includes:

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

When Should Volunteers Monitor?



Before a winter weather (to get a baseline reading).



After the first winter storm (when salt has been applied to roads).



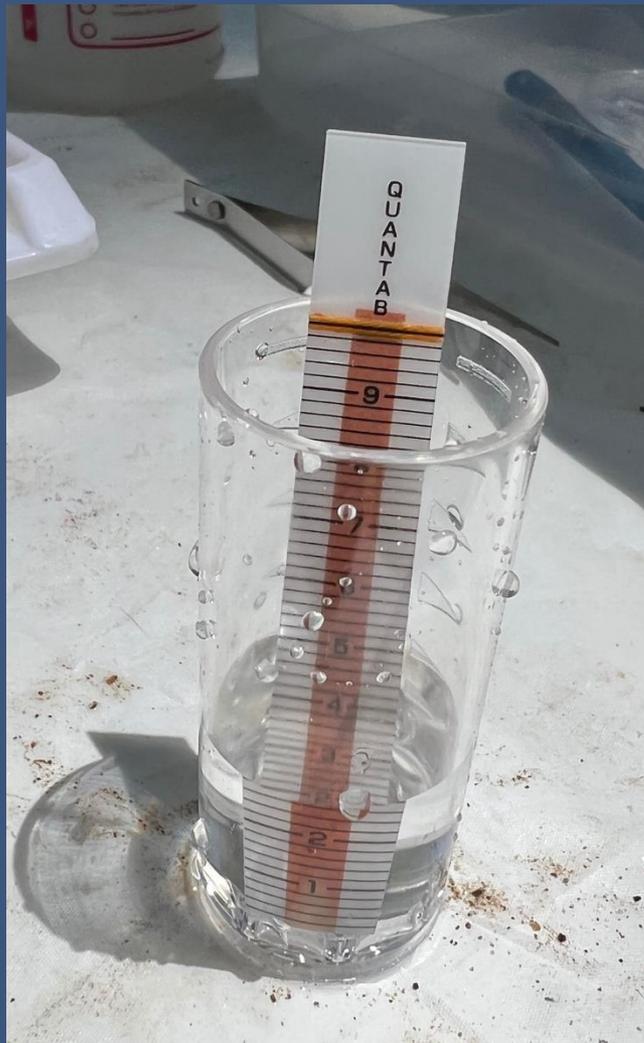
After the first thaw or rainstorm of winter.



After the next rain event.

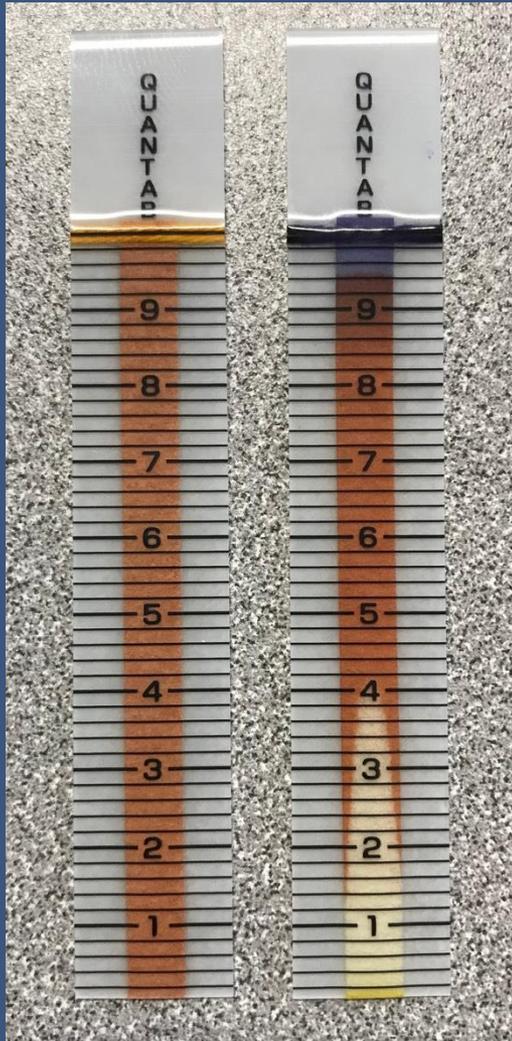


Consistently throughout the year (e.g. the first Saturday of every month).



Taking Your Sample

- 1 test strip
- 1 small jar/cup
- Add water
 - Rinse and repeat 3x
 - Leave 1/2-1" of water
- Wait ~3 minutes



Taking Your Sample

- 1 test strip
- 1 small jar/cup
- 1-2 inches of water
 - Add water
 - Rinse and repeat 3x
 - Leave 1/2-1" of water
- Wait ~3 minutes



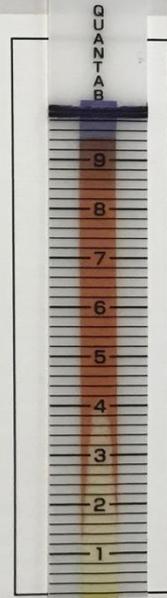
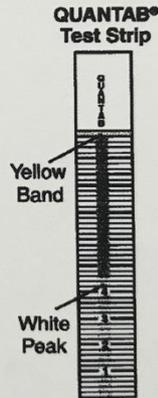
SALT WATCH™

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Chloride test instructions on other side.
Need help? Visit www.saltwatch.org.

Quantab Units	%NaCl	ppm(mg/L) Cl ⁻	Quantab Units	%NaCl	ppm(mg/L) Cl ⁻
1.4	0.005	31	4.8	0.036	220
1.6	0.006	37	5.0	0.039	238
1.8	0.007	44	5.2	0.042	257
2.0	0.008	50	5.4	0.046	276
2.2	0.010	58	5.6	0.049	297
2.4	0.011	66	5.8	0.052	318
2.6	0.012	75	6.0	0.056	341
2.8	0.014	85	6.2	0.060	365
3.0	0.016	95	6.4	0.064	391
3.2	0.017	106	6.6	0.069	418
3.4	0.019	117	6.8	0.074	448
3.6	0.021	130	7.0	0.079	479
3.8	0.024	143	7.2	0.085	513
4.0	0.026	157	7.4	0.091	551
4.2	0.028	172	7.6	0.098	592
4.4	0.031	187	7.8	0.105	637
4.6	0.034	203			

USE BY: 08/2024 Lot A2238



This test strip reads:
4 Quantab Units





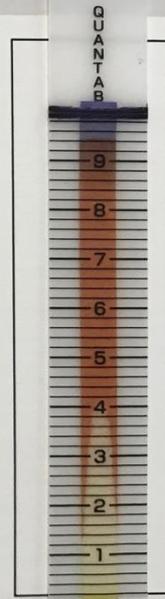
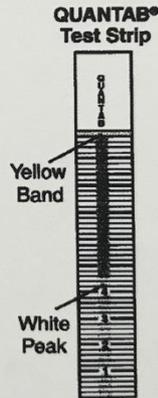
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1.8	0.007	44	5.2	0.042	257
2.0	0.008	50	5.4	0.046	276
2.2	0.010	58	5.6	0.049	297
2.4	0.011	66	5.8	0.052	318
2.6	0.012	75	6.0	0.056	341
2.8	0.014	85	6.2	0.060	365
3.0	0.016	95	6.4	0.064	391
3.2	0.017	106	6.6	0.069	418
3.4	0.019	117	6.8	0.074	448
3.6	0.021	130	7.0	0.079	479
3.8	0.024	143	7.2	0.085	513
4.0	0.026	157	7.4	0.091	551
4.2	0.028	172	7.6	0.098	592
4.4	0.031	187	7.8	0.105	637
4.6	0.034	203			

USE BY: 08/2024 Lot A2238



This test strip reads:
4 Quantab Units

4 Quantab Units means
the sample is 157ppm

What do Salt Levels Mean?

0-100 mg/L

Chloride in freshwater naturally occurs *

230 mg/L

Chloride is "chronically" toxic to aquatic life

250 mg/L

EPA Secondary Standard of Drinking Water

860 mg/L

Chloride is "acutely" toxic to aquatic life



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Data Sharing Instructions

1

Create an account on the Clean Water Hub

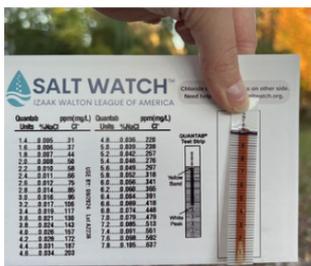
The Clean Water Hub is the database where all Salt Watch readings are reported. Visit www.cleanwaterhub.org/saltwatch and follow the prompts to create an account!

Already have an account on the Hub?
You're all set!



2

Measure chloride in your waterways



Choose your water source

You can sample streams, rivers, lakes, ponds, drainage/outlet pipes, and more!

Use your chloride test strips

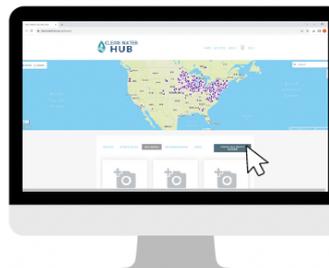
Follow the instructions in your Salt Watch kit to accurately measure the amount of chloride in your water source.

3

Share your data on the Clean Water Hub

1. On a phone or computer, navigate to www.cleanwaterhub.org/saltwatch. Log in to the Clean Water Hub or create a new account.
2. Click on **CREATE SALT WATCH READING**
3. Select an existing site from the dropdown menu or click "Create a New Site"
4. Fill out the form for your site. Double-check form and click **SAVE CHANGES** when you are finished.

cleanwaterhub.org/saltwatch



Sign up for a Clean Water Hub Account



[EXPLORE DATA](#) [ABOUT](#) [LOG IN](#) [SIGN UP](#) [HELP](#)

1. Create an account with your name, email, and password
2. Add **Patapsco Heritage Greenway** as your Organization Name

Register

Your Email Address ***required**

First Name ***required**

Last Name ***required**

Organization Name

If you do not associate with an organization, you will be automatically labeled as a Freelancer.

Patapsco Heritage Greenway

Greater Patapsco Community Association - S...

Retype your password ***required**

CREATE ACCOUNT

Create a Salt Watch Reading

1. Site Name
2. Name of Water Source and Type
3. Site Description
4. Organization: PHG
5. Add Photos!
6. Location
7. New Salt Watch Reading
8. Expiration Day
9. Lot Number
10. Comments



EXPLORE DATA MY SITES ABOUT HELP

Salt Watch Form

Create a New Site [edit](#)

New Site

Site Name **(required)**

Name of water source (if applicable)

Water Source **(required)**

Site Description

Organizations

Begin typing a organization name

Don't see your Organization? Finish creating your site and [submit](#) the organization to Izaak Walton League! You can always associate a site with an organization at a later date.

Add a photo of your site

REMOVE IMAGE

Choose File No file chosen

UPLOAD

City State

Latitude **(required)** Longitude **(required)**

ADD LOCATION MODE ON



New Salt Watch Reading

Survey Date **(required)**

Most Recent Precipitation **(required)**

mm/dd/yyyy

Quantab Unit Reading **(required if using a Salt Watch Kit)**

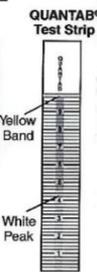
Chloride (mg/L) **(required)**

Quantab			ppm(mg/L)			Quantab			ppm(mg/L)		
Units	%NaCl	Cl ⁻	Units	%NaCl	Cl ⁻	Units	%NaCl	Cl ⁻	Units	%NaCl	Cl ⁻
1.4	0.005	29	4.0	0.034	267	4.0	0.034	267	4.0	0.034	267
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1.8	0.007	40	6.0	0.040	290	6.0	0.040	290	6.0	0.040	290
2.0	0.008	47	7.0	0.043	298	7.0	0.043	298	7.0	0.043	298
2.2	0.009	55	8.0	0.046	307	8.0	0.046	307	8.0	0.046	307
2.4	0.010	63	9.0	0.049	316	9.0	0.049	316	9.0	0.049	316
2.6	0.012	72	10.0	0.052	325	10.0	0.052	325	10.0	0.052	325
2.8	0.013	81	11.0	0.055	334	11.0	0.055	334	11.0	0.055	334
3.0	0.015	91	12.0	0.058	343	12.0	0.058	343	12.0	0.058	343
3.2	0.017	101	13.0	0.061	352	13.0	0.061	352	13.0	0.061	352
3.4	0.019	112	14.0	0.064	361	14.0	0.064	361	14.0	0.064	361
3.6	0.020	124	15.0	0.067	370	15.0	0.067	370	15.0	0.067	370
3.8	0.022	136	16.0	0.070	379	16.0	0.070	379	16.0	0.070	379
4.0	0.024	148	17.0	0.073	388	17.0	0.073	388	17.0	0.073	388
4.2	0.027	160	18.0	0.076	397	18.0	0.076	397	18.0	0.076	397
4.4	0.029	173	19.0	0.079	406	19.0	0.079	406	19.0	0.079	406
4.6	0.032	186	20.0	0.082	415	20.0	0.082	415	20.0	0.082	415

Expiration Date

Lot Number

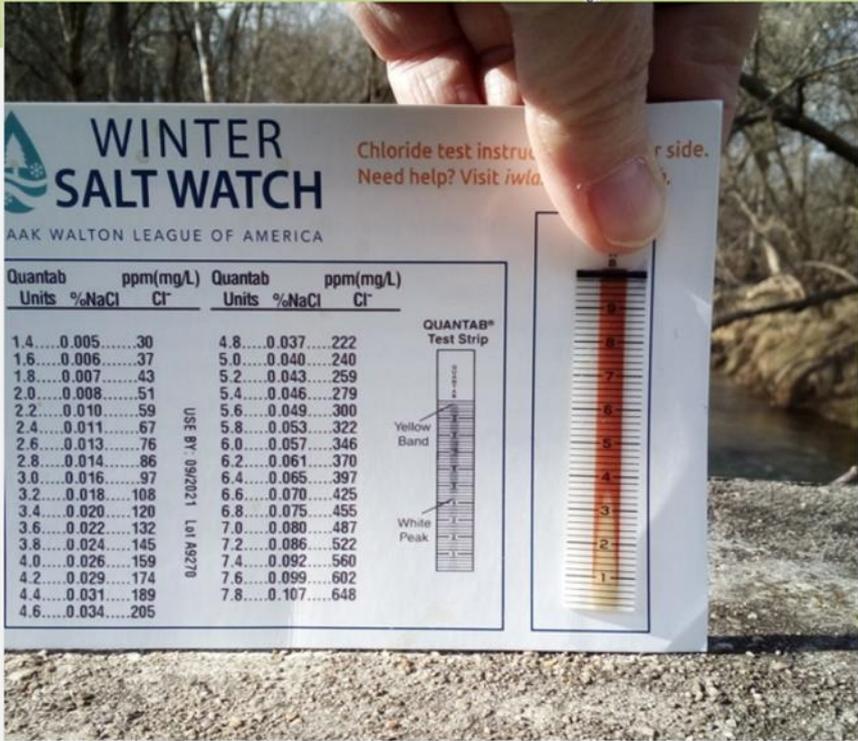
USE BY: **2015-01-01**
Lot # **123456**



Expiration Date (MM/YYYY) **(required for Salt Watch Kit)**

Lot Number **(required for Salt Watch Kit)**

Comments



WINTER SALT WATCH
Chloride test instructions on the other side.
Need help? Visit iwl.org

WALTON LEAGUE OF AMERICA

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2.4	0.011	67	5.8	0.053	322
2.6	0.013	76	6.0	0.057	346
2.8	0.014	86	6.2	0.061	370
3.0	0.016	97	6.4	0.065	397
3.2	0.018	108	6.6	0.070	425
3.4	0.020	120	6.8	0.075	455
3.6	0.022	132	7.0	0.080	487
3.8	0.024	145	7.2	0.086	522
4.0	0.026	159	7.4	0.092	560
4.2	0.029	174	7.6	0.099	602
4.4	0.031	189	7.8	0.107	648
4.6	0.034	205			

USE BY 09/2021 Lot A8270

QUANTAB® Test Strip

Yellow Band

White Peak

Test# 2, at Riffle Ford Road bridge on Sunday Jan 19 at 11am. Road was treated on Friday Jan 17 prior to ice event on Saturday Jan 18 that was followed by a rain event.



Jan 19, 2020 · 11:18AM



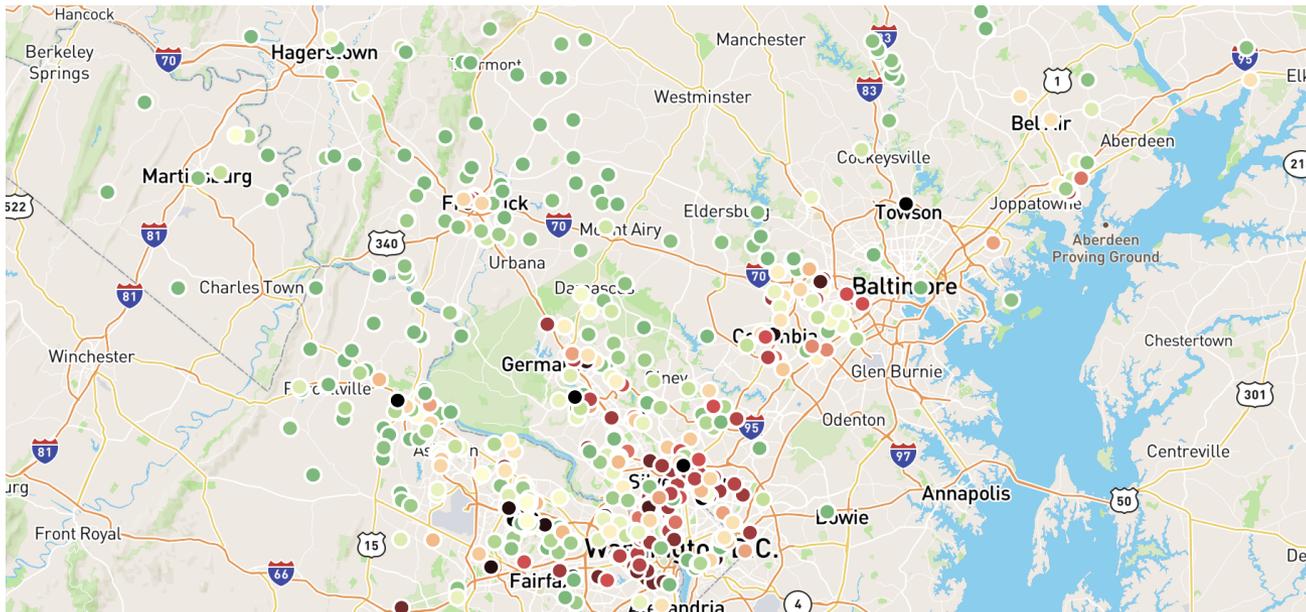
Middle Potomac-Catoctin Watershed
[Get directions to this location](#)

Tagged Organizations

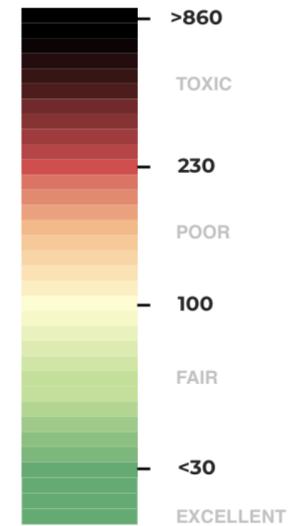


Salt Watch Map

Start Date End Date



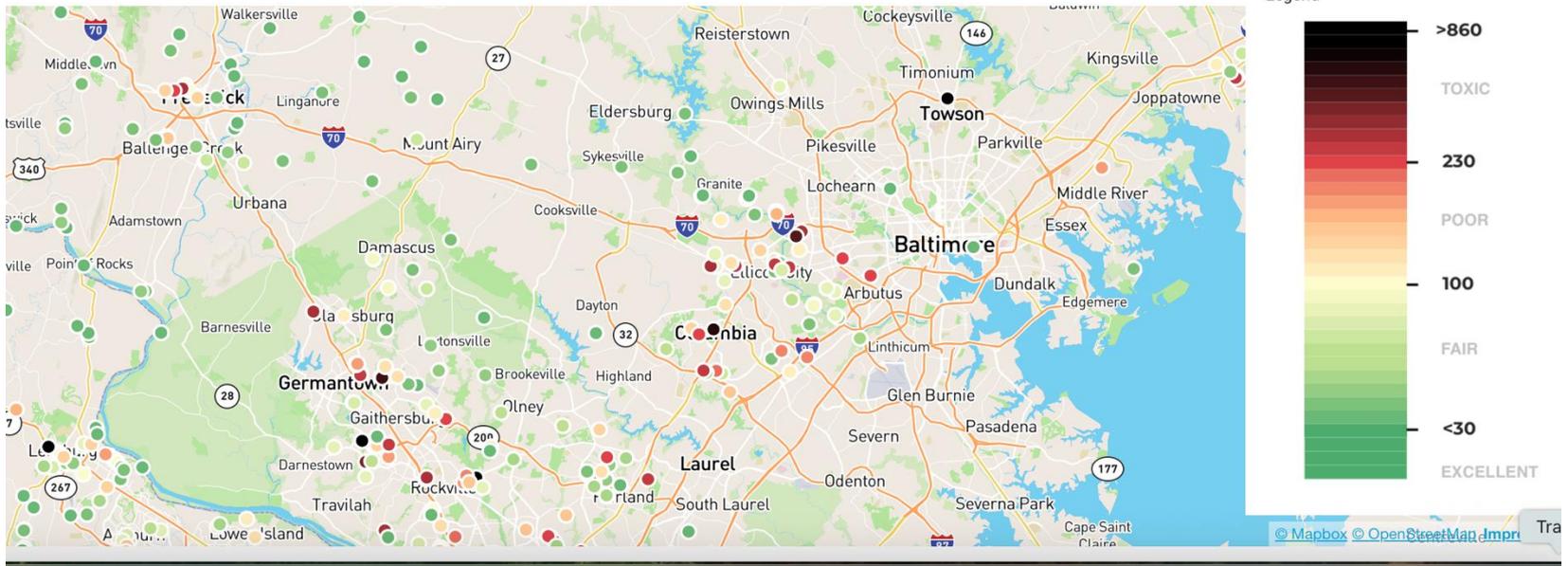
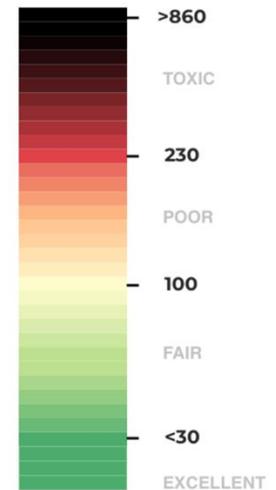
Filter By Water Source



Salt Watch Map

Start Date End Date [Filter by Dates](#)

Filter By Water Source
Legend



What Should Volunteers Do Next?



Salt Watch Advocacy Resources

What You Can Do



Start at Home

1

Salt is really powerful when it comes to preventing ice from forming – all you need for a 20-foot driveway is ONE mugful (12 oz) of road salt.

2

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.

3

Watch out for deicers labeled as "eco-friendly" or "pet-friendly"! Read the package more closely: If there is chloride in the product (sodium chloride, magnesium chloride, potassium chloride, etc.), it is still a salt!

Get the Word Out

Write a Letter to the Editor

Start with our [template](#) and adapt it for educating YOUR community about the need to reduce salt use!

Hand Out Flyers

Use [these flyers](#) to educate your neighbors about their home salt use.

Use [these flyers](#) to inform local businesses about the impact salt use in parking lots can have on water quality!

Curb Salt Use In Your Community

Call 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.

Share Best Practices

Property managers, community leaders, and state agencies might not know where to start in curbing salt use in your area. Share the [Road Salt Best Practices](#) compiled from our partners already working to reduce salt use in their regions.

Write a Letter to Your State Legislator or City Council

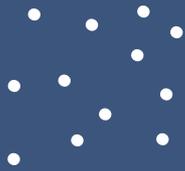
Write to your representatives at the state and local level in support of salt reduction and smarter salt use in your community. You can start with our sample letters – but feel free to personalize them to your own perspective!

- **Maryland**
 - [Find your legislators](#)
 - [Sample letter](#)
- **Minnesota**
 - [Find your legislators](#)
 - [Sample letter](#)
 - [Tell your city council / local property owners to use the model snow and ice policies and contracts with applicators from MPCA](#)
- **Pennsylvania**
 - [Find your legislators](#)
 - [Sample letter](#)
- **Virginia**
 - [Find your legislators](#)
 - [Sample letter](#)
- **Wisconsin**
 - [Find your legislators](#)
 - [Sample letter](#)
 - [Tell your city council / local property owners to use the model snow and ice policies and contracts with applicators from WI Salt Wise](#)
- **Other states**
 - [Sample letter to legislators](#)



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 RESPONSIBLY



Visit:

www.saltwatch.org

Email:

saltwatch@iwla.org

If you notice a spill, please report it

Howard County

- County roads: Howard County Highways 410-313-7450
- State Roads (any road with a number e.g. Rte 108): 410-531-5333

Also, resources on Clean Water Howard website:

<https://www.cleanwaterhoward.com/what-your-role/community-stewardship/winter-salt-reduction>

Baltimore County

- Call 311
- Email eps@baltimorecountymd.gov or paienforce@baltimorecountymd.gov

Also, for more info: bit.ly/MDEsaltsmart

Blue Water Baltimore :

Call our 24-hour hotline at **443-908-0696** or use our online reporting form. [Pollution Report](#)





Please consider becoming a member and joining PHG for future events

- Website: www.patapsco.org
- Facebook: Patapsco Valley Heritage Area
- Instagram: PatapscoValleyHeritage
- Eventbrite: Patapsco Heritage Greenway



Diana Devers: environment@patapsco.org

Mandy DeLeo: wqm@patapsco.org

Hannah Emmons: community@patapsco.org

Environmental Events QR Code