Save our Streams 2024 Annual Report

Highlighting activities and outcomes of the Izaak Walton League of America's Clean Water Program in 2024









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photo: Kendall Juell cover: Sue March

Welcome

Hello monitors, Ikes, and friends,

As 2024 has come to a close, the energy and enthusiasm from our monitors and advocates has been a joy to see, even amidst many water quality challenges.

Our volunteers have faced pervasive nitrate pollution, egregious oversalting practices, and the slow degradation of waterways thanks to suburban sprawl in many metropolitan areas. But what makes a volunteer great is their willingness to commit to the long haul, strive for slow yet steady change, and not give up in the face of a challenge.

For that, I want to say thank you, and keep up the good work. Together, we can make a difference for water quality across the country.



Samantha Puckett

Clean Water Program Director



Our Team

Clean Water Program Director | Samantha Puckett Save Our Streams Coordinator, Mid-Atlantic | Maggie Dombroski Salt Watch Coordinator | Abby Hileman Chesapeake Monitoring Outreach Coordinator | Matthew Kierce Save Our Streams Coordinator, Midwest | Heather Wilson



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.

For the Izaak Walton League Clean Water Program, volunteers are the heart of everything we do. From monitoring water quality to advocating for solutions at the local, state, and federal level, we could not be even remotely as impactful without them.

2024 brought a year of successes, from the biggest Nitrate Watch and Salt Watch years we've seen yet, to a streamlined Virginia Save Our Streams program, and way more in between. Read on to see the 2024 results for Salt Watch, Nitrate Watch, Save Our Streams, and more. We are excited to see how this momentum continues to build in 2025.



Clean Water Hub

The Clean Water Hub is the water quality database used to store and visualize data reported by Izaak Walton League water quality monitoring volunteers. The Hub is designed not only to meet the data storage needs of League volunteers and other organizations doing water quality monitoring, but also to make data easy to understand and utilize in outreach and communication about water quality.

Since 2019, the League has driven the evolution and improvement of the Clean Water Hub, working to incorporate features that make it more useful and user-friendly. A few of the important updates made to the Hub in 2024 include:

- Migrating Virginia Save Our Streams data submission from the VA SOS
 website to the Clean Water Hub
- Creating the Virginia Save Our Streams map to visualize VA SOS data
- Improving the bulk upload feature, allowing admin users to easily upload large datasets
- Creating additional guides and troubleshooting resources for the Clean Water Hub <u>help pages</u>

To explore the data on the Clean Water Hub and start adding your own, visit **www.cleanwaterhub.org**.







Salt Watch

As of the end of 2024, Salt Watch had received over **22,453 chloride test results** since the program was launched in 2018. Since we began the push for year-round data collection, Salt Watch has seen increased data submission outside of the winter season. This has added to our understanding of the persistent nature of road salt pollution and how chloride concentrations change over time.

Salt Watch staff also released several new toolkits in 2024.



SALT

MATCH

2024 BY THE NUMBERS



Salt Watch Partners

Salt Watch would not be a success without the hard work, dedication and collaboration from our partners! With 71 official partners and over 600 participating organizations, Salt Watch partners have been spreading the word about the Salt Watch program, engaging new volunteers, reporting data, and advocating for smarter salting practices. 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! We're also excited to see the advocacy actions some of our partners are starting to take to reduce road salt pollution in their communities!

Check out our interactive <u>Partner Map</u> to see more of our key partners across the country, from government agencies to school groups.



To get your organization involved in Salt Watch, please email us at <u>saltwatch@iwla.org</u>.

Salt Watch Results: 2023-2024 Season

Between July 1, 2023 and June 30, 2024, we distributed **4,809 Salt Watch Kits** to 36 states and received **6,648 chloride test results** from volunteers in 29 states. Most of the data reported was from the northern mid-Atlantic states through upper midwestern states, but there were also some data (not shown on the map below) from Washington, California, and Colorado.



Salt Watch Results: 2024-2025 Season (so far!)

In the first half of the 2024-2025 Salt Watch season, we have distributed over **4,435 Salt Watch Kits** and pulled in over **4,124 Salt Watch test results**, with results still coming in!

We are looking forward to forging partnerships with new organizations and volunteers, supplying Salt Watch Kits to volunteers, and providing resources for advocacy at all levels.

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



Salt Watch Gaithersburg

Applicator Training

Gaithersburg Salt Watch held its third Smart Salt Applicator Training for Parking Lots and Sidewalks. The training was offered both online and inperson. There were **12 individuals** who successfully completed the certification exam.



Outreach

League staff participated in two different Gaithersburg farmers markets throughout the year, as well as Gaithersburg Oktoberfest, Gaithersburg Active Aging Expo, and AstraZeneca Sustainability Showcase, distributing Salt Watch kits and information about chloride runoff to community members. **651 kits** were provided to school groups and residents in Gaithersburg in 2024. On the ground outreach helps to connect the community with resources to protect fresh water and tips to reduce oversalting at home.

Business Engagement

In the spring of 2024, Salt Watch staff canvassed businesses to ask about salting practices over the winter and to inform them of smart salting practices and how smart salting can maintain safety and save businesses money.

Behavior Change Campaign

Salt Watch received grant funding to begin research for a behavior change campaign in Gaithersburg. The results of this research will inform future Salt Watch messaging and campaign strategies around smart salting practices.

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

Learn more about Gaithersburg Salt Watch: <u>www.saltwatchgaithersburg.org</u>

Salt Watch Montgomery County

Applicator Training

Montgomery County (MoCo) Salt Watch held its second Smart Salt Applicator Training for Parking Lots and Sidewalks. The training was offered both online and in-person. There were **40 individuals** who successfully completed the certification exam. These trainings have allowed us to develop partnerships with the Maryland-National Capital Park and Planning Commission (M-NCPPC) and the Montgomery County Public School applicators. Applicator trainings like these are essential, supplying road salt applicators with information about road salting best practices and how they can save money, protect the environment, and maintain safety with reduced winter salt application.



Outreach

League staff participated in two different farmers markets throughout the year in Montgomery County (not including Gaithersburg Farmers Markets) and regional events including M-NCPPC's Northern Regional Fall Forum, Montgomery County Greenfest, and STEM and STEAM nights at middle and high schools. At these events, staff distributed Salt Watch kits and shared information about chloride runoff. **955 kits** were provided to MoCo school groups and residents in 2024.

Business Engagement

In spring of 2024, Salt Watch staff canvassed businesses to ask about salting practices over the winter and to inform them of smart salting practices and how smart salting can maintain safety and save businesses money.

Special thanks to the Chesapeake Bay Trust in partnership with the Montgomery County Department of Environmental Protection for funding this project.

> Learn more about Montgomery County Salt Watch: <u>www.saltwatchmoco.org</u>

Nitrate Watch

In 2024, the Nitrate Watch program continued to support volunteers located throughout the country, united by a common concern – nitrate pollution. Nitrate Watch is a crowd-sourced community science project of the Izaak Walton League of America. This program, launched in February 2023, mobilizes volunteers to monitor and report nitrate levels in the waterways they care about and the drinking water they rely on.

This year, we sent **1,060 kits** to volunteers and partners, and received an impressive **5,427 nitrate test results** from volunteers. We prioritized forging relationships with new partner organizations, educating volunteers about the connection between soil health and water quality, and providing opportunities to advocate for Farm Bill policies that would reduce nutrient runoff. In 2024, hundreds of advocates pressed their lawmakers for legislation to improve water quality by promoting soil health and wetlands conservation.

2024 BY THE NUMBERS



Nitrate Watch Partners

We are grateful for our cohort of partner organizations, and are excited to have welcomed **10 new partners** in 2024. These organizations are spreading the word about the Nitrate Watch program, reporting data, and advocating for reduced nitrate pollution in their local communities. In many cases, our partners serve as an important hub of information and action, providing vital support to volunteers at the local level.

In addition to our official partners, Nitrate Watch volunteers represent **480 organizations** across the country.

NITRATE WATCH PARTNERS *new in 2024

- Antietam-Conococheague Watershed Alliance*
- Columbia County Division of Health*
- Faithful Shepherd Catholic School
- Farmington River
 Watershed Association
- Friends of the Lower Olentangy Watershed*
- Friends of the Minnesota Valley*
- Friends of the Rouge
- Green Lake Association*
- Iowa Citizens for Community Improvement

- Iowa Environmental Council
- Iowa Learning Farms
- Jefferson County Farmers & Neighbors*
- Little Falls Watershed
 Alliance
- Loudoun Wildlife
 Conservancy
- Lower Grand River Organization of Watersheds*
- Partners of Scott County Watersheds*
- Prairie Rivers of Iowa
- Rogue River Watershed
 Partners*
- The Field Trip Academy*



View a map of all partners and participating organizations.

Interested in becoming a Nitrate Watch partner organization? Email us at <u>nitratewatch@iwla.org</u>.

Nitrate Watch Results

DRINKING WATER



Research indicates that a drinking water standard of 10 mg/L may not be sufficiently protective of human health. Adverse health effects, including thyroid disease, birth defects, and certain cancers, have been observed with prolonged exposure to drinking water containing nitrate concentrations of 5 mg/L, or even less.



Nitrate Watch Results

SURFACE WATER



Creek Critters

The Creek Critters smartphone app continues to serve as an engaging macroinvertebrate monitoring resource for all audiences! In partnership with Nature Forward and with support from the Raines Family Foundation, the Izaak Walton League promotes this app as an entry point to biological monitoring and a field resource for macroinvertebrate identification. The app guides users step-by-step through the process of finding and identifying macroinvertebrates, automatically calculates a Stream Health Score based on the findings, and sends the data to the Clean Water Hub.

In 2024, the League promoted Creek Critters through social media posts, newsletters, tabling events, presentations, and an insert in each Salt Watch and Nitrate Watch kit sent to volunteers. Collectively, these outreach activities have made thousands of impressions! This year, we sent 745 Creek Critters postcards to IWLA chapters for outreach events and distributed 121 postcards during Salt Watch events.

Thanks to these outreach efforts, the Creek Critters app engaged **13,617 people** and collected **1,309 stream health reports** throughout the country.

To view Creek Critters data in the Clean Water Hub, visit <u>www.cleanwaterhub.org/organization/72</u>.

To learn more about the app, visit www.iwla.org/creekcritters.



photo: Devan George



Save Our Streams

Across the country, SOS staff and regional trainers returned to the streams for a total of **31 in-person training sessions**. A total of **101 volunteers** completed their certification in 2024.

We continued the hybrid training model throughout 2024, 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, and as a result, we will continue with this hybrid model moving forward.

Visit <u>www.iwla.org/sos</u> to learn more.



photo: Nancy Marie Rodriguez

Virginia Save Save OUR Our Streams

Virginia Save Our Streams monitors water quality of Virginia's streams and educates the public about importance of clean water. Hundreds of VA SOS volunteers collect stream quality data from **over 200 stream sites** across the state. These streams flow through our neighborhoods and communities and serve as drinking water sources for millions of Virginians. Read on for milestones and results from Virginia.

2024 BY THE NUMBERS



Virginia Save Our Streams

Growing the Network

Our new monitors come from Averett University, several Master Naturalist chapters, Loudoun Wildlife Conservancy, Natural Bridge State Park, Soil & Water Conservation Districts, and more. These new folks bring us to a total of **343 monitors** with active certifications.

New Certified Trainers

Our new volunteer trainers will expand our network in Montgomery, Giles, Floyd, Pulaski, Bedford, Franklin, Amherst, Appomattox, Campbell, and Nelson counties. We now have a total of **35 trainers**.



Trainer Coverage (blue)



Staff Changes

Maggie Dombroski joined the team as the Mid-Atlantic Save Our Streams Coordinator in April 2024.



Virginia Save Our Streams

2024 Monitoring in Virginia



reimbursed to monitoring groups purchasing equipment



spent to purchase equipment for teachers to use with their students



stream healthy surveys in Virginia (296 approved in the quality assurance process)

746

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



Virginia Save Our Streams

Scoring Virginia's Streams



ROCKY BOTTOM STREAM SCORES

285 Approved Stream Health Surveys









Stream Health Score

20

60

50

40

30

20

10

Iowa Save Our Streams

2024 was another great year for crowd-sourced volunteer water quality monitoring in Iowa. This year saw record-breaking numbers of new sites and SOS results reported to the Clean Water Hub by Iowans. It also saw the continuation of the SOS equipment Ioan program in Iowa, including the addition of a new Ioan site. We are pleased to continue to support an impressive **9 Save Our Streams trainers** across the state.

2024 BY THE NUMBERS



photo: Amy Golly

Iowa Save Our Streams 2024 Iowa SOS Data

In 2024, there were **3903 Save Our Streams chemical results** reported on the Clean Water Hub in Iowa. This does not include Salt Watch and Nitrate Watch results reported in Iowa (of which there were many!). We are happy to see Iowa's crowd-sourced water quality data reporting continue to increase year over year.



The majority of Iowa's data comes from SOS Chemical test results, which provide detailed information about a stream's health at a moment in time. In 2024, there were **14 Save Our Streams biological stream health surveys** reported in Iowa. Biological data provides a more holistic view of overall stream health. Iowa's biological stream health scores are summarized below.



Biological Stream Health Scores in Iowa

Iowa Save Our Streams

Equipment Loan Network

Supplies for SOS Chemical and Biological monitoring are located at equipment loan stations positioned throughout Iowa. Volunteers can borrow monitoring supplies from these stations, lessening the financial barriers to participation in Save Our Streams.

In 2024, we added a new equipment loan station to our map. This station, located in Ames, is hosted by the Story County Conservation Board. In 2025, we have plans to add a new loan station in Allamakee County, hosted by Friends of Yellow River State Forest.



As new stations are added, the equipment loan map will be updated. For the most up-to-date list of equipment loan stations, including contact information for each site's liaison, visit <u>www.iwla.org/water/resources-for-monitors</u>.

The Iowa SOS Equipment Loan Network is supported by funds from the Iowa DNR Resource Enhancement and Protection (REAP) Conservation Education Program.



Iowa Save Our Streams

The Izaak Walton League was a lead organizer of the Iowa Water Summit, which took place on October 8, 2024 in Des Moines. This event brought together nonprofit professionals, academics, county conservation employees, and concerned citizens to discuss volunteer water quality monitoring in Iowa, share ideas, and strengthen relationships. **Over 70** water monitors and advocates were in attendance.



photos: Bud Hartley

FOUNDATION

The Iowa Water Summit was a great opportunity to network and learn about what different water quality groups are doing across the state. Thank you to all who were able to attend. We are lucky to have so many dedicated people and organizations doing amazing work for Iowa's waters!

The Iowa Water Summit was made possible thanks to funding from the Water Foundation and support from planning partners, including:

- Prairie Rivers of Iowa RC&D
- Iowa Environmental Council
- Partners of Scott County
 Watersheds
- Northeast Iowa RC&D
- Pathfinders RC&D
- Polk County Conservation
- Drake University

Iowa Save Our Streams Bulk kits for Iowa Educators

In the fall of 2024, the Izaak Walton League was invited to participate in training workshops for Iowa science educators for the second year in a row. These trainings, hosted by the Iowa Department of Education in partnership with the Iowa Department of Natural Resources, bring together science educators from across the state, including classroom teachers, informal educators, administrators, and preservice teachers. At these trainings, the League showcased the water quality community science resources and programs available for educators to use with their students.

Thanks to funding from the Iowa Division of the Izaak Walton League, we were able to provide Iowa educators with the opportunity to request bulk Salt Watch and Nitrate Watch kits for their classrooms. In an effort to make water quality monitoring easier to incorporate into a classroom setting, teachers in Iowa are able to request up to 30 Salt Watch and/or Nitrate Watch kits at once. Since the fall teacher workshops, we have distributed **480 kits** to Iowa teachers.

Educators in attendance also took home folders containing information about the Clean Water Team's other water monitoring programs and resources, including Save Our Streams, Creek Critters, the Clean Water Hub, and the equipment loan program. At two trainings located in Des Moines and Cedar Falls, we interacted with approximately 200 educators.

We're excited to support these educators as they bring water quality community science to their classrooms and share these resources with other members of their teaching teams!



Chesapeake Monitoring Cooperative

The Izaak Walton League's Role in the CMC

The Chesapeake Monitoring Cooperative (CMC) brings together leading organizations to provide technical expertise, programmatic guidance, and outreach support for the integration of water quality monitoring data into the Chesapeake Bay Program and beyond. Our shared vision is a Chesapeake community where all data of known quality contribute to informed watershed management and restoration efforts.

As a key partner, the Izaak Walton League of America (IWLA) strengthens volunteer monitoring efforts by coordinating and training individuals, as well as groups collecting Tier 1 & 2 nontidal biological data. The League also supports the cooperative through project coordination, data integration, and outreach, led by the League's Chesapeake Monitoring Outreach Coordinator.



Chesapeake Monitoring Cooperative

Priority Areas

In 2024, the CMC continued advancing its mission by expanding community-driven water monitoring efforts and strengthening data accessibility. Two new community success stories were added to the interactive CMC Case Studies map, highlighting efforts to monitor water safety in underrepresented, at-risk communities affected by bacterial contamination. These stories showcase the power of volunteer monitoring in addressing public health concerns and informing local decision-making.

The CMC also managed the collection and processing of Tier II benthic macroinvertebrate samples helping to fill critical data gaps across the Chesapeake Bay watershed. This effort ensures a more comprehensive understanding of stream health and strengthens regional water quality assessments.

Additionally, the Izaak Walton League's Salt Watch program took a step toward integration into the CMC as a crowdsourced monitoring initiative. By working on the development of a Quality Assurance Project Plan (QAPP), the League is laying the groundwork for Salt Watch data to become an officially recognized resource within the CMC framework, further broadening the reach of volunteer-based monitoring.



photo: Severn River Association

Chesapeake Monitoring Cooperative

CMC Data Explorer

The CMC Data Explorer saw major improvements in 2024, enhancing accessibility and user experience for volunteer monitors and partner organizations. Led by CBNERR and VIMS, the CMC team successfully launched a redesigned homepage for the CMC Data Explorer. To ensure functionality met the needs of its users, the new interface underwent beta testing with volunteers and water monitoring groups, incorporating their feedback to improve usability and engagement.

Key new features include an advanced filtering mechanism that refines the stations displayed on the map, allowing users to easily find data relevant to their needs. A dynamic statistics bar now updates in real time with each filter selection, providing instant insights into the dataset being viewed. Additionally, a built-in plotting tool enables users to automatically graph their station data and compare different water quality parameters. This enhances the ability to analyze trends directly within the platform.

Looking ahead, the CMC team plans to continue to refine the homepage experience, extend these enhancements to the Virginia Data Explorer, and work to integrate more data from other states in the watershed.



NFWF Restoration Monitoring

With support from the National Fish and Wildlife Foundation (NFWF), the League and the CMC have developed a restoration monitoring protocol designed for volunteer monitors. This protocol aims to provide a more quantitative approach to assessing the progress of stream restoration projects across the Chesapeake Bay watershed. By shifting the focus from purely qualitative visual assessments, the team can better measure the success and outcomes of the restoration practice implemented at that site. The Izaak Walton League is contributing its expertise on all things volunteerled benthic monitoring, while also supporting data management through the Survey123 platform.

Project Goal and Beyond

The goal of this effort is to create an accessible restoration monitoring protocol that empowers volunteers to capture meaningful, measurable data on restoration progress. Moving forward in 2025, the team will lead the benthic monitoring efforts during the spring and fall sampling seasons, continue to maintain the Survey123 platform for data integration, and transfer collected data to our partner, Stroud Water Research Center, for assessment and analysis.



photos: Alliance for the Chesapeake Bay

Our Valued Volunteers

Our volunteers are the cornerstone of our work, and we have to admit it - they are the best!

At the end of 2024, we circulated a survey among our water quality volunteers to better understand their involvement in our programs.

When asked...

How likely are you to participate in water quality monitoring with us next year? on a scale of 1-5 (1=definitely no. 5 = definitely yes) **96.2%** of respondents said "yes" (4 or 5)

When asked...

Beyond monitoring, have you taken any actions to improve water quality in your community?



of respondents said "yes"

The word cloud to the right summarizes respondents' detailed responses about actions taken beyond monitoring.



Social Media



@saveourstreamsIWLA

The Clean Water team has continued to leverage social media as a tool for engaging water quality communication. Throughout the year, we've used infographics, short-form video, and popular memes to share information about our programs and topics related to water quality. In doing so, we've been able to make complex topics more interesting and digestible by injecting humor and including simple visuals.

We enjoy using these platforms to educate our audience about water quality in a way that is both informative and fun, and allows for increased awareness and community interaction. Be sure to follow us!



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:

- Aegon Transamerica Foundation
- 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
- Horne Family Foundation
- Iowa Department of Natural Resources Resource Enhancement and Protection Program
- Izaak Walton League of America Endowment
- James E. Dutton Foundation
- National Science Foundation
- Raines Family Fund
- Roy A. Hunt Foundation
- Virginia Department of Environmental Quality
- The Water Foundation
- 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: <u>www.iwla.org/sos</u> Salt Watch: <u>www.saltwatch.org</u> Nitrate Watch: <u>www.nitratewatch.org</u> Creek Critters: <u>www.iwla.org/creekcritters</u> Clean Water Hub: <u>www.cleanwaterhub.org</u> Virginia Save Our Streams: <u>www.VA SOS.org</u> Chesapeake Monitoring Cooperative: <u>www.chesapeakemonitoringcoop.org</u>

Follow us on social media to keep up with the latest SOS news and updates, and subscribe to our Stream Monitor newsletters at <u>www.iwla.org/water</u>!

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



photo: Ashley Palmer





