

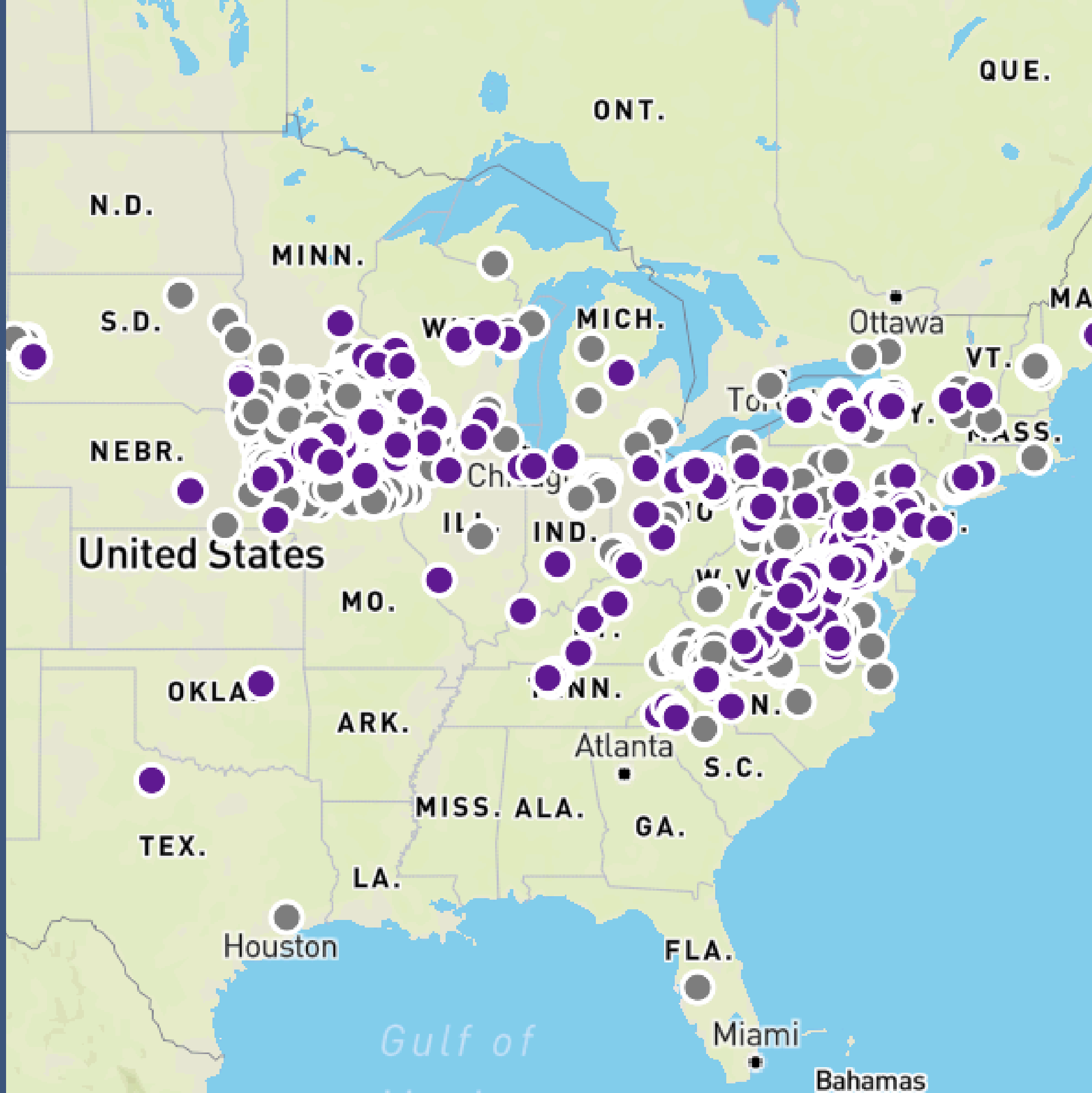


# Clean Water Hub

## Overview & Tutorial

Maggie Dombroski  
Mid-Atlantic Save Our Streams Coordinator

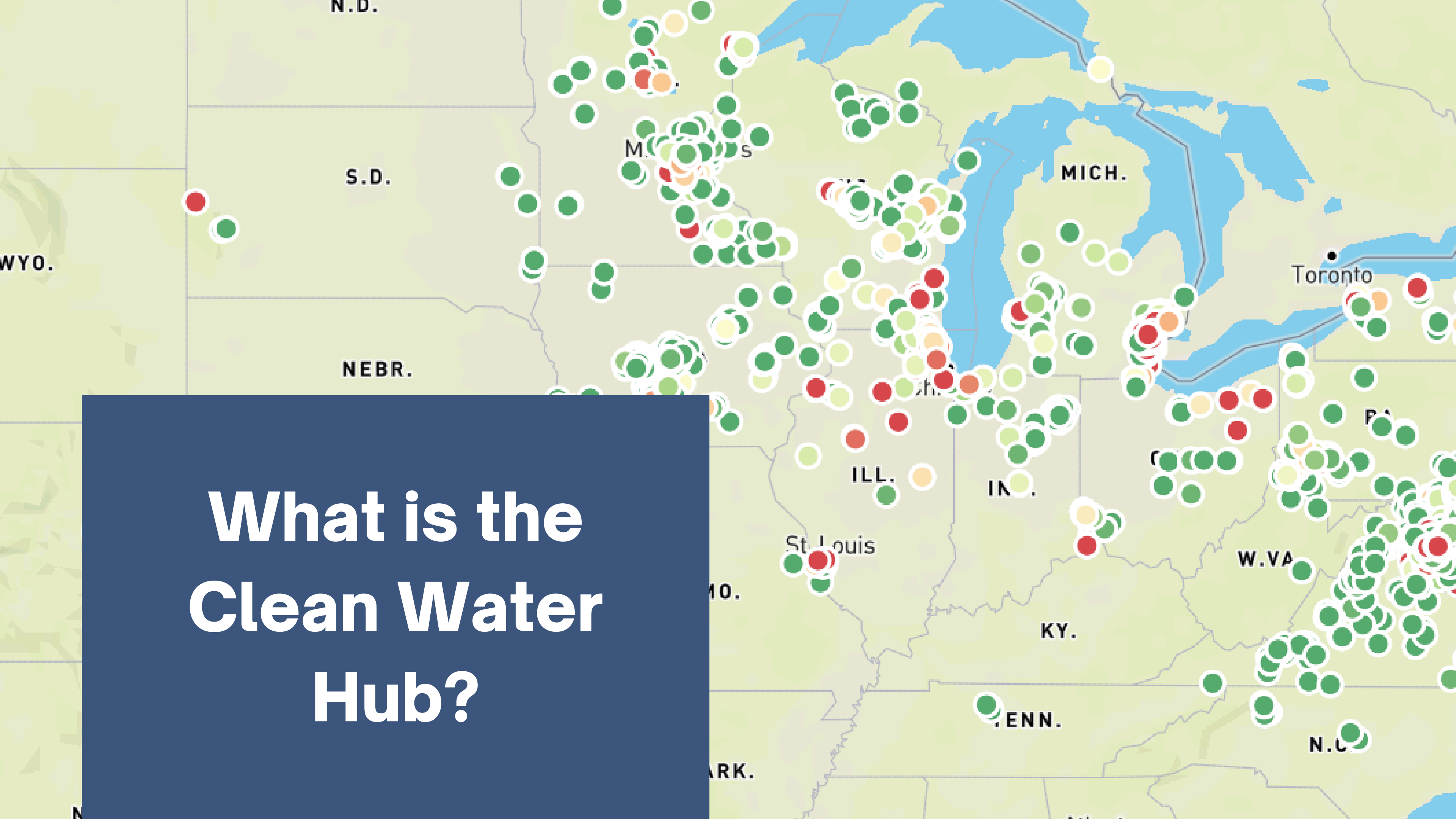
January 24, 2025



# New in 2025

**Data entry in Clean Water Hub  
instead of VASOS database**

**Standardized site names using  
Alliance for Chesapeake Bay  
convention (new names for  
existing sites will be shared  
soon)**

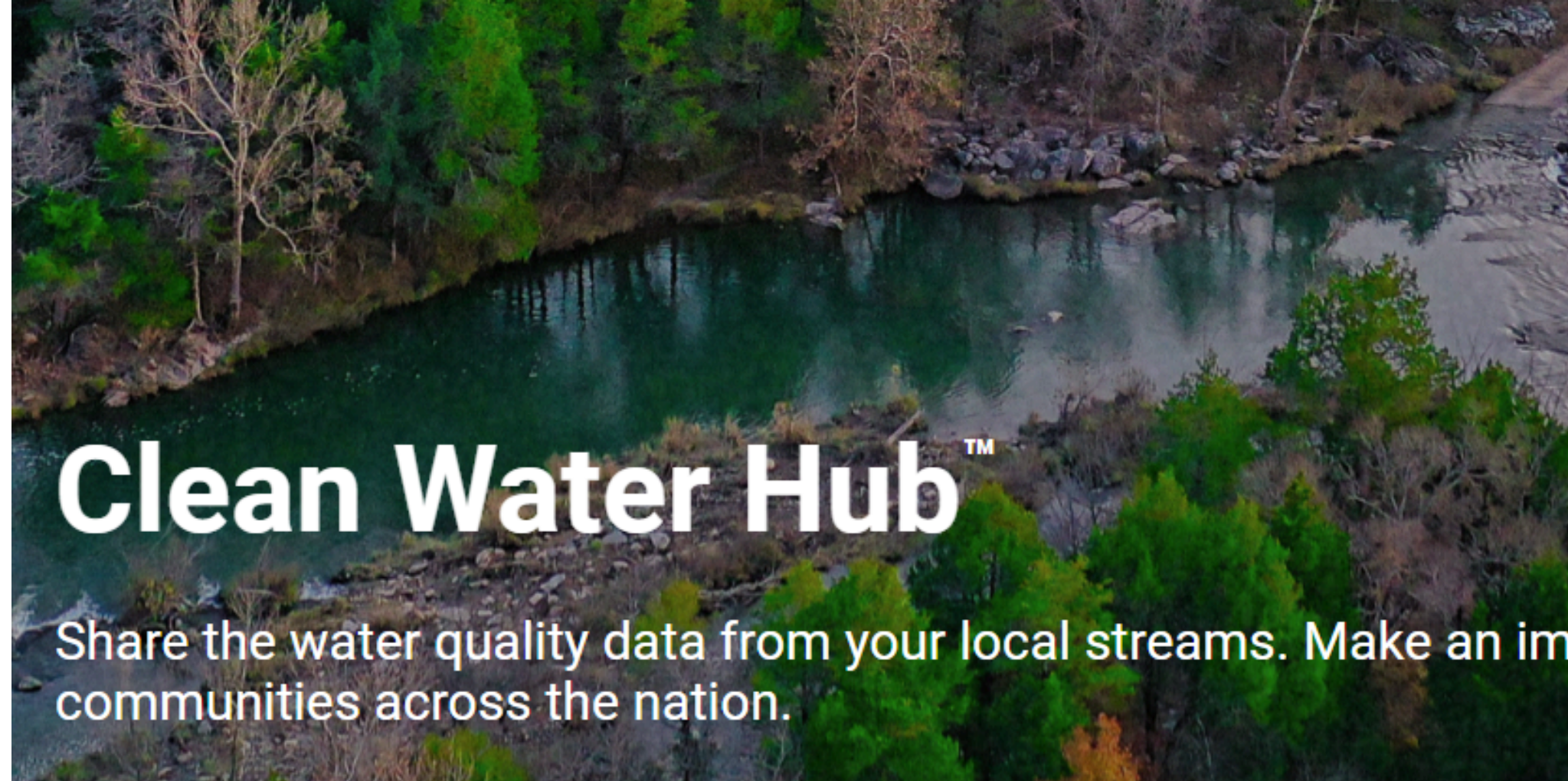
A map of the United States showing numerous colored dots (green, yellow, orange, red) representing water quality data points. The dots are concentrated in the Midwest and Northeast regions. State abbreviations like N.D., S.D., NEBR., MICH., ILL., IN., KY., W.VA., and N.C. are visible. Major cities like St. Louis and Toronto are also labeled. A dark blue box with white text is overlaid on the bottom left of the map.

# What is the Clean Water Hub?

# Clean Water Hub

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

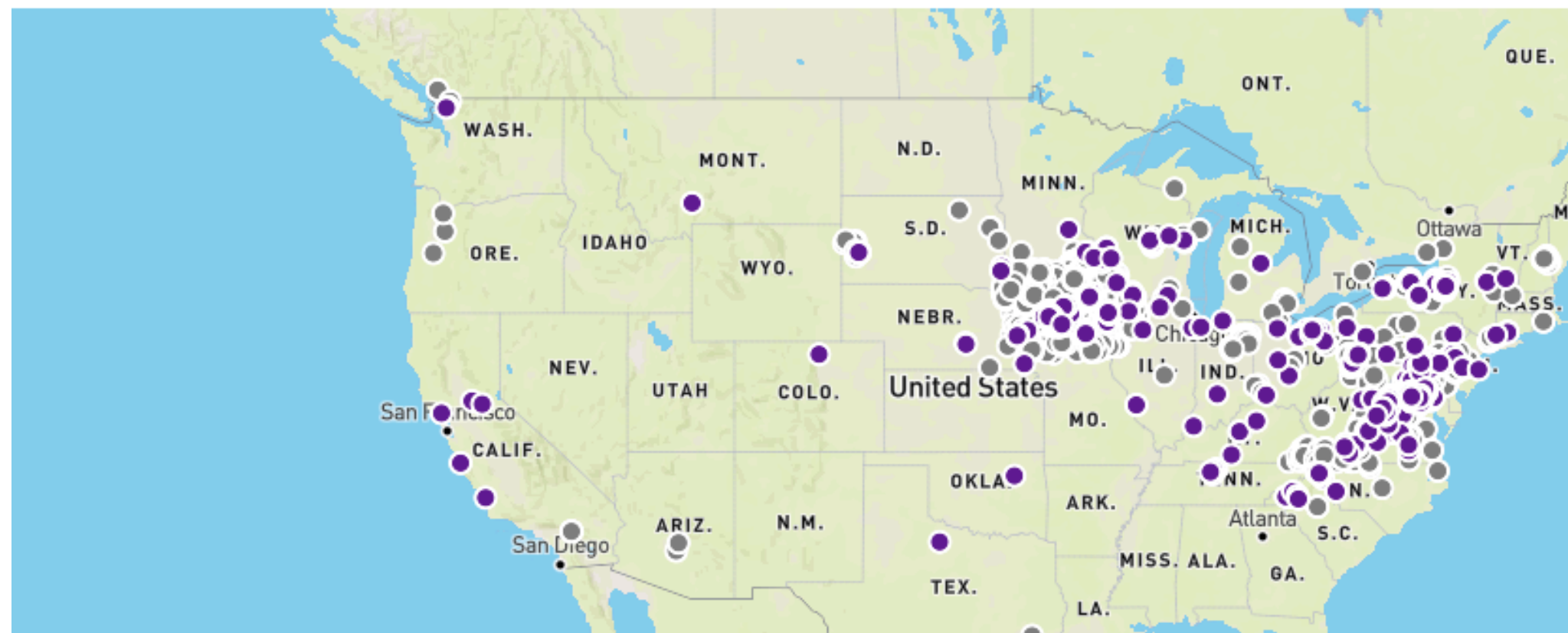
- National water quality database
- Publicly accessible
- Created with usability in mind
  - Data is meant to be easy to access, understand, and share
- Color-coded, interactive maps



SIGN UP

SIGN IN

EXPLORE THE MAP



# Clean Water Hub

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

- Compiles data from:
  - National SOS (Biological & Chemical)
  - VA/CMC SOS
  - Creek Critters
  - Salt Watch
  - Nitrate Watch



A map of North America showing the United States and parts of Canada. The map is overlaid with numerous circular data points of varying sizes and colors (purple, grey, white). The points are most densely clustered in the Great Lakes region and the Northeast. State abbreviations like WASH., MONT., N.D., S.D., MICH., and MAINE are visible. Major cities like Ottawa and Toronto are also labeled. The Gulf of Mexico and Mexico are visible at the bottom of the map.

# Clean Water Hub stats\*

**18483**

**stations**

**60223**

**samples**

**301**

**organizations**

**2954**

**members**

**\*as of January 9, 2025**

# Data Use

## Government Agencies

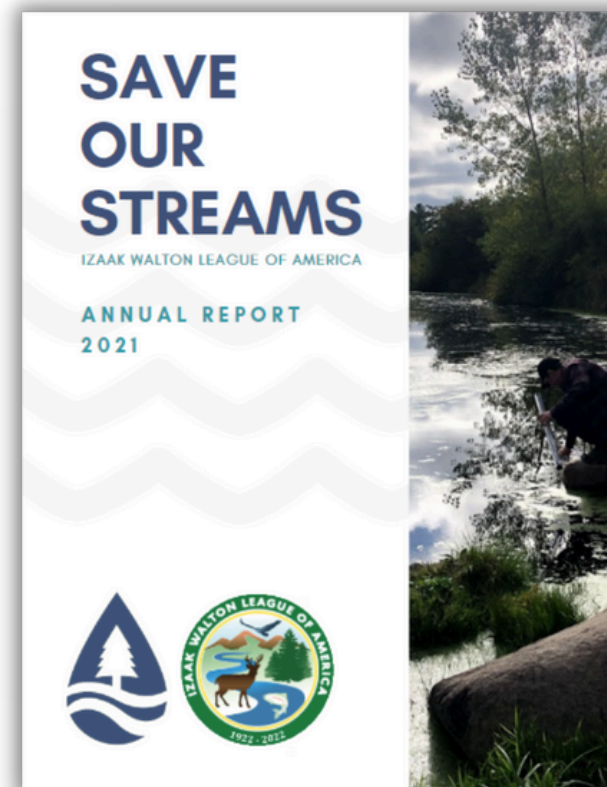
---

- Shared with Virginia DEQ and 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

---

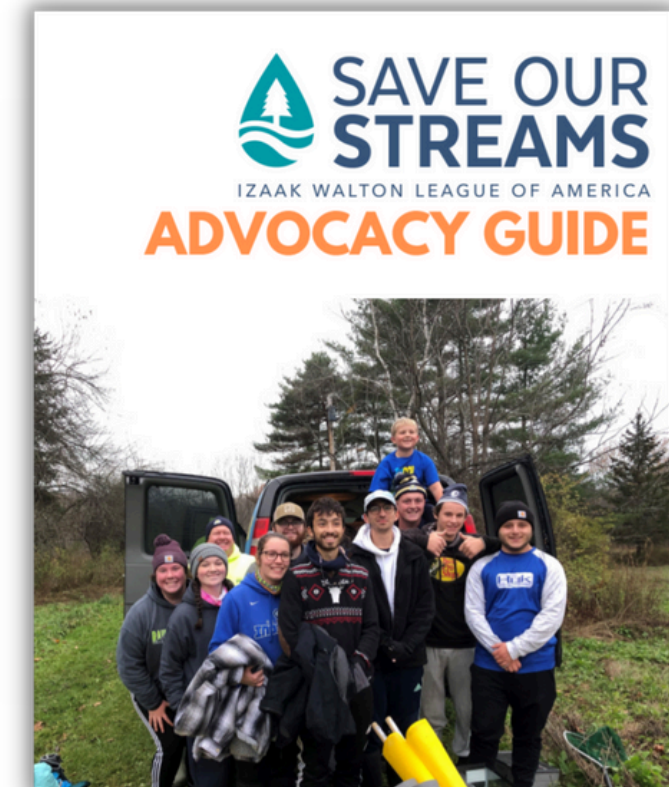
- Annual report
- Updates to SOS volunteers
- Outreach to media sources



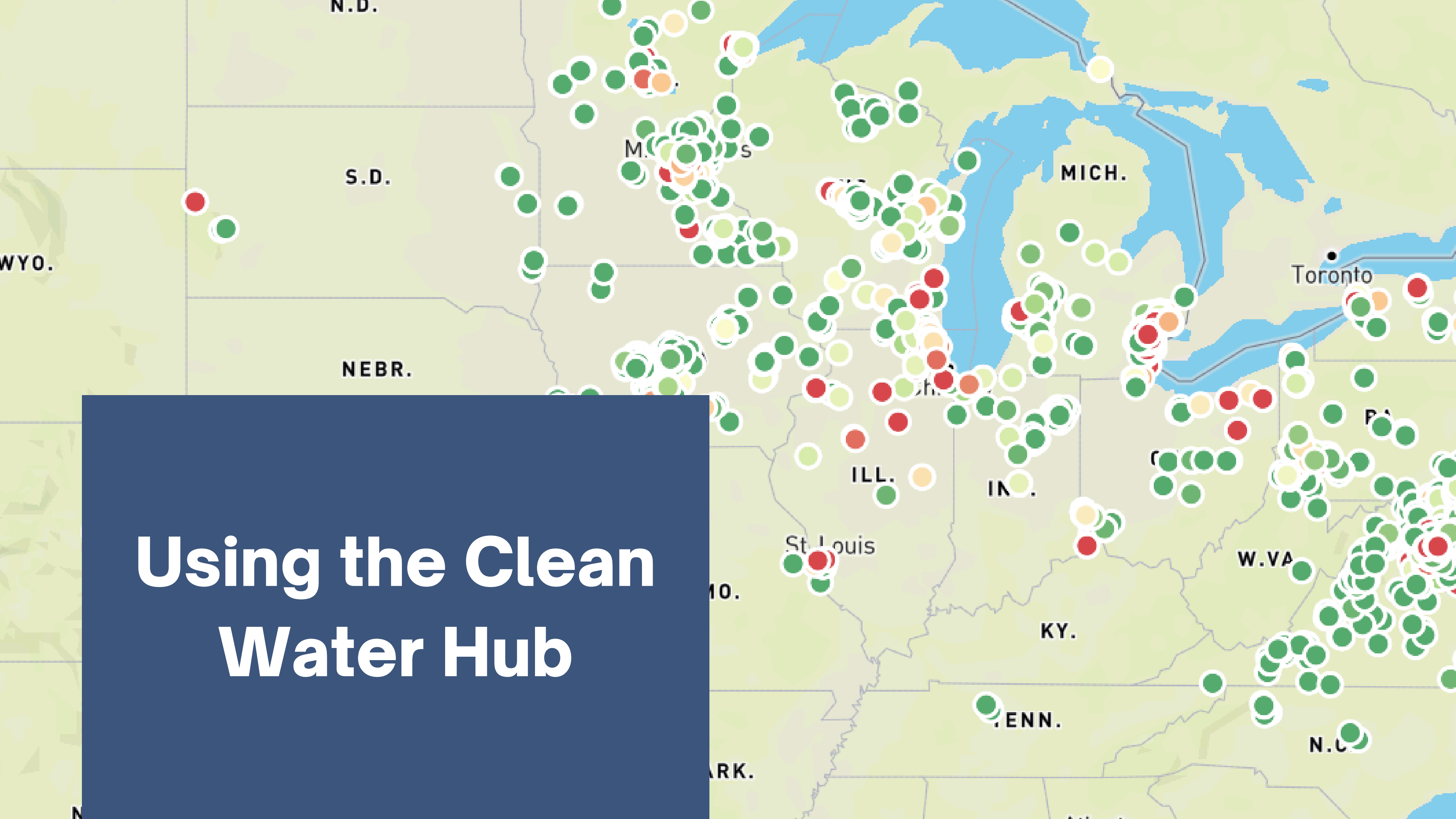
## Clean Water Advocates (you!)

---

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



# Using the Clean Water Hub





# Using the Clean Water Hub

Step 1

Create a  
Clean  
Water Hub  
account

Step 2

Join or  
create an  
organization

Step 3

Submit your  
site to the  
VASOS  
Coordinator

Step 4

Enter your  
data

## Step 1

# Create an Account

[www.cleanwaterhub.org/account/register](http://www.cleanwaterhub.org/account/register)



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

## 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.

Don't See your Organization? [Submit](#) it to Izaak Walton League!

Type a password **\*required**

Retype your password **\*required**

CREATE ACCOUNT

## Step 2

# Join an Organization

When creating your account



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

## 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.

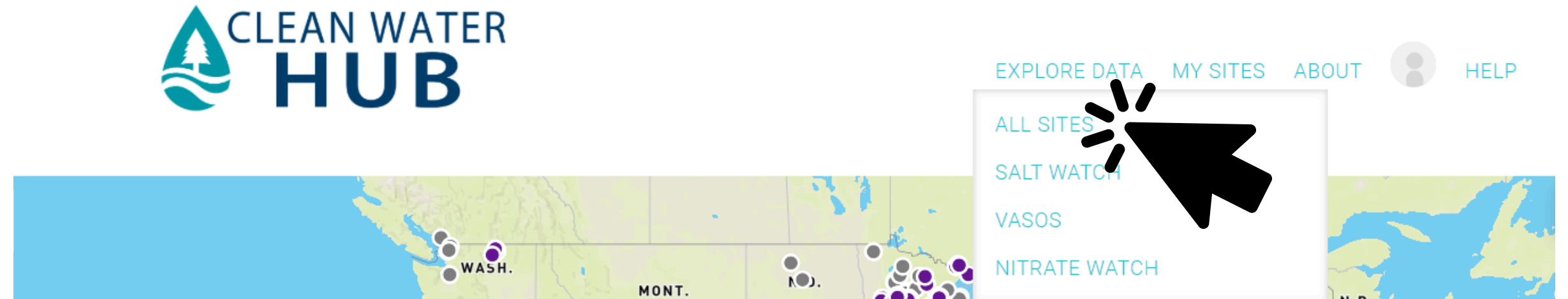
Don't See your Organization? [Submit](#) it to Izaak Walton League!

Type a password **\*required**

Retype your password **\*required**

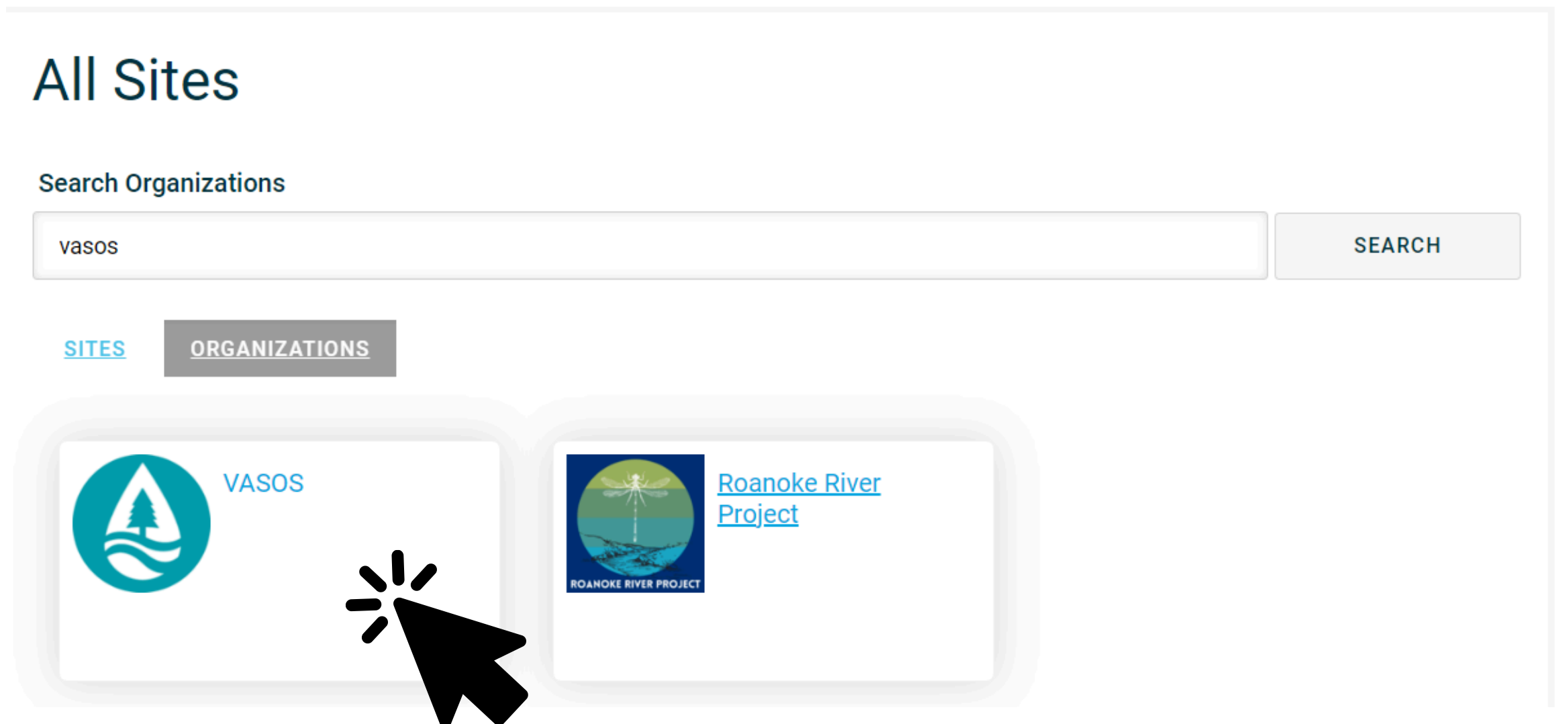
CREATE ACCOUNT

## Step 2



# Join an Organization

After you've created an account



## Step 3

# Organization Page

- See all of your organization's sites in one place
- Download your organization's data
- Not monitoring with a local organization? All monitors are part of the [VASOS organization page!](#)

## NORTHERN VIRGINIA SOIL AND WATER CONSERVATION DISTRICT



JOIN ORGANIZATION

### ABOUT

Our vision is engaged communities working together to protect and restore natural resources. Our mission is to promote sustainable urban and suburban activities and stewardship to conserve our soil, water, air, plants, and animal resources in Fairfax County - vital components of the Chesapeake Bay Watershed. We achieve this through effective leadership, technical assistance and outreach programs in partnership with government, industry, non-profit organizations, and the public.

[www.fairfaxcounty.gov/soil-water-conservation](http://www.fairfaxcounty.gov/soil-water-conservation)

DOWNLOAD SITES AND READINGS

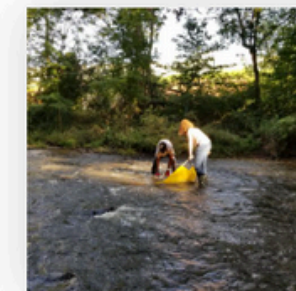
### Most Recently Modified



ADD A PHOTO TO YOUR SITE

#### [White oaks park](#)

Paul spring branch



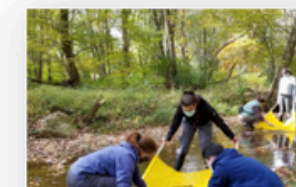
#### [Cub Run \(09-PL45-Cub-CR13\)](#)

Cub Run



#### [Little Difficult Run \(DR04\)](#)

Little Difficult Run



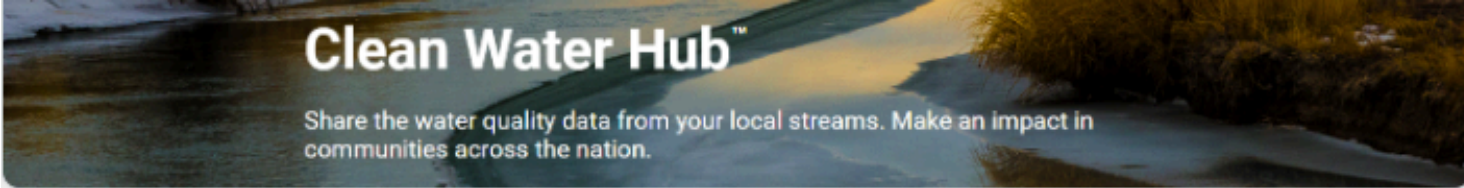
#### [Wolftrap Creek \(DR12\)](#)

Wolftrap Creek

## Step 2

# Create an Organization


Submit a new organization by filling out the form



**Clean Water Hub™**  
Share the water quality data from your local streams. Make an impact in communities across the nation.

### Clean Water Hub Profile Request

Would your organization or monitoring group like a profile on the [Clean Water Hub](#)? Once made, you will be able to link all of your monitoring sites to your profile, see all of your sites in one place, and download your data directly from the hub. To create a profile, fill out this form and SOS staff will create your profile and email you with further information.

saveourstreams.iwla@gmail.com [Switch account](#) 

The name and photo associated with your Google account will be recorded when you upload files and submit this form. Your email is not part of your response.

\* Indicates required question

Name \*

Your answer

Email \*

Your answer

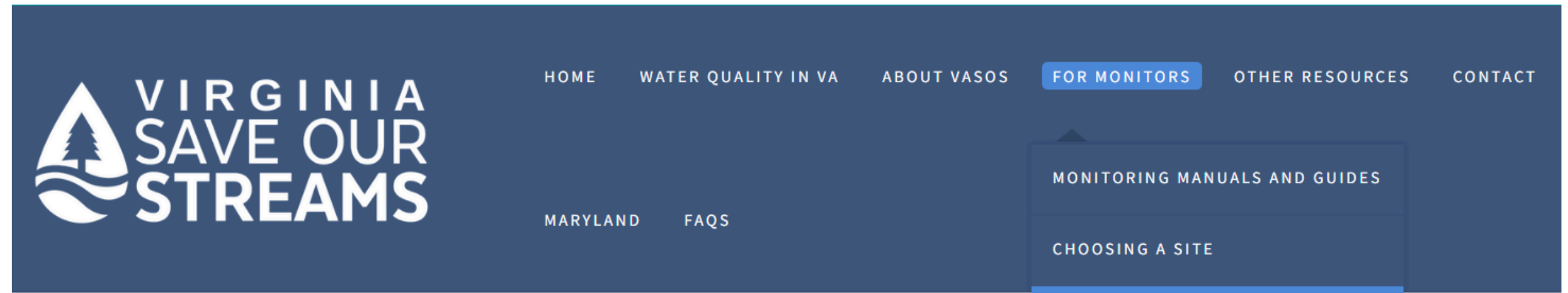
Organization or Monitoring Group Name \*

Your answer

## Step 3

# Submit your site to VASOS Coordinator

<https://vasos.org/report-a-new-site>



## Submit a New VASOS Site

Enter the below information to report your new monitoring site to VASOS staff. They will use this information to add your site to the monitoring permit with the VA Department of Wildlife Resources and to the Clean Water Hub so you can submit data. Email [vasos@iwla.org](mailto:vasos@iwla.org) with any questions.

Don't have a Clean Water Hub account yet? Create one here: <https://www.cleanwaterhub.org/account/register>

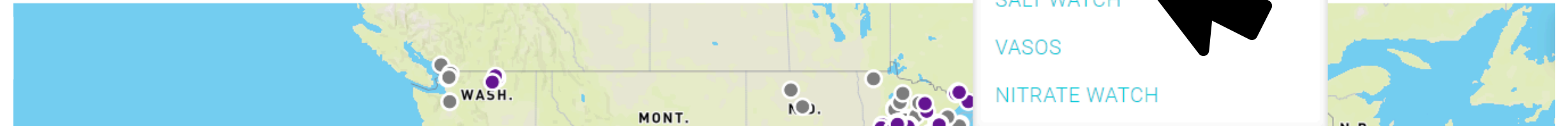
Today's Date \*

## Step 4



EXPLORE DATA MY SITES ABOUT HELP

ALL SITES  
SALT WATCH  
VASOS  
NITRATE WATCH



# Find Your Site

by searching the name provided by the VASOS Coordinator

## All Sites

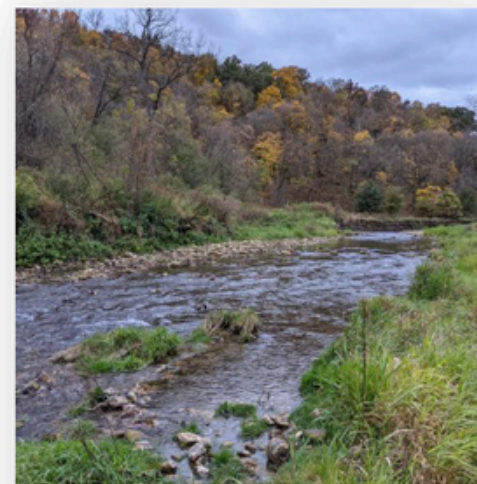
Search Sites

souannriv

SEARCH

SITES

ORGANIZATIONS



[SOUANNRIV33.5](#)


South Anna River  
Where the river crosses Byrd Hill Rd, south of the intersection with Sunnyside Rd. Sample location just upstream from pond.



VASOS




# Step 4

# Enter Your Data

**SOUANNRIV33.5** 

 **SOUTH ANNA RIVER**  
Byrd Mill, VA 


Where the river crosses Byrd Mill Rd, 1/4 mile south of the intersection with Sugarplum Rd. Sample location just upstream from pond.


**Create a Reading** 

- Create a New VASOS/CMC Muddy Bottom Reading
- Create a New VASOS/CMC Rocky Bottom Reading**
- Create a New SOS B...
- Create a New SOS Che...

**VASOS/CMC MUDDY BOTTOM** **VASOS/CMC ROCKY BOTTOM** **SOS CHEMICAL**

**LATEST READING - VASOS BOTTOM**

 Dec 30, 2024



Score
8.5
9.5

A map of the United States showing a distribution of data points. The points are represented by circles in various colors: green, red, orange, and yellow. Some green circles have white outlines. The points are densely clustered in the Northeast, Midwest, and West Coast, with fewer points in the South and Mountain West regions. State abbreviations like N.D., S.D., NEBR., MICH., ILL., IN., KY., W.VA., ENN., N.C., and WYO. are visible on the map. The city of Toronto is also labeled. A dark blue rectangular box is overlaid on the bottom left of the map, containing white text.

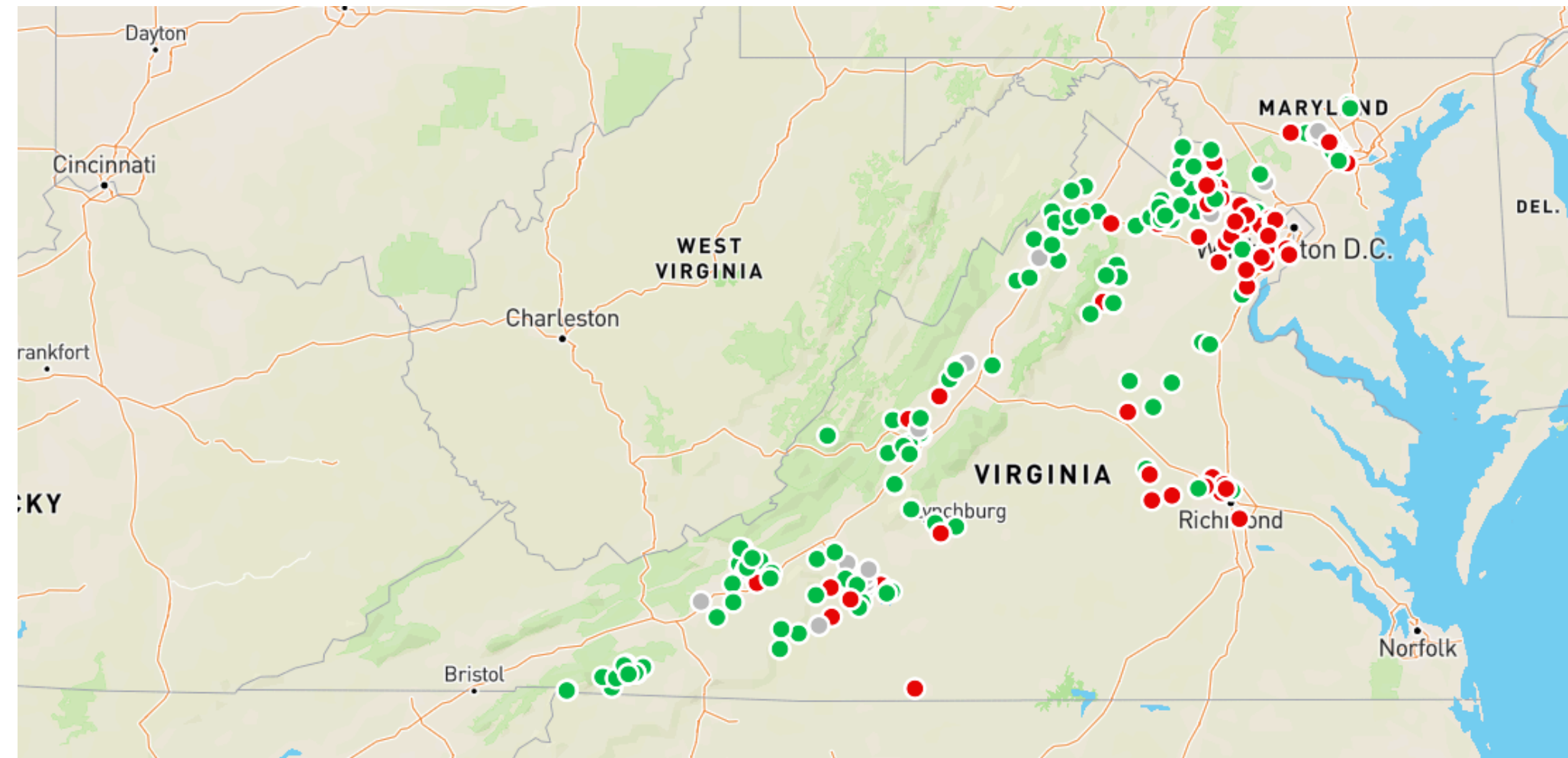
# Viewing & Downloading Data

## VASOS Map

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

# Interactive Maps

- VASOS Map
  - Filter by date
  - click on individual data points to see details



## VASOS

Virginia Save Our Streams (VASOS) is a program of the Izaak Walton League in which hundreds of certified volunteers identify benthic macroinvertebrates from hundreds of stream sites across the state. By identifying which macroinvertebrates are present in a local stream, volunteers can calculate a stream health score.

Having site-specific and timely water quality information allows us to identify pollution problems, determine how to res

# Data Access

# Data Export

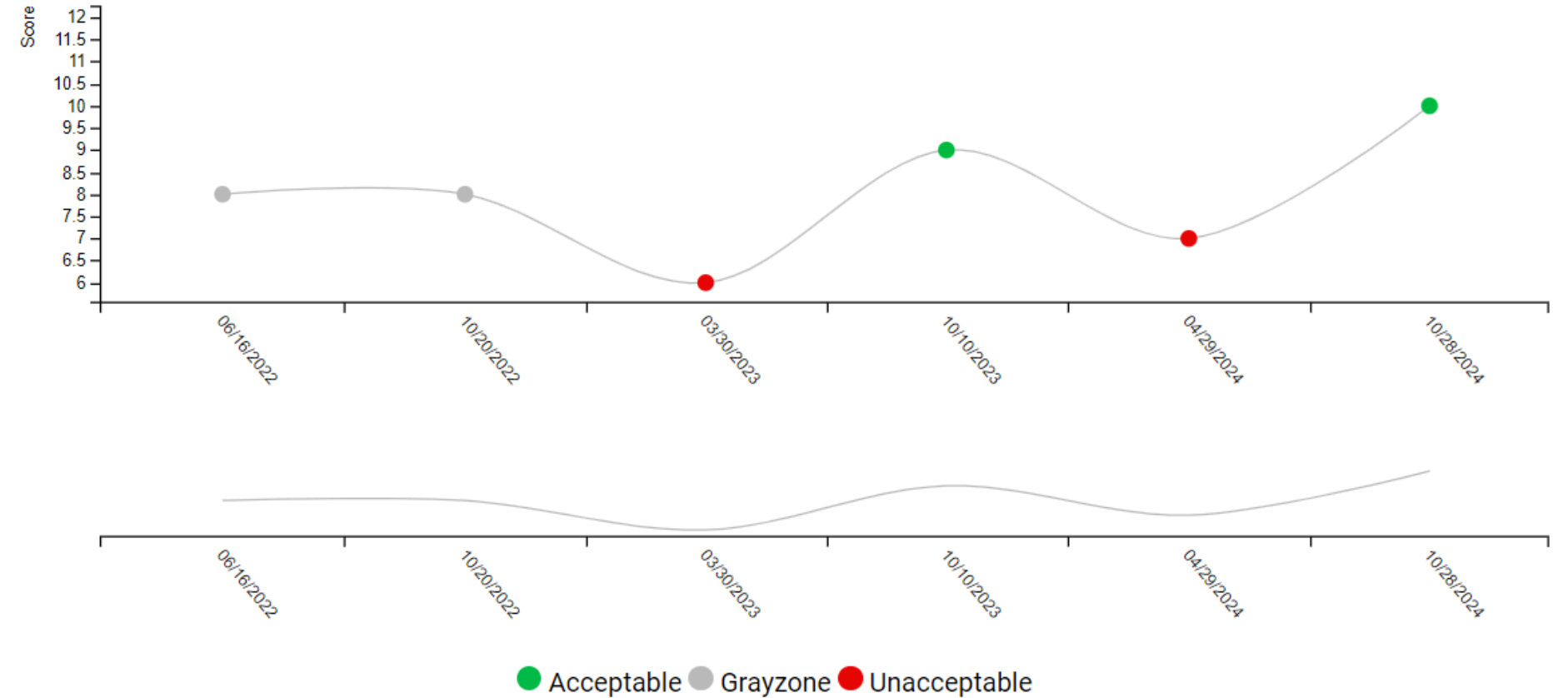
- Site Data
  - View & Screenshot graphs
  - View all site data
  - View individual readings
- Organization Data
  - Export dataset

## LATEST READING - VASOS/CMS ROCKY BOTTOM

CREATE A VASOS/CMC ROCKY BOTTOM READING

Oct 28, 2024

09:45AM - 12:45PM



	Survey Date	Multi Metric Score	Ecological Conditions
<a href="#">VIEW</a> <a href="#">EDIT</a>	Oct 28, 2024	10	Acceptable
<a href="#">VIEW</a> <a href="#">EDIT</a>	Apr 29, 2024	7	Unacceptable
<a href="#">VIEW</a> <a href="#">EDIT</a>	Oct 10, 2023	9	Acceptable
<a href="#">VIEW</a> <a href="#">EDIT</a>	Mar 30, 2023	6	Unacceptable

## Data Access

# Data Export

- Site Data
  - View & Screenshot graphs
  - View all site data
  - **View individual readings**
- Organization Data
  - Export dataset

### [SOUANNRIV33.5](#)

SOUTH ANNA RIVER  
Byrd Mill, VA




## PROTOCOL VASOS/CMC ROCKY BOTTOM MONITORING DATA



 Dec 18, 2024  01:00PM - 03:00PM

**Created By**  
[Margaretta Dombroski](#)  
**Last Monitored By**  
[Maggie Dombroski](#)

### WEATHER CONDITIONS

 Sunny Today  
 Sunny Yesterday  
 Overcast Day Before Yesterday

### WATER CONDITIONS

Flow Rate  
Normal  
  
Water Temperature  
18° C

### SAMPLING

Sample Type  
Rocky Bottom

### Description

Where the river crosses Byrd Mill Rd, 1/4 mile south of the intersection with Sugarplum Rd. Sample location just upstream from pond.

### Information

**Number of People in Group:** 2  
**Certified Monitor(s):** Maggie Dombroski  
**Net Collection Time:**

- Net time 1: 90
- Net time 2: 60

### Macroinvertebrate Count

worms: 5  
flatworms: 20  
leeches: 30  
crayfish: 30  
sowbugs: 5  
stoneflies: 15  
mayflies: 10  
dragonflies and damselflies: 5

## Data Access

# Data Export

- Site Data
  - View & Screenshot graphs
  - View all site data
  - View individual readings
- Organization Data
  - **Export dataset**

DOWNLOAD SITES AND READINGS



VASOS 



JOIN ORGANIZATION

### ABOUT

Virginia Save Our Streams is a program of the Izaak Walton League. Since the nineties, hundreds of volunteers have been collecting and submitting stream health data using a state-specific protocol, developed by researchers at Virginia Tech. This data is submitted annually to the Virginia Department of Environmental Quality, which can use the data to track restoration projects, target areas for follow up, and educate the public. VA SOS partners include local Soil and Water Conservation Districts, watershed organizations, local nonprofits, and more.

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

DOWNLOAD SITES AND READINGS

# Data Access

# Data Export

- Site Data
  - View & Screenshot graphs
  - View all site data
  - View individual readings
- Organization Data
  - **Export dataset**

	A	B	C	D	E	F	G	H	I
1	Site id	Site URL	Site Name	Latitude Measure	Longitude Measure	Description	Name of Stream	City	State
2	12109	https://wv	Limestone Branch Upstream at Temple Hall	39.177863	-77.530459	Upstream	Limestone Branch	Leesburg	VA
3	26880	https://wv	Horsepen Run 1	39.051286	-77.396723	park at Riv	Horsepen Run	Sterling	VA
4	26929	https://wv	Town Branch 3	39.1126484	-77.5673151	Upstream	Town Branch	Leesburg	VA
5	26964	https://wv	Broad Run 4	39.0412636	-77.4400547	Park at Wc	Broad Run	Ashburn	VA
6	12113	https://wv	S Fork Catoctin 1 - Kane Preserve	39.141842	-77.715807	Near fence	South Fork Catoctin Creek	Purcellville	VA
7	12007	https://wv	BR#2 - LWC #19	38.984083	-77.498183	Loudoun \	Broad Run		
8	35081	https://wv	Butchers Branch Tributary 1	39.083795	-77.78286	Upstream of	Snickersville Turnpike	Airmont	VA
9	35134	https://wv	DRYMILBRA0.2	39.102293	-77.584989	0.2 miles U	Dry Mill Branch	Leesburg	VA
10	30543	https://wv	Un09-RU57-Bla-BLACK1-LWC42	39.01141326	-77.578687		Black Branch	Leesburg	VA
11	26871	https://wv	Cattail Branch 4	39.111234	-77.5140535	Park at 43	Cattail Branch	Leesburg	VA
12	26868	https://wv	Cattail Branch 2	39.121447	-77.541766	Walk on th	Cattail Branch	Leesburg	VA
13	26869	https://wv	Cattail Branch 3	39.121002	-77.533698	Park at 82	Cattail Branch	Leesburg	VA
14	12018	https://wv	TUSCRE2.2	39.09555	-77.5424	Former na	Tuscarora Creek		VA
15	12118	https://wv	TOWBRA0.1	39.105602	-77.56236	by back pa	Town Branch	Leesburg	VA
16	26874	https://wv	Cattail Branch 8	39.09904	-77.498511	Near River	Cattail Branch	Leesburg	VA
17	12019	https://wv	PINY#1 - LWC#15A	39.28833	-77.73667	BREC prop	Piney Run		
18	26878	https://wv	Beaverdam Run 2	39.03737	-77.49325	On a trail t	Beaverdam Run	Ashburn	VA
19	12104	https://wv	TUSCRE5.0	39.101565	-77.580112	Site next t	Tuscarora	Leesburg	VA
20	26873	https://wv	Cattail Branch 7	39.101355	-77.501154	Near Hillh	Cattail Branch	Leesburg	VA
21	38729	https://wv	Big Branch Site @LTH #1	39.048374	-77.606495	Before the	Big Branch	Leesburg	VA
22	26927	https://wv	Tuscarora Creek 4	39.1048226	-77.5533465	103 Sycoli	Tuscarora Creek	Leesburg	VA
23	32300	https://wv	Piney Run	39.2881533	-77.7361337	100 yards	Piney Run	Neersville	VA
24	26870	https://wv	Cattail Branch 5	39.1074727	-77.5085057	Located w	Cattail Branch	Leesburg	VA
25	26926	https://wv	Tuscarora Creek 3	39.1048832	-77.5608145	Park on Ha	Tuscarora Creek	Leesburg	VA
26	12024	https://wv	UTHORRUN0.89	39.0507151	-77.397383	Formerly k	Unnamed trib of Horse Pen Run	Sterling	VA
27	12010	https://wv	09-PL02-Sou-SFCAT#5 - LWC#17	39.1902	-77.6149		South Fork Catoctin Creek		VA
28	12021	https://wv	CLRK01 - LWC#23	39.220783	-77.535081	20-40 feet	Clarks Run		
29	26876	https://wv	Broad Run 3	39.009721	-77.452179	Downstrea	Broad Run	Ashburn	VA
30	12110	https://wv	N Fork Catoctin RA Upstream	39.1792821	-77.681607	Jackson pr	North Fork Catoctin Creek	Purcellville	VA
31	35080	https://wv	Butchers Branch Tributary 2	39.086376	-77.789613	On Lumley property		Airmont	VA
32	11479	https://wv	BS1-LWC28	39.1306	-77.5591	"Big Spring	Big Springs Creek		
33	26930	https://wv	Town Branch 4	39.110084	-77.563619	Harrison S	Town Branch	Leesburg	VA
34	12015	https://wv	WaterCress#1 - LWC #20	39.02835	-77.59055	site 1 - On	Goose Creek Tributary		
35	11437	https://wv	BR3 - LWC26	39.05186	-77.432477	Just north	Broad Run		

# Data Access

# Data Export

- Site Data
  - View & Screenshot graphs
  - View all site data
  - View individual readings
- Organization Data
  - **Export dataset**

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	site_id	survey_date	weather	is_approved	average_stream_width	average_stream_depth	flow_rate	collection	collection	collection	collection	sampling	worms	flatworms
2	11305	2010-07-11 0:00:00	Hot and h	TRUE	22	18	Normal	80	0	0	0		1	32
3	11305	2011-05-29 0:00:00	Scattered	TRUE	7		Normal	20	0	0	0		5	45
4	11305	2011-09-17 0:00:00	Cloudy, so	TRUE	12	9	High	20	0	0	0			125
5	11346	2012-06-03 0:00:00		TRUE			Normal	20				Nature Ge	1	31
6	11368	2013-05-11 0:00:00	Thunderst	TRUE	30	16	High	20	0	0	0		5	1
7	11368	2013-09-08 0:00:00	Dry	TRUE	6	4		20	20	0	0		6	0
8	11398	2014-11-11 0:00:00	Clear	TRUE	3.5	14	Normal	20	0	0	0	Width = 4;	0	97
9	11428	2016-05-24 0:00:00	Was some	TRUE	26	9	High	20	20	20	0	Other Mor	7	5
10	11428	2016-07-14 0:00:00	Sunny, hot	TRUE	18	6	Low	20	20	20	0	Temp mus	1	1
11	11428	2016-10-24 0:00:00	66 Deg F	TRUE	18	10	Normal	20	20	20	0	Other Mor	0	36
12	11437	2016-10-29 0:00:00	Clear, no r	TRUE	15	15	Normal	90	60	0	0	Other Mor	7	117
13	11428	2017-04-28 0:00:00	Warm, sur	TRUE	18		Normal	60	0	0	0	Other mor	0	10
14	11428	2017-09-28 0:00:00	Warm, sur	TRUE	25	10	Normal	60	60	0	0	Other mor	6	36
15	11459	2017-10-01 0:00:00	Clear, no r	TRUE	50	12	Normal	60	20	0	0	Other mor	10	38
16	11459	2018-05-18 0:00:00		TRUE	40	8	High	60	60	60			42	
17	11398	2018-08-07 0:00:00		TRUE	5	5	Normal	60					7	7
18	11459	2019-05-26 0:00:00		TRUE	25	25	High	60					2	1
19	11479	2019-05-31 0:00:00	mostly sur	TRUE	2.5	4	Normal	25	80				11	4
20	11491	2019-09-22 0:00:00	Overcast a	TRUE	4	0.3	Low	90	90				1	77
21	11495	2019-10-25 0:00:00	partly sun	TRUE	5	3	Low	60	20				2	24
22	11495	2020-06-08 0:00:00	Today-Sun	TRUE	11	5	Normal	60					2	35
23	11491	2020-05-03 0:00:00	overcast, i	TRUE	4	10	Normal	60	30	30			9	4
24	11491	2020-05-03 0:00:00	overcast, i	TRUE	4	10	Normal	60	30	30			9	4
25	11495	2020-10-10 0:00:00	today - ov	TRUE	8	8	Low	60				increased traffic over		4
26	12007	2008-04-29 0:00:00	Heavy rain	TRUE	25	18		30	0	0	0		4	1
27	12008	2008-05-04 0:00:00	Sprinkle, S	TRUE	25	9	High	30					8	2
28	12009	2008-05-08 0:00:00		TRUE				30	30	30	30		1	0
29	12010	2008-05-24 0:00:00	Dry	TRUE	25	18	High	30	30	30	30		4	1
30	12011	2008-07-17 0:00:00	No rain	TRUE	11	4	Low	30	30	30	30		4	0
31	12012	2008-08-03 0:00:00	Dry	TRUE	12	12	Normal	25	25	15			6	0
32	12014	2008-09-18 0:00:00		TRUE				30	30	30	30		0	0



## What is Nitrate?

Healthy streams are vital to healthy communities. It's where our kids play and dogs splash. And some of these streams provide the water we drink. But is the water in these streams clean and safe? The truth is, for most local streams, no one knows. That's a problem – one the Izaak Walton League has been working on since 1969.

### Nitrate

Nitrates are chemical compounds that can be found in nature. Nitrates are made up of nitrogen and other elements, which plants and animals need to grow and thrive. Now, the most common source of nitrates are artificial fertilizers used by farmers and homeowners for crops, lawns, and landscaping.

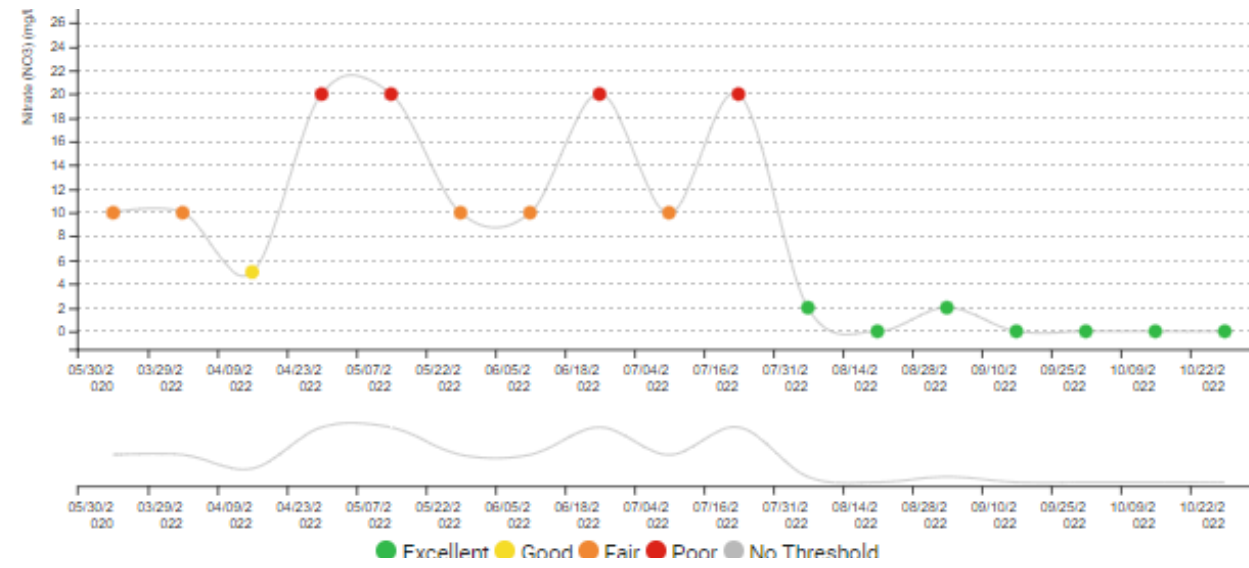
Although a small amount of nitrate is important for a healthy stream, too much nitrate can cause serious problems. Rain can wash fertilizer from farms and lawns into nearby streams, causing nitrate levels to spike. These spikes then cause bacteria and algae to grow into dramatic "blooms."

### Blooms

Algae and bacteria live naturally in freshwater streams. However, when high nitrate levels let algae and bacteria "bloom," the stream suffers. Blooms block sunlight, starving aquatic plants below. As these plants die and decompose, the amount of oxygen in the water plummets. If untreated, blooms can choke a stream and kill off most of the underwater life.



The Little Creek earned a Good nitrate level. This means that the amount of runoff has not harmed the stream. However, the amount of nitrate in the stream has gone up over the past three years. This means that the Creek water quality will probably continue to degrade. The Friends of the Little Creek are working with farmers and landowners along the creek to try and reduce the amount of runoff washing into the stream.



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

Jamilee Hoffman  
Mar 17, 2022



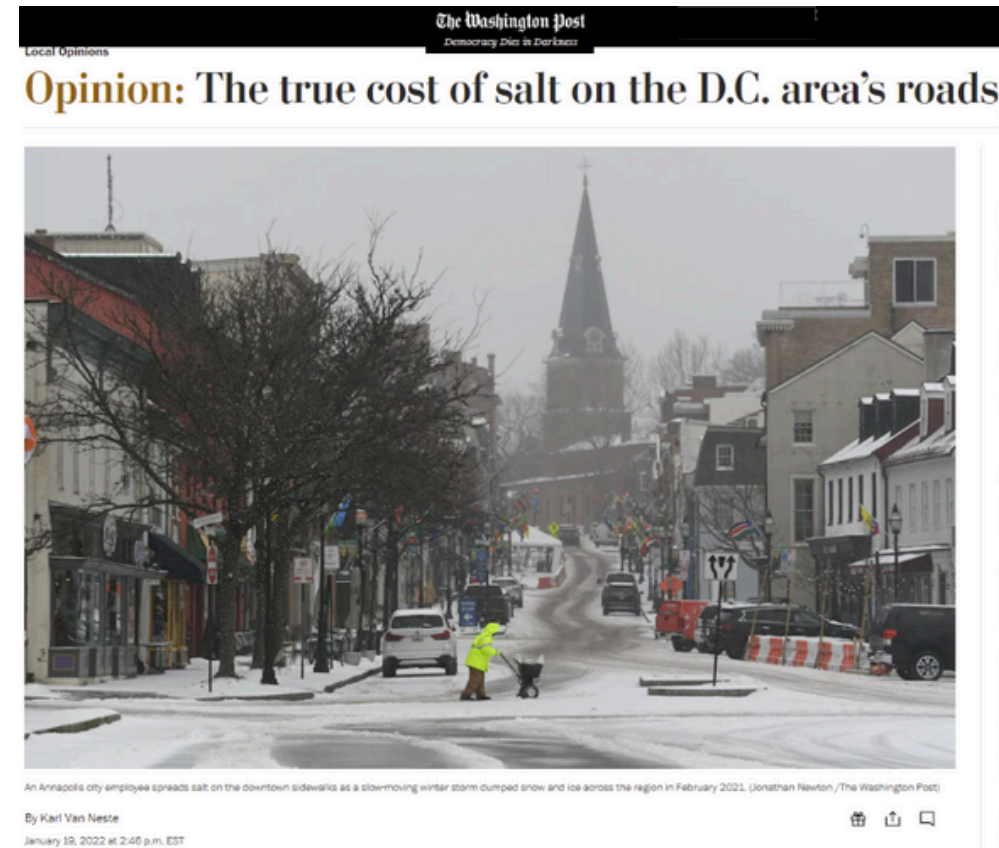
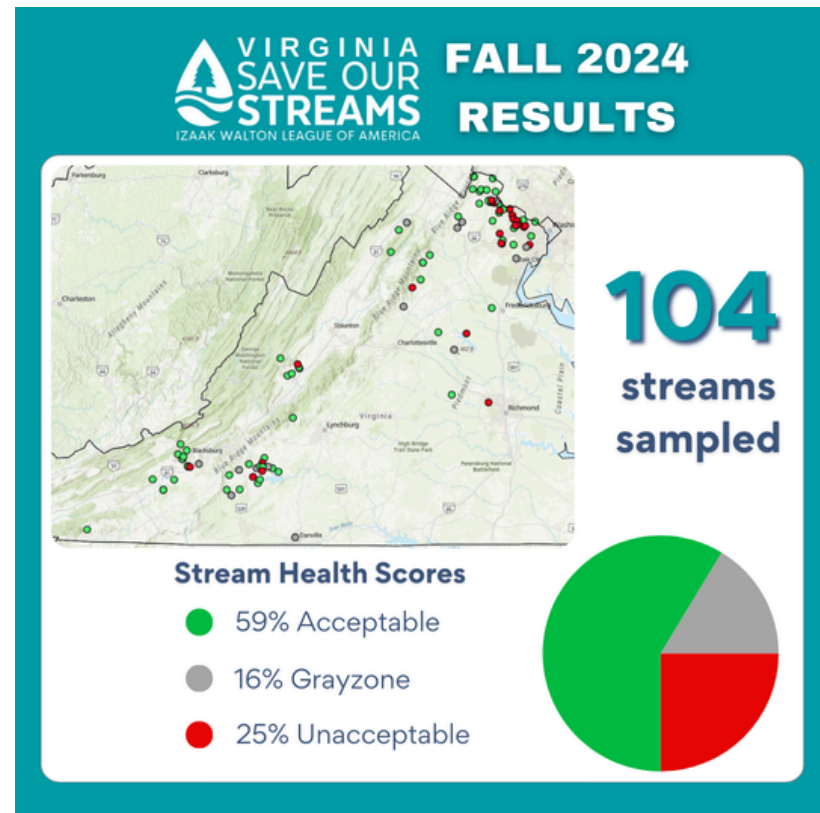
### How can you help?

Anyone can be a stream health monitor! The data you collect will be used to restore and protect the creeks and streams in your own backyard.

Find your local chapter or contact the Izaak Walton League to organize a training event in your area!

# Data

# Action



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

**Time to Call a Halt to Harmful Nitrate Pollution**

Nitrate is a well-known and highly prevalent water pollutant with harmful impacts to human and environmental health. Nitrates are abundant in synthetic fertilizers, animal manure, and

# **Clean Water Webinar**

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## **ADVOCACY 101: SPEAK UP FOR CLEAN WATER**

Jessica Gordon,  
Izaak Walton League of America

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**February 19, 2025**

**12 pm Eastern**



# Tutorial

Let's walk through...

- Signing up (new user)
- Joining an organization
- Finding your site
- Adding VASOS data
- Exporting data
- Managing an organization

**Help is only a  
click away...**

**[help.cleanwaterhub.org](https://help.cleanwaterhub.org)**

**[Video tutorial on VASOS website](#)**



[MAPS](#) [ABOUT](#) [LOG IN](#) [SIGN UP](#) [HELP](#)



All Collections > Virginia/CMC Save Our Streams User Guide



## Virginia/CMC Save Our Streams User Guide

Using the Hub as a VASOS monitor



By Samantha • 4 articles

- What is Virginia Save Our Streams? >
- Establishing a New VA/CMC SOS Site >
- How to Enter VA/CMC SOS Data >
- Where do I find VA/CMC SOS datasheets? >



# Questions?

Email [mdombroski@iwla.org](mailto:mdombroski@iwla.org) or [vasos@iwla.org](mailto:vasos@iwla.org)

Check out Hub help pages

Visit [vasos.org/data-entry](https://vasos.org/data-entry) for written and video tutorials

