SAVE OUR STREAMS™

IZAAK WALTON LEAGUE OF AMERICA

2022

Annual Report

CONTENTS

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This Page: Darrin Hill, David Elliot

WELCOME

Hello monitors, Ikes, and friends,

Wow, what a year it has been! In 2022 alone we added 3 great staff members to the Clean Water Program. Heather Wilson joined us as the Midwest Save Our Streams Coordinator, Matthew Kierce started in his role as the Chesapeake Monitoring Outreach Coordinator, and Abby Hileman took on the League's first ever Salt Watch Coordinator role!

Yes, you read that right. The Salt Watch program has grown so much that we needed an entire position to coordinate the program. 2022 was truly a banner year for Salt Watch. It was our biggest year yet, we expanded to new regions, and we surpassed 10,000 test results submitted, a feat that we are incredibly proud of.

Our other programs grew, changed, and rebounded as well. Virginia Save Our Streams saw more engaged monitors than ever, thanks to the tireless work of our Mid-Atlantic Save Our Streams Coordinator, Kira Carney. That, plus the launch of a new Iowa Equipment Loan program and a new restoration monitoring protocol with the Chesapeake Monitoring Cooperative, are just some of the victories we are celebrating this year. Read on to learn more of the nitty gritty of 2022 stats, successes, and lessons learned as we move into 2023.

SAMANTHA BRIGGS

Clean Water Program Director

OUR TEAM

Staff:

Clean Water Program Director - Samantha Briggs

Save Our Streams Coordinator, Mid-Atlantic - Kira Carney

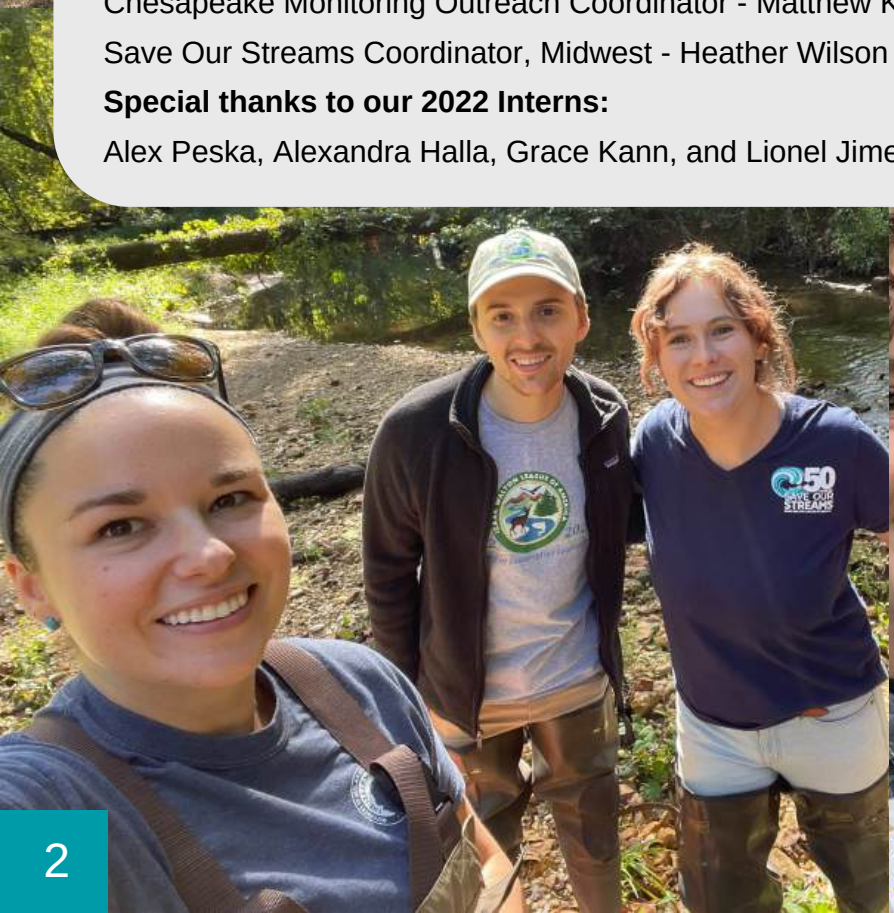
Salt Watch Coordinator - Abby Hileman

Chesapeake Monitoring Outreach Coordinator - Matthew Kierce

Save Our Streams Coordinator, Midwest - Heather Wilson

Special thanks to our 2022 Interns:

Alex Peska, Alexandra Halla, Grace Kann, and Lionel Jimenez!



CLEAN WATER PROGRAM

The Izaak Walton League, founded in 1922, has a mission to conserve, restore, and promote the sustainable use and enjoyment of our natural resources, including soil, air, woods, waters, and wildlife. The League is a member-based organization composed of 200 chapters across the United States, as well as a staffed national headquarters in Gaithersburg, Maryland.

2022 brought even more evolution and expansion for the Clean Water Program, but the core principles remained the same for Save Our Streams - to improve water quality and engage volunteers in water quality issues. Read on to learn more about the activities and successes our Clean Water Program has undertaken and experienced in 2022 through the following programs and projects:

- Salt Watch
- Creek Critters Mobile Application
- Save Our Streams Chemical and Biological Monitoring
- Virginia Save Our Streams
- Iowa Save Our Streams
- Chesapeake Monitoring Cooperative
- New: Nitrate Watch!

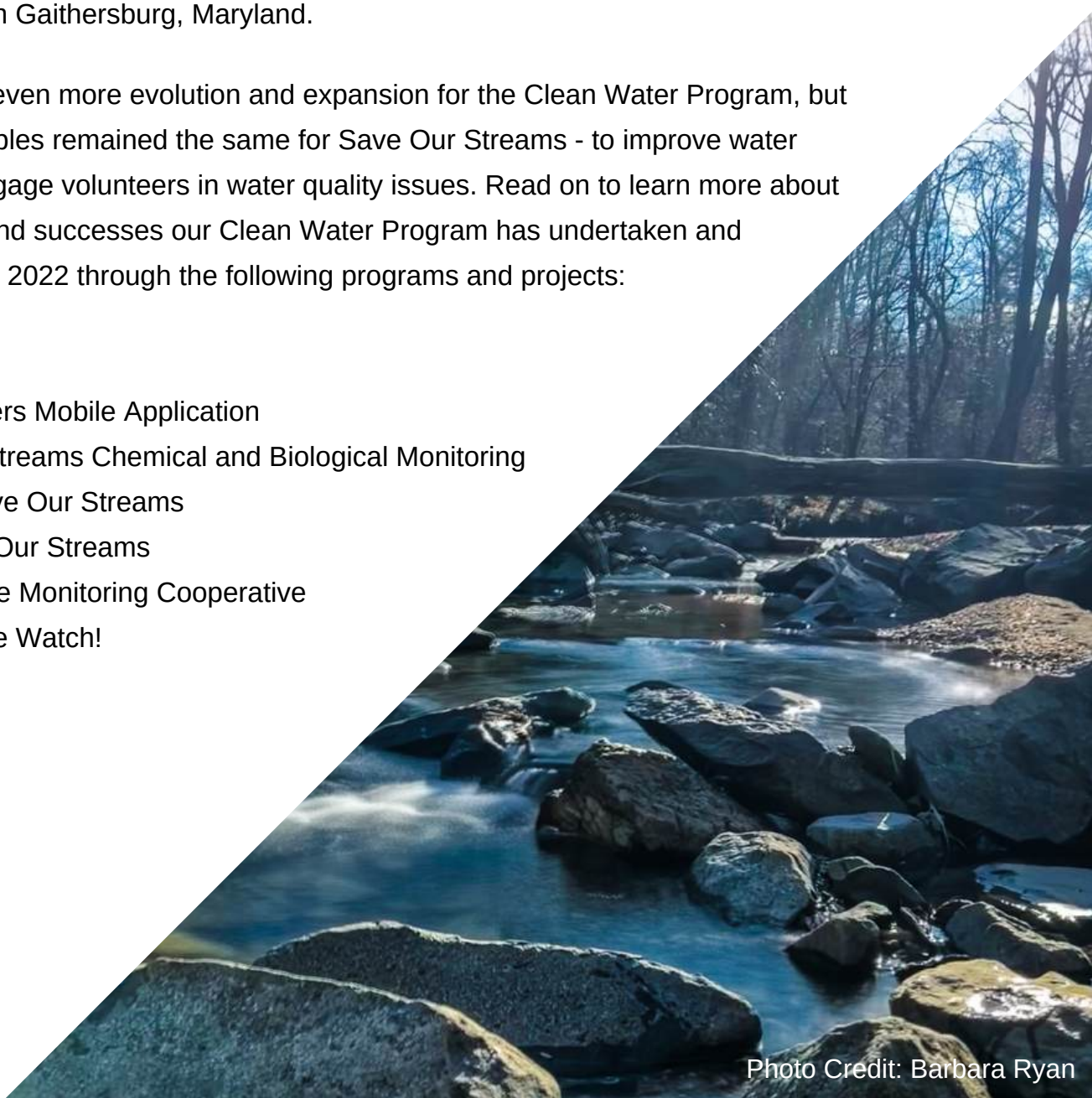


Photo Credit: Barbara Ryan

SALT WATCH

Every year, the Salt Watch (**www.saltwatch.org**) program gets bigger and bigger! In 2022, we surpassed 11,000 data submissions since the beginning of the Salt Watch program! Salt Watch Season 5 (2021-2022) was our biggest season yet with over 5,000 chloride results and Salt Watch Season 6 (2022-2023) is on track to be even bigger!

This year, we hired a full-time dedicated staff member for the Salt Watch Program. Abby Hileman joins the team as the Salt Watch Coordinator.

In the fall of 2022, the “Winter Salt Watch” program rebranded to “Salt Watch.” This change came after a recognized need for the Salt Watch program to be expanded from winter monitoring to a year-round chloride monitoring program. Based on results from year-round monitors, chloride spikes in many waterways were present during the summer and fall droughts. Year-round elevated chloride levels can also be indicative of a groundwater contamination issue.

SALT WATCH PARTNERS

Our list of partners has grown to 32 Official Salt Watch Partners and over 300 participating organizations. Schools and teachers have added Salt Watch to their curriculum, watershed groups have added it to their monitoring programs, and others are using Salt Watch to start monitoring for the very first time! Check out the map below to see more of our key partners across the country, from government agencies to school groups. This map is not comprehensive, and we are adding new partners every day! View the interactive Salt Watch Partner Map here: **https://arcg.is/01r8rD**

Since joining the Salt Watch program, **Loudoun Wildlife Conservancy** volunteers have reported almost 200 data points; 104 of those results occurred in the 2021-2022 season. The data points recorded in the 2021-2022 season were the work of only 9 volunteers sampling 14 sites. This season (2022-2023) of Salt Watch, Loudoun is testing over 50 sites in and around Leesburg, VA with the help of 40 volunteers.

The Farmington River Watershed Association (FRWA) received grant funding to conduct chloride monitoring in the watershed for the summer of 2022. The data collected allows for FRWA to see long-term trends in the Upper and Lower Farmington River Watershed. FRWA has historical data dating back to 2004 and has seen increases in chloride over time from 2004-2019. FRWA looks forward to continuing Salt Watch year-round to monitor locations long-term and to develop best management practices to reduce salt pollution.

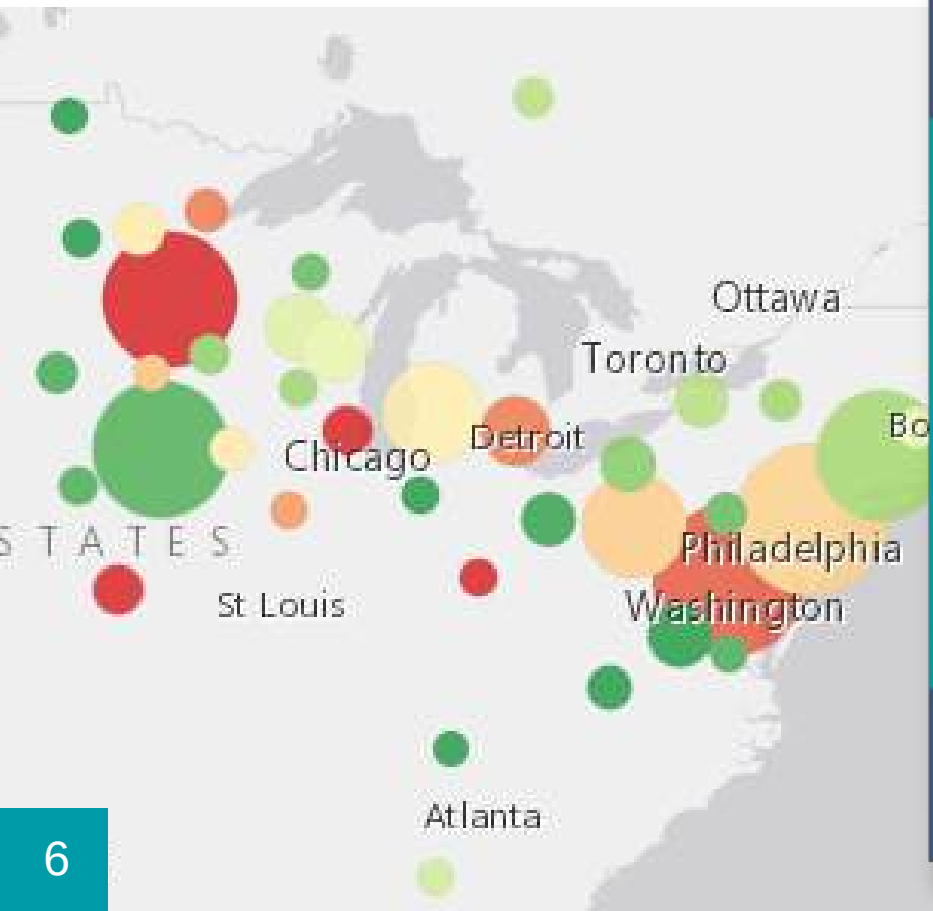
To get your organization involved in Salt Watch, please email us at **saltwatch@iwla.org**.

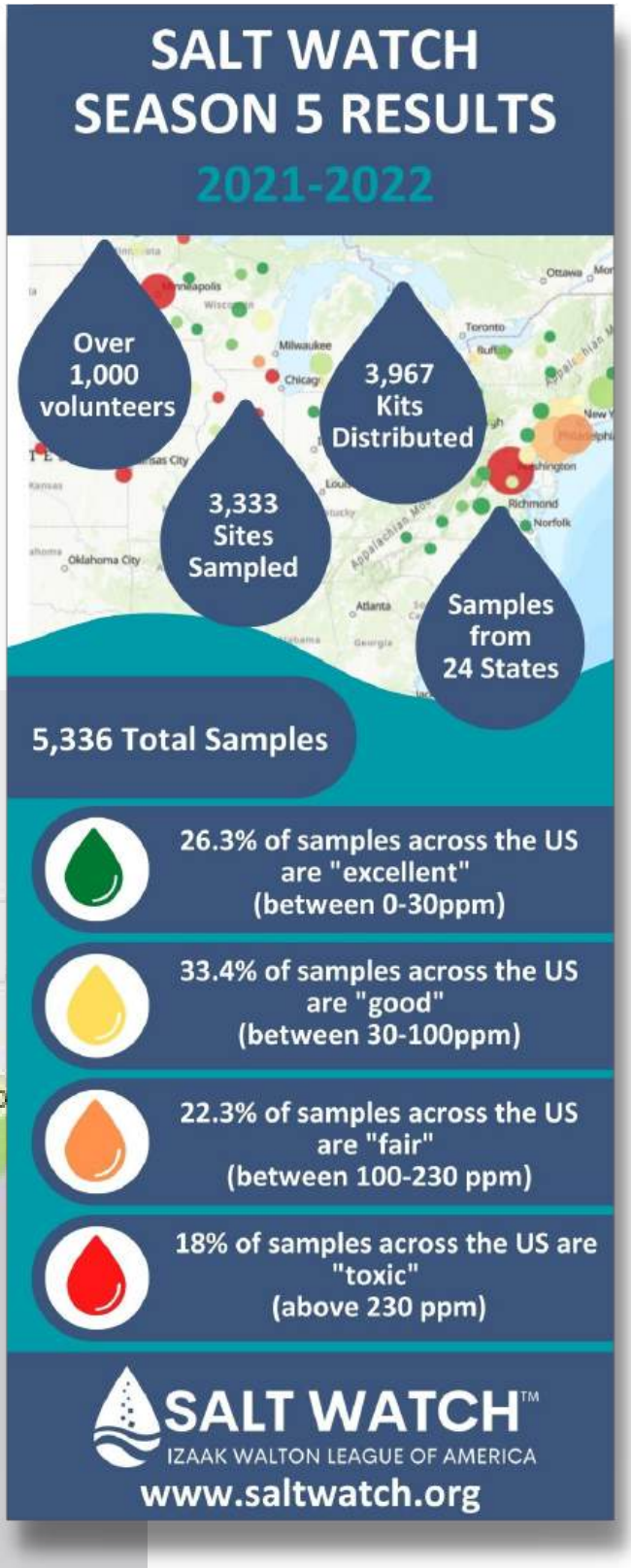
SALT WATCH 2021-2022

In the 2021-2022 Salt Watch season, we saw growth compared to the previous season, distributing 3,967 Salt Watch Kits, and receiving 5,336 Salt Watch readings.

We received Salt Watch reports from over 1,000 volunteers in 24 states across the country. The average chloride reading for the year was 152 ppm, which is elevated well above naturally occurring chloride levels in freshwater waterways.

To view previous seasons' result, visit **www.iwla.org/saltwatchresults.**

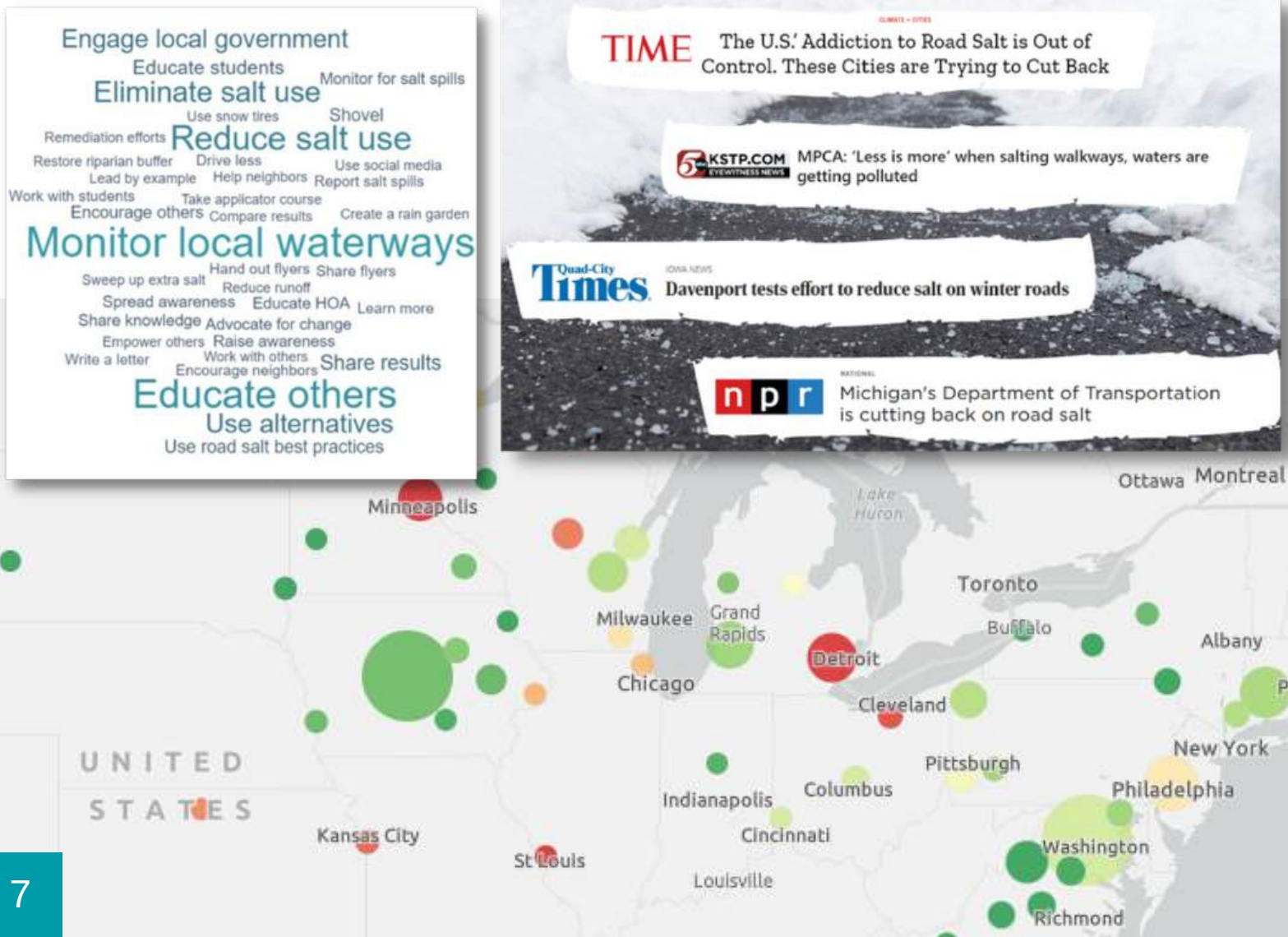




SALT WATCH 2022-2023

As of January 2023, we have sent 2,832 kits and have received 1,700 results—well ahead of Season 5's results this time last year. This season has also seen a dramatic increase in reports taken outside of the winter season—54% of the results received before January 2023 were taken before winter due to year-round monitoring initiatives of many partner organizations. Intense winter storms throughout the country have resulted in many high chloride levels (and thus, more red dots on the map below). These spikes have garnered media attention in areas like Iowa, Michigan, Wisconsin, and the Chesapeake Bay Region. To read these articles and more, visit **www.iwla.org/saltwatchresults** and scroll down to see news articles.

To view this season's Salt Watch Map (updated weekly), visit **www.iwla.org/saltwatchresults**.

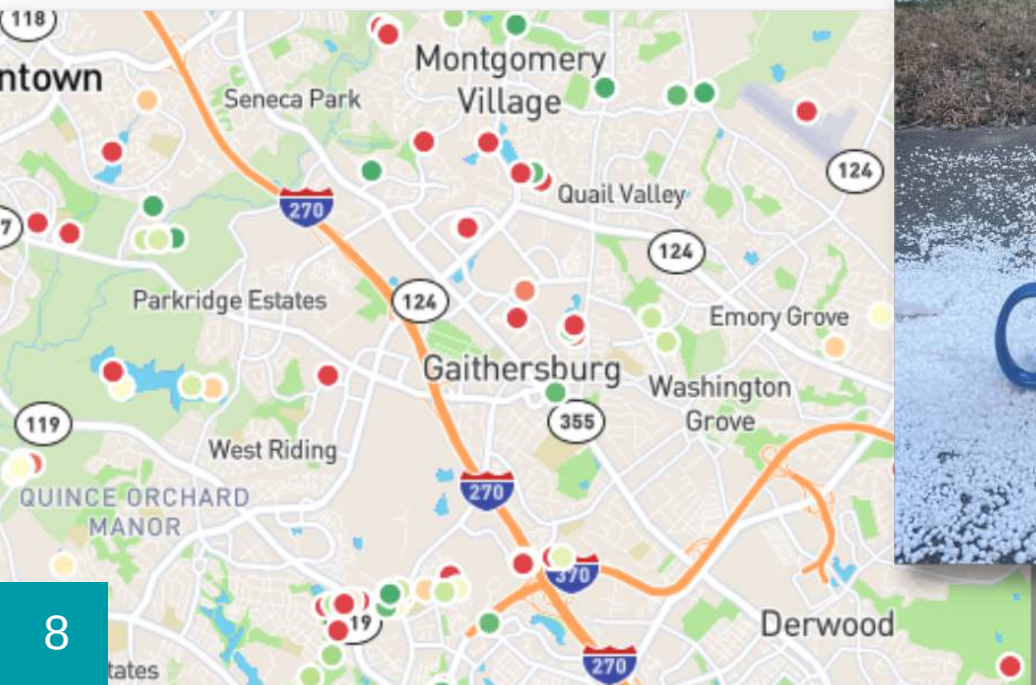


GAITHERSBURG SALT WATCH

This year was the second year of receiving funding for a focused Salt Watch program in Gaithersburg, Maryland with Gaithersburg Salt Watch.

Izaak Walton League staff has participated in community events, like farmers markets, and a hike (in partnership with ICPRB and the City of Gaithersburg), giving out Salt Watch kits and information about chloride runoff to community members. Over 75 Salt Watch kits have gone out to school groups and residents in Gaithersburg in 2022. Learn more about Gaithersburg Salt Watch at **www.saltwatchgaithersburg.org**.

Special thanks to the Chesapeake Bay Trust in partnership with the City of Gaithersburg for funding this project.

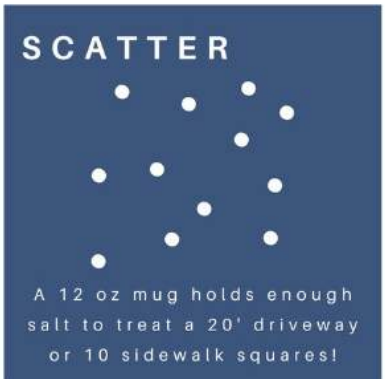


MONTGOMERY COUNTY SALT WATCH

This was our first year of receiving funding for a focused Salt Watch campaign in Montgomery County, Maryland with MoCo Salt Watch.

The MoCo Salt Watch “Salt Wise” campaign is focused on Smart Salt messaging: shoveling early and often during winter weather, using a 12-oz mug to sprinkle salt over an area of 20 feet or 10 sidewalk squares, and sweeping up any excess salt. One particular aspect of the Montgomery County campaign involves engaging Spanish-speaking communities, which has allowed us to add Spanish-translated materials to our outreach. As part of our outreach, Salt Watch curriculum was also added to the biology curriculum of local Montgomery County High Schools with the help of Nature Forward.

Learn more about MoCo Salt Watch at **www.saltwatchmoco.org**. Special thanks to the Chesapeake Bay Trust in partnership with the Montgomery County DEP for funding this project.



CREEK CRITTERS MOBILE APPLICATION

In partnership with Nature Forward in Maryland and with support from the Raines Family Foundation, the Izaak Walton League has continued to promote the Creek Critters app to users across the country! Free to download for iOS or Android smart phones, Creek Critters introduces kids, adults, and everyone in between to macroinvertebrate monitoring. The League has promoted Creek Critters through social media posts that have reached thousands of viewers and through tabling events and presentations. New this year, Salt Watch kits also include a Creek Critters insert.

Thanks to our outreach, the Creek Critters app collected over 1500 stream health reports throughout the country, 433 of which have been transferred to the Clean Water Hub.

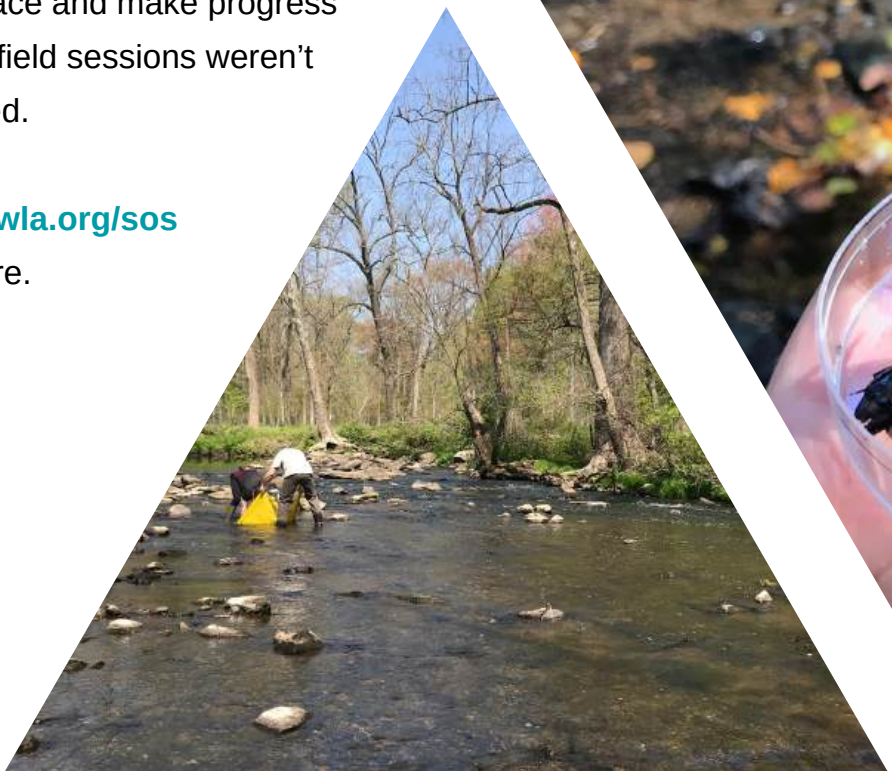
To see the Creek Critters data in the Hub, visit **www.cleanwaterhub.org/organization/72**.
To learn more about the app, visit **www.iwla.org/creekcritters.**

SAVE OUR STREAMS (SOS)

In-person SOS training sessions were back in full force in 2022! Across the country, SOS staff and regional trainers returned to the streams for a total of 53 in-person training sessions. A total of 246 volunteers completed their certification in 2022. Many of these individuals began their training during the COVID-19 pandemic and were finally able to attend an in-person training this year.

We embraced the hybrid training model in 2022, encouraging volunteers to complete an online training and macroinvertebrate exam ahead of their in-person training. This shift allowed volunteers to learn at their own pace and make progress even when field sessions weren't being offered.

Visit **www.iwla.org/sos** to learn more.



VIRIGNIA SAVE OUR STREAMS 2022: BY THE NUMBERS

THE BOUNCE BACK CONTINUES

After the dip in trainings and monitoring in 2020, we were glad to see people return to the field with gusto in 2021! 2022 has continued this trend and we are happy to report another big year of growth for the VA SOS program!

NEWLY CERTIFIED MONITORS **168**

NEW MONITORING SITES **125**

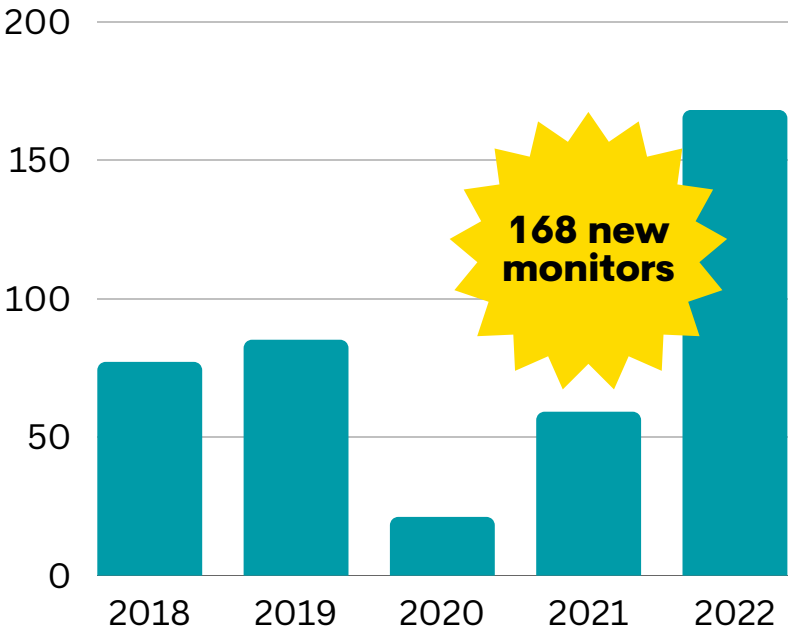
CERTIFICATION TRAININGS **33**

NEW COUNTIES MONITORED **7**

NEW VOLUNTEER TRAINERS **5**

GROWING THE VASOS NETWORK

New SOS Monitors Certified in Virginia



Not only did the program continue to grow in 2022, but we *doubled* the pre-COVID number of newly certified monitors! Volunteers are doing a great job of recruiting new monitors and spreading the word about VA SOS monitoring!

Our new monitors come from Master Naturalist chapters, Izaak Walton League of America chapters, Soil & Water Conservation Districts, schools, and other watershed health organizations!

NEW CERTIFIED TRAINERS

Our 5 new trainers will continue to grow our network in Franklin, Bedford, Henry, Campbell, Halifax, Pittsylvania, and Prince William counties!





2022 MONITORING IN VIRGINIA

$10,451

reimbursed to 26 monitoring groups purchasing equipment

$4,317

spent to purchase equipment for teachers to use with their students

309

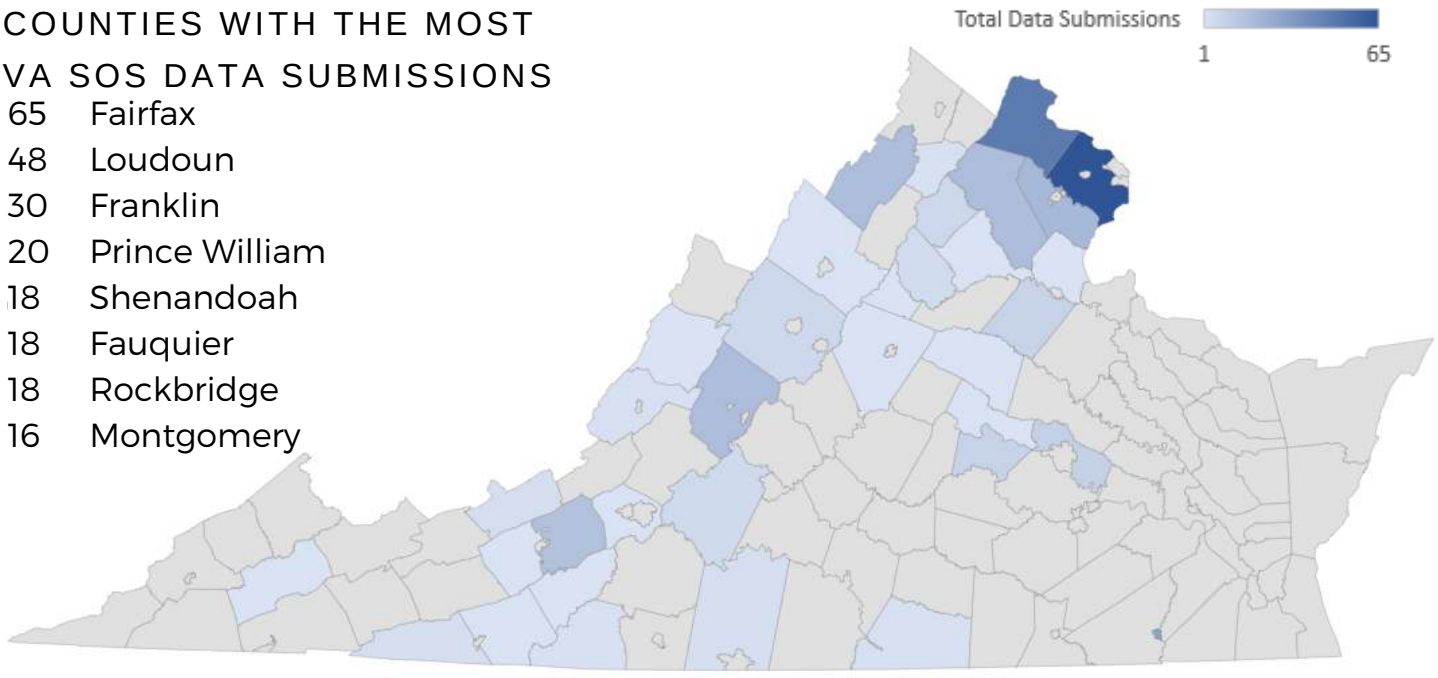
data submissions in Virginia (285 approved in the quality assurance process)

781

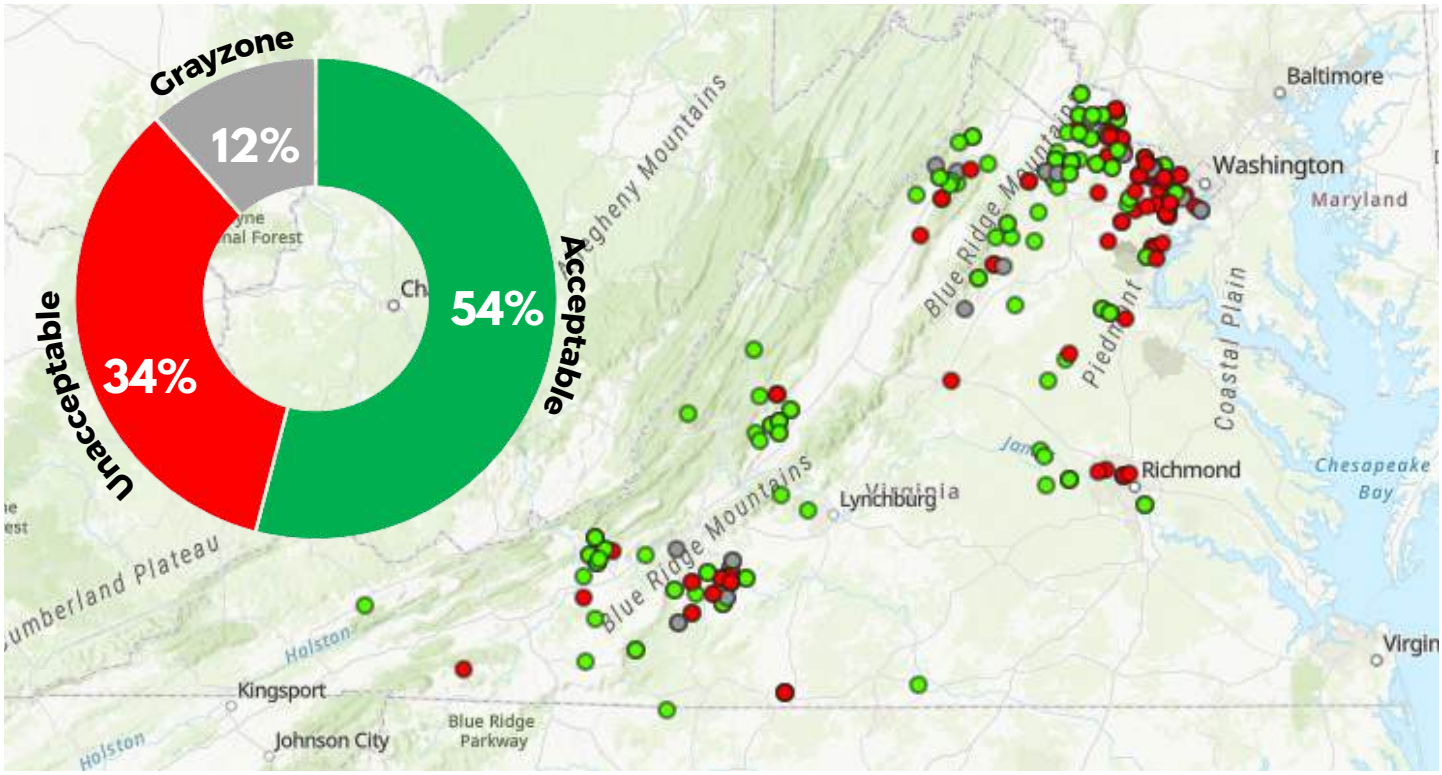
Salt Watch kits mailed to Virginians testing their streams for chloride pollution

COUNTIES WITH THE MOST VA SOS DATA SUBMISSIONS

65	Fairfax
48	Loudoun
30	Franklin
20	Prince William
18	Shenandoah
18	Fauquier
18	Rockbridge
16	Montgomery

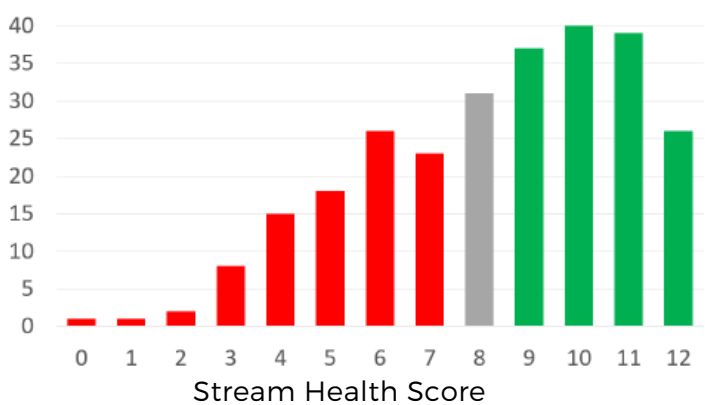


SCORING VIRGINIA'S STREAMS



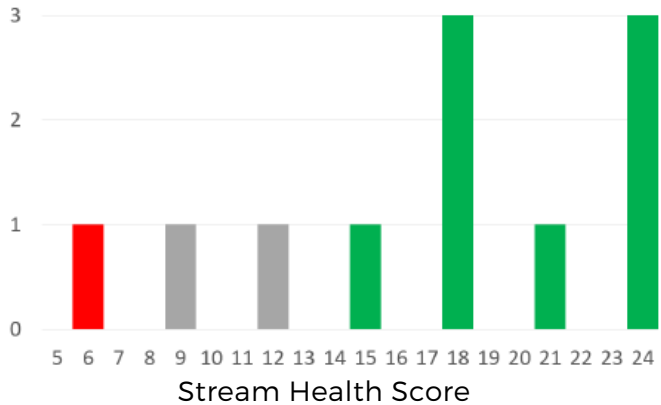
ROCKY BOTTOM STREAM SCORES

Total 270 approved data points



MUDDY BOTTOM STREAM SCORES

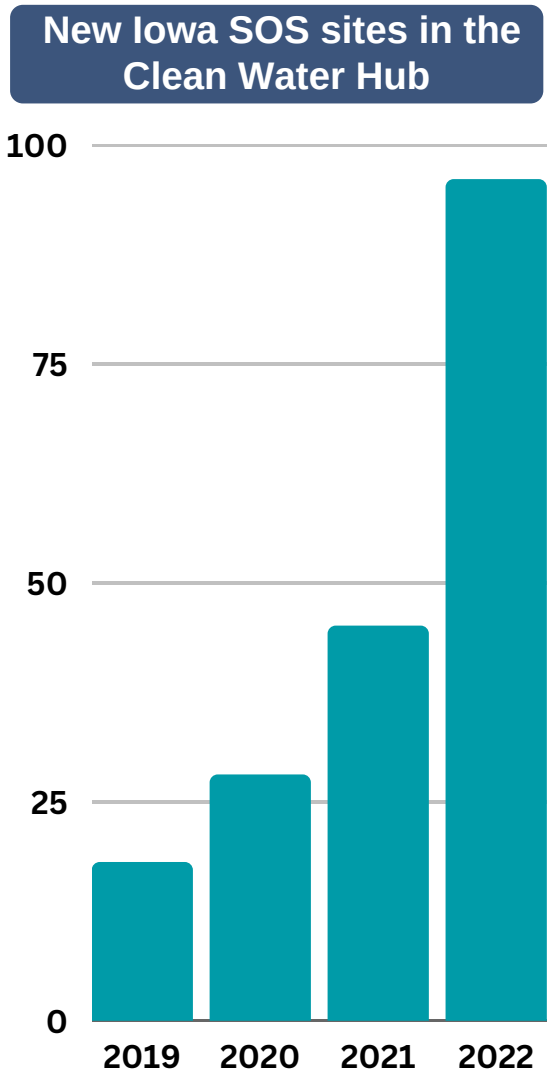
Total 15 approved data points



IOWA SAVE OUR STREAMS 2022: BY THE NUMBERS

ON AN UPWARD TREND

By almost every measure, 2022 was the biggest year yet for Save Our Streams in Iowa. Following a few years of slowed progress due to the COVID-19 pandemic, we saw record-setting numbers for both new certified monitors and new monitoring sites!



NEWLY CERTIFIED MONITORS **66**

NEW MONITORING SITES **96**

CERTIFICATION TRAININGS **15**

NEW EQUIPMENT LOAN SITES **12**

NEW VOLUNTEER TRAINERS **5**

GROWING THE SOS NETWORK IN IOWA

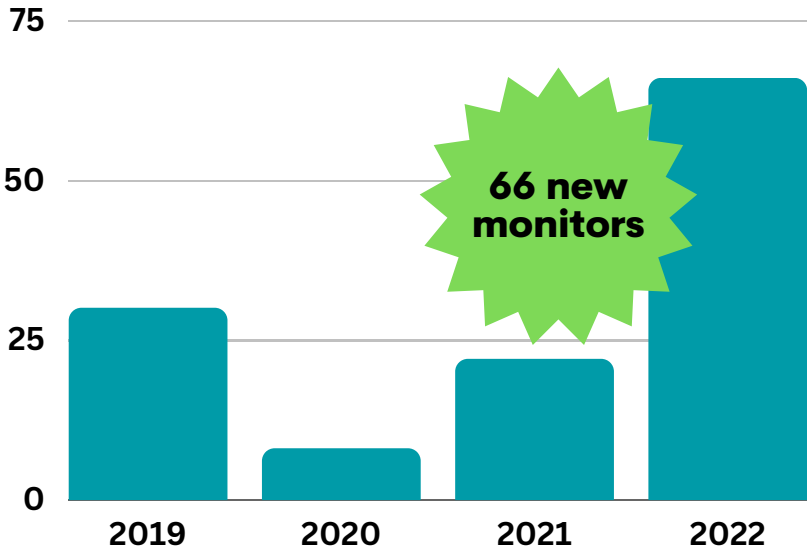
Certified Trainers in Iowa

Following the example of Virginia Save Our Streams, a train-the-trainer model was introduced in Iowa in 2022. Five new regional trainers were trained and certified in the first year of this program. These trainers can now serve as a regional source of training and expertise, extending the impact of SOS throughout Iowa.





New SOS Monitors Certified in Iowa



Altogether, Save Our Streams staff and regional trainers led 15 trainings in Iowa in 2022. A total of 66 stream monitors completed their SOS certification in 2022. *This number is greater than the previous three years combined!*

IOWA EQUIPMENT LOAN PROGRAM

MONITORING EQUIPMENT MADE ACCESSIBLE

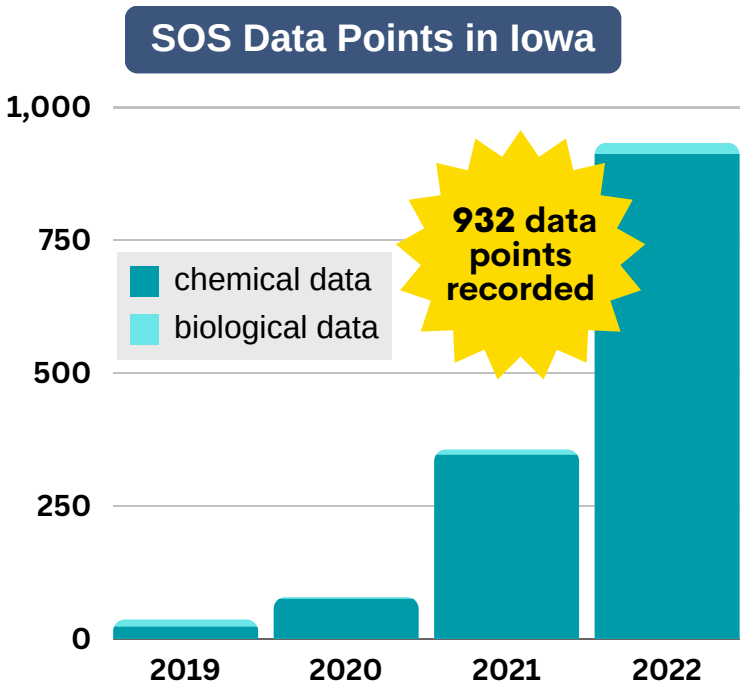
After much planning and coordination, we were excited to launch a new equipment loan program in Iowa. Volunteers can now borrow biological and chemical monitoring supplies from 13 equipment loan stations across the state, lessening the financial barriers to participation in Save Our Streams.

For a complete list of Iowa Equipment Loan stations, including contact information for each site's liaison, visit **www.iwla.org/water/resources-for-monitors**.

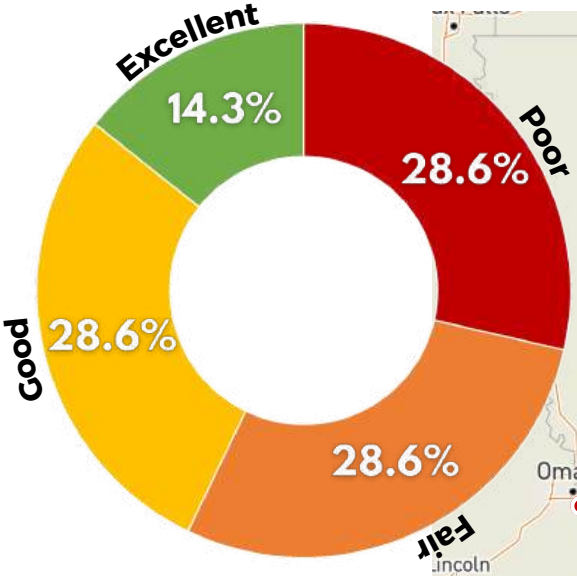
IOWA'S SOS DATA

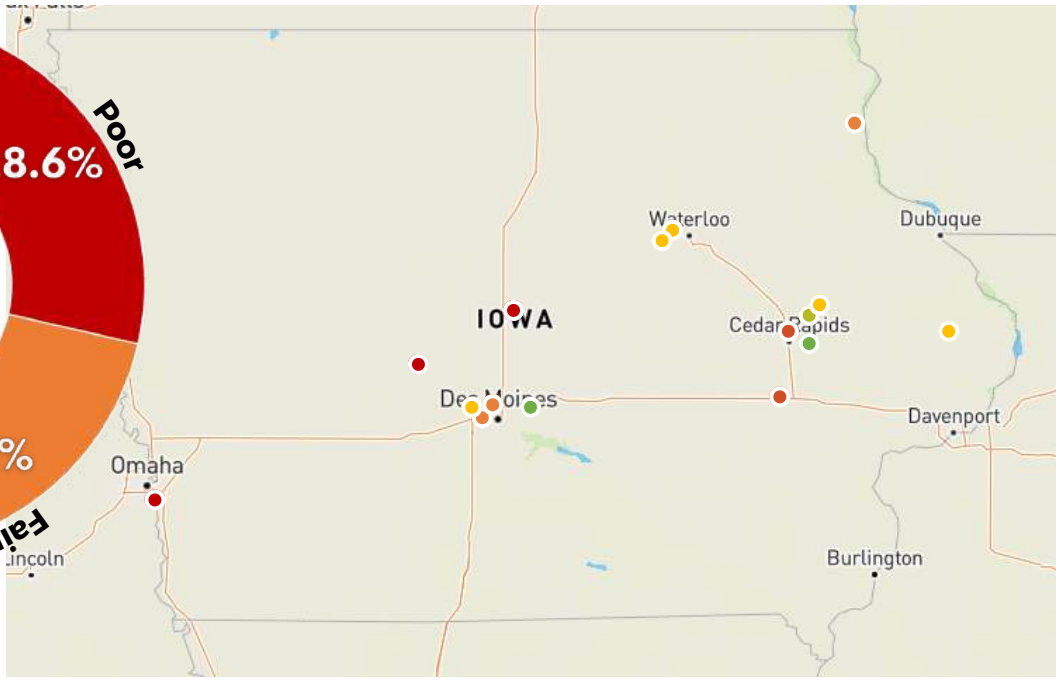
In 2022, there were 932 data points recorded on the Clean Water Hub in Iowa. *This by far exceeds the amount of data from the previous three years combined!*

The majority of Iowa's data comes from SOS Chemical readings, which provide detailed information about a stream's health at a moment in time. We have seen an increase in SOS Biological readings in Iowa, with 21 biological results reported in 2022 (up from 10 in 2021). Biological data provides a more holistic view of stream health. Iowa's biological results are summarized below.



Biological Stream Health Scores in Iowa





CHESAPEAKE MONITORING COOPERATIVE

CMC GOALS AND MISSION

The Chesapeake Monitoring Cooperative is a group of leading organizations that provide technical, programmatic, and outreach support for the integration of water quality and macroinvertebrate monitoring data into the Chesapeake Bay Program partnership. We envision a Chesapeake community where all data of known quality are used to inform watershed management decisions and restoration efforts.

The Cooperative works with diverse partners to collect and share new and existing water quality data. We are supporting a comprehensive understanding of Chesapeake Bay Watershed health. Data contributions by a network of volunteer sources provide valuable information that supports shared decision-making and adaptive management. Find out more about the CMC at **www.chesapeakemonitoringcoop.org**.

CMC SERVICE PROVIDERS

ALLIANCE for the Chesapeake Bay

THE IZAAK WALTON LEAGUE OF AMERICA

University of Maryland CENTER FOR ENVIRONMENTAL SCIENCE

Alliance for Aquatic Resource Monitoring ALLARM est. 1986

VIMS | WILLIAM & MARY

VIRGINIA INSTITUTE OF MARINE SCIENCE

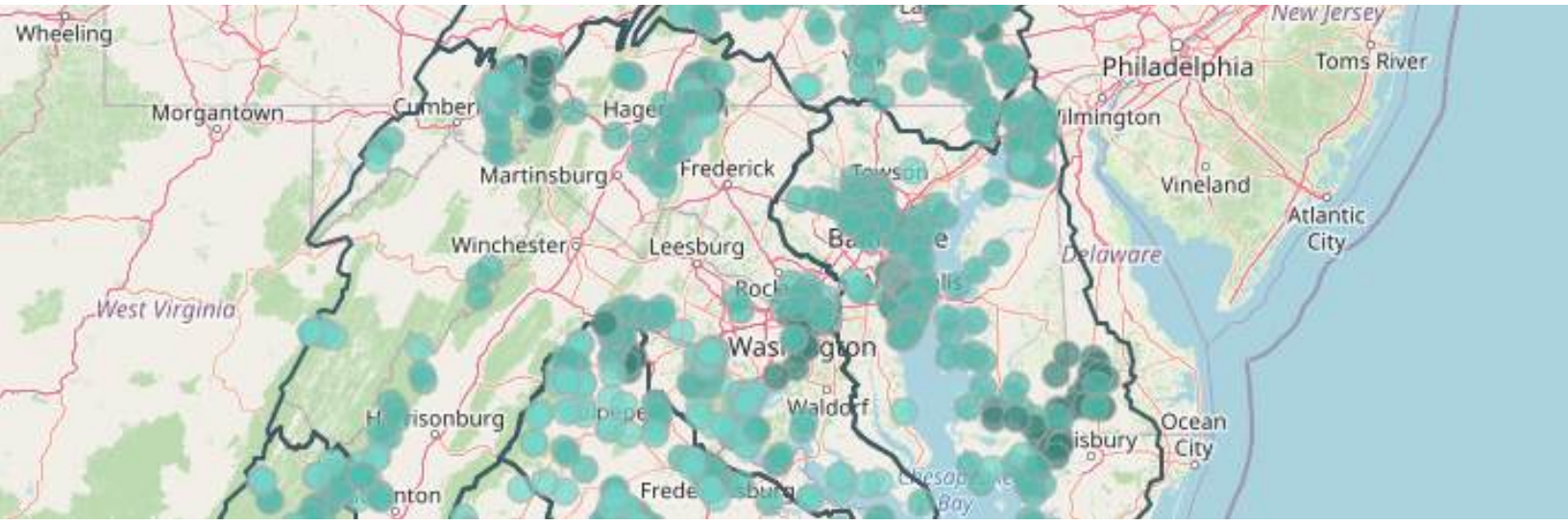
CHESAPEAKE MONITORING COOPERATIVE

THE IZAAK WALTON LEAGUE'S ROLE IN THE CMC

The Izaak Walton League of America supports the volunteer monitoring efforts of the CMC through the coordination and training of monitoring groups/individuals collecting Tier 1 & 2 nontidal biological data, such as Virginia Save Our Streams. The League also provides project coordination, data integration, and overall pragmatic support through the Chesapeake Outreach Coordinator, Matthew Kierce.

CHESAPEAKE DATA EXPLORER

The Chesapeake Data Explorer is the main database that centralizes community and volunteer monitoring data across the Chesapeake Bay watershed. The database currently contains 688,927 water quality records, 4,348 benthic macroinvertebrate records, 2,930 monitoring sites, 745 monitors, and 130 organizations.



PRIORITY AREAS

Priority areas in the Chesapeake Bay region continue to be identified through ongoing discussions with relevant state agencies, local governments, and DEIJ communities across the watershed. This effort is part of the CMC's ongoing work to create an updated prioritization report for the current grant cycle of the program.

NFWF RESTORATION MONITORING

The National Fish and Wildlife Foundation (NFWF) is the largest private conservation grant-maker, working with public and private sector organizations to protect and restore fish, wildlife, plants and habitats for current and future generations. NFWF is leveraging the expertise of the Stroud Water Research Center in stream restoration and the CMC team's expertise in community science in order to implement a stream restoration monitoring protocol conducted by volunteer monitors.

GOAL

Create a quantitative restoration protocol that can be utilized by volunteer monitors to record the health and success over time of streams undergoing restoration projects.

NEXT STEPS

Moving into 2023, the team will work to finalize the restoration protocol, collaborate on how to identify and engage the appropriate volunteers for monitoring, create a Survey123 form to act as a flexible data management stepping stone into NFWF's FieldDoc, and begin spring monitoring with selected sites that have planned upcoming restoration.

NEW IN 2023: NITRATE WATCH

The Clean Water Program's newest community science project just launched in early 2023. Nitrate Watch sheds light on nitrate pollution, a pervasive water quality issue with harmful effects on human health and the environment. This program provides volunteers across the country with free nitrate test kits to monitor nitrate levels in both surface water and drinking water. All of the data collected by Nitrate Watch volunteers will be collected in the Clean Water Hub database, where it will be publicly available and easily accessed.

In preparation for the launch of Nitrate Watch, the latter half of 2022 was full of research, content creation, and data submission testing. Learning from the success of Salt Watch, we are taking steps to have advocacy resources, communication tools, and data visualization ready as soon as Nitrate Watch kits are in the hands of our volunteers.

NEXT STEPS

We are excited to see what volunteer engagement and advocacy actions come from the first year of Nitrate Watch. A newsletter sign-up launched in November 2022 has received responses from 145 people from 24 states and DC. These individuals will be the first to know when Nitrate Watch kits become available. We are thrilled to see this level of interest in a program that hasn't formally launched yet!

Learn more and get involved at www.nitratewatch.org.

THANK YOU!

Our work simply couldn't be done without our hundreds of dedicated volunteers. THANK YOU to all of our monitors across the country: you are the first line of defense for clean water. Now more than ever, we need your data and your voice to protect our nation's waterways. Together we can educate our communities, collect critical data, and Save Our Streams!

We also thank the many funders that make the Clean Water Program possible:

- Alliance for the Chesapeake Bay
  - Chesapeake Bay Program
  - National Fish and Wildlife Foundation
- Chesapeake Bay Restoration Fund
- Chesapeake Bay Trust
  - City of Gaithersburg
  - Montgomery County Department of Environmental Protection
- Iowa Department of Natural Resources Resource Enhancement and Protection Program
- Raines Family Fund
- Virginia Department of Environmental Quality
- Numerous individual donors that sponsor Salt Watch and Nitrate Watch kits as well as the Clean Water Program

GET INVOLVED

Want to become an advocate for local streams? There are so many ways to get involved with the Clean Water Program, and anyone can volunteer! Find out how to get involved in our different programs today:

Save Our Streams: **www.iwla.org/sos**
Salt Watch: **www.saltwatch.org**
Creek Critters: **www.iwla.org/creekcritters**
Clean Water Hub: **www.cleanwaterhub.org**
Virginia Save Our Streams: **www.vasos.org**
Chesapeake Monitoring Cooperative: **www.chesapeakemonitoringcoop.org**
Nitrate Watch: **www.nitratewatch.org**

Follow us on social media to keep up with the latest SOS news and updates, and subscribe to our Stream Monitor newsletters at **iwla.org/water!** Share your own success stories and lessons learned by tagging us on social media or emailing us directly. Drop us a line at **sos@iwla.org**.

@saveourstreams @saveourstreamsIWLA