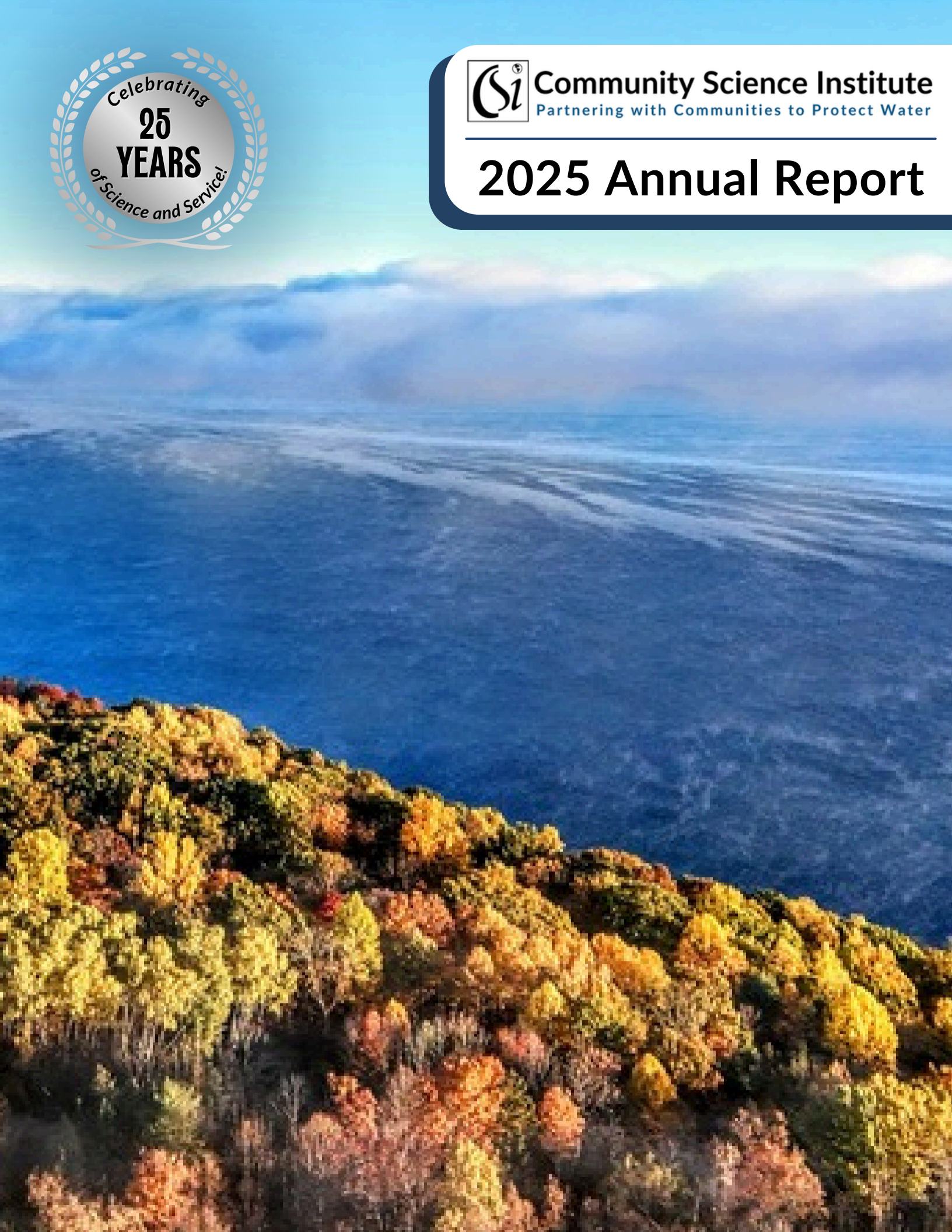
Celebrating 25 YEARS of Science and Service!

Community Science Institute

Partnering with Communities to Protect Water

2025 Annual Report



From the Desk of CSI's Executive Director

Dear Friends and Supporters,

In 2025, Community Science Institute celebrated an important milestone: our 25th anniversary. For a quarter century, CSI has worked alongside volunteers, partners, and communities to advance the protection of our region's water resources through accessible, community-driven science. Together, we have cultivated an impressive dataset containing over 150,000 water quality data points.

This year reflected both the strength of that legacy and the energy of the community behind it. Volunteers continued to power our monitoring programs: tracking a record-breaking harmful algal bloom season on Cayuga Lake, collecting stream and lake samples across several regional watersheds, and monitoring about two dozen new and long-term stream locations for benthic macroinvertebrates. At the same time, CSI expanded its impact through new initiatives, including the launch of our Water Testing Assistance Program to increase access to drinking water testing and continued expanding our outreach capacity through the Journey of Water summer youth education series, public presentations, and community events such as our HABby Hour.

Grascen scouted sampling sites in March 2025 for the new Owego Creek monitoring project in collaboration with the Al Hazzard Chapter of Trout Unlimited.

As we reflect on 25 years of Community Science Institute, I am deeply grateful to the volunteers, staff, partners, and supporters who make this work possible. Your dedication ensures that rigorous, accessible science continues to inform stewardship and safeguard our region's waters for years to come.

With gratitude, Grascen Shidemantle, Ph.D. , Executive Director

2025 Staff & Board of Directors

Staff:

- Grascen Shidemantle - *Executive Director*
- Noah Mark - *Laboratory Director*
- Katia Appel - *Office Administrator*
- Seth Bingham - *Water Quality Scientist, Quality Assurance Officer*
- Adrianna Hirtler - *Biomonitoring Coordinator*
- Rama Hoetzlein - *Database Developer*
- Alyssa Johnson - *Outreach & Programs Coordinator, Cayuga Lake Harmful Algal Bloom Monitoring Program Coordinator*
- Aditi Khare - *Database Developer*
- Daniel Pascucci - *Water Quality Scientist*

Contract Services:

- William George - *Data Entry Specialist*

College Student Interns:

- Kendall Wilcox - *Hobart & Williams Smith Colleges*
- Jacqueline Fischer - *Ithaca College*
- Jared Thomas - *Ithaca College*

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- Angel Hinickle - *President*
- Stephen Carroll - *Vice President*
- Darby Kiley - *Secretary*
- Stephen Penningroth - *Treasurer*
- Gerald VanOrden
- Deborah Jones
- Robert Thomas
- Robert Meek
- Hollie Ellison
- Maura Beatty

Annual Report:

- Grascen Shidemantle - *Editor*
- Alyssa Johnson - *Annual Report Design*

Cover photo: Autumn colors meet low-hanging clouds above Cayuga Lake on October 28, 2025. Photo by Mike Dressing.

Certified Lab Operations

In 2025, CSI's certified laboratory provided independent water quality testing to support public safety, environmental management, and recreational water monitoring across Cayuga Lake and surrounding communities. As part of hydrilla control efforts, the U.S. Army Corps of Engineers Buffalo District, **in collaboration with NYSDEC, conducted ten Fluridone (Sonar® H4C) herbicide treatments near Ithaca and Wells College Bay, with CSI analyzing approximately 600 water samples** to ensure concentrations remained below drinking water limits, protecting both public health and water quality.

The laboratory also tested **approximately 130 public swimming area samples for *E. coli* and/or microcystin on behalf of New York State Parks**, helping maintain safe, contaminant-free waters for visitors. To safeguard drinking water, **over 100 paired raw (source lake water) and finished (post-treatment) drinking water samples were evaluated for microcystins, confirming that municipal systems serving over 50,000 residents** effectively screened for and removed harmful cyanotoxins before distribution. Additionally, **more than 1,700 drinking water samples submitted by county health departments, local businesses, and community members were tested for total coliform and *E.coli*, with nearly 22% requiring follow-up due to the presence of bacteria**. Because potable water is defined by the absence of total coliform and *E.coli*, this monitoring enabled timely corrective actions to protect public health.

New in 2025, CSI also expanded volunteer support for laboratory operations by recruiting and training four volunteers to assist with bottle washing and preparing water sample kits. These volunteers followed CSI's Standard Operating Procedures to ensure sample integrity, prevent contamination, and maintain certified results. Synoptic Stream and Lake and Harmful Algal Bloom Monitoring programs generate large volumes of sample bottles, and assembling collection kits is a time-intensive task that previously relied entirely on staff. **In total, volunteers contributed approximately 189 hours washing bottles and 78 hours preparing sample kits—equivalent to nearly seven full-time work weeks—helping maintain consistent, high-quality laboratory operations.**

New volunteers, Dr. Neil and Maureen Shallish, joined CSI in February 2025, helping assemble sample kits and wash bottles.

Water Testing Assistance Program

Everyone deserves the peace of mind that comes with knowing their drinking water is safe. For households relying on private wells, routine testing is essential to detect contaminants like bacteria and nitrates, but cost can be a barrier. In response, CSI launched the Water Testing Assistance Program (WTAP) in October 2025 to make high-quality drinking water testing more accessible to low-income households.

Participants receive:

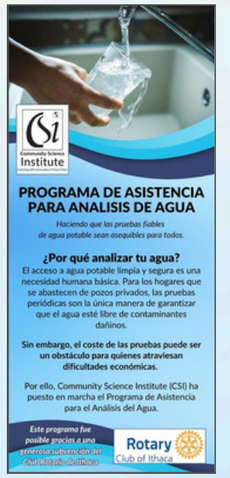
- 50% off CSI's in-house drinking water tests
- Personalized recommendations from CSI's scientific staff to help determine which tests are most relevant

Who can participate:

- Private households experiencing financial hardship
- Residents from any municipality or county
- Eligibility is determined through self-reporting or referral from trusted partner organizations, including Ithaca Neighborhood Housing Services and Tompkins County Whole Health's Healthy Neighborhoods Program

Through WTAP, CSI ensures that financial constraints do not prevent households from confirming their drinking water is safe, empowering communities with both data and guidance.

¡Ahora disponible en español! Si el español es su idioma preferido, CSI cuenta con varios miembros del personal que hablan español y pueden ayudarle.



Supported by a community grant from the Rotary Club of Ithaca, the program reflects a shared commitment to public health and equity.

Rotary Club of Ithaca

Biological Monitoring Program

In 2025, the Biomonitoring Program **conducted monitoring at 21 sites across 15 streams**, including one new sampling location, supporting both long-term trend tracking and program expansion. A **total of 25 samples were collected,** with replicate sampling at four sites to strengthen data quality. Monitoring efforts were supported by **22 Open Lab Nights and 84 trained volunteers**, reflecting strong community participation and program capacity.

Youth engagement and public education remained central to program delivery. **Staff and volunteers led six Stream Biomonitoring Rapid Assessments with youth**, including Biomonitoring Fun! events, the Sciencenter Future Science Leaders collaboration, and programming with the Greater Ithaca Activities Center summer camp. Additional outreach included library programs, Master Naturalist training at Arnot Forest, and hands-on activities at community water events across the region.

Future scientists collect benthic macroinvertebrate samples at Buttermilk Falls State Park in August 2025.

The program advanced applied research and partnerships throughout the year. Collaborations included a project with the Sciencenter focused on water quality in the Cayuga Lake watershed, with results presented at the Association of Science and Technology Centers Annual Conference; research with the New York State Water Resources Institute on neonicotinoid insecticides in streams; and stream microbiome research with Ithaca College. Biomonitoring data collection also supported watershed restoration efforts, including sampling to understand the potential impacts of dam removal on Owego Creek.

Together, these efforts demonstrate the program's continued role in generating credible environmental data, supporting research and restoration, and engaging communities in watershed science.

Cayuga Lake Harmful Algal Bloom Monitoring Program

In 2025, CSI's Cayuga Lake Harmful Algal Bloom (HAB) Monitoring Program maintained **weekly shoreline surveillance across 66 volunteer-monitored zones, supported by more than 85 trained volunteers serving as HABs Harriers** (shoreline surveyors) and HABs Carriers (sample transporters). The program received **284 HAB reports, a 124% increase from 2024,** with **community-submitted reports increasing by 25%**, indicating that outreach and education efforts are reaching more lake users. The first bloom was reported on July 5, more than a month later than the previous year, while the latest bloom report on record was received on November 7.

A total of **34 samples were strategically collected from 14 priority monitoring sites identified by county health departments** to strengthen public health relevance and program efficiency. **All samples underwent microscopy and microcystin analysis, with chlorophyll-a testing completed for 33 samples.** Toxicity patterns remained consistent with previous years, with more than half of samples exceeding the New York State contact recreation limit for microcystin of 4.0 µg/L.

A large HAB event occurred at Frontenac Park in Union Springs in October 2025.
Photo taken via drone by Nicholas Leonard Dronography.

Bloom activity included a significant shoreline-wide event along Cayuga Lake's western shore from Canoga to Ithaca in early July, while overall HAB activity peaked between mid-September and mid-October. Program partners, Cayuga Lake Watershed Network and Discover Cayuga Lake, supported outreach efforts throughout the season. CSI also hosted HABby Hour, a free public event, offering community members an informal opportunity to learn about HABs and speak directly with staff.

Synoptic Stream & Lake Monitoring Program

CSI coordinated **53 monitoring events with 101 volunteers, who collected 571 water samples from 48 streams across the Cayuga Lake watershed** to assess regional water quality conditions. All samples were analyzed in CSI's certified laboratory for nutrients, sediment, chloride, *E. coli*, and additional key indicators. These efforts contribute to a long-term dataset now **exceeding 91,000 water quality measurements spanning 23 years** in the Cayuga Lake watershed.

In collaboration with Dr. Cynthia Becker of Ithaca College, **volunteers monitoring Six Mile Creek collected additional samples in March 2025 to support characterization of the creek's microbiome:** the diverse community of microorganisms, including bacteria and fungi, that influence aquatic ecosystem health. These microbial data will be integrated with concurrent stream chemistry measurements collected by the Six Mile Creek volunteer team and are part of an ongoing research initiative continuing into 2026.

Fall Creek volunteer, Charlie Trautmann, collects water samples using a bucket, as limited shoreline access at this site requires an alternative sampling approach to safely reach the stream.

CSI also maintained its long-standing partnership with **Seneca Lake Pure Waters Association (SLPWA), providing volunteer training and laboratory services** for their tributary monitoring program in the Seneca Lake watershed. In 2025, **CSI analyzed samples from two baseflow events and three stormwater events across eight streams**, in collaboration with SLPWA volunteers.

Additionally, CSI expanded its Synoptic Program partnerships by working with **Friends of the Upper Delaware River (FUDR) to deliver training and water quality analysis for seven monitoring locations** across the East and West Branches of the Upper Delaware River and the Beaver Kill tributary. This effort represents the first inclusion of Upper Delaware River watershed data in CSI's Streams and Lakes Chemistry Water Quality Database.

Owego Creek Tributaries Monitoring Project with Trout Unlimited

In 2025, CSI partnered with the Al Hazzard Chapter of Trout Unlimited to launch the Owego Creek Tributaries Monitoring Project, assessing habitat conditions for potential wild brook trout (*Salvelinus fontinalis*) reintroduction. Streamside water quality monitoring was conducted in a manner similar to CSI's former Red Flag program, focusing on headwater tributaries in Tompkins and Tioga Counties to identify potential spawning habitat.

Fifteen volunteers participated in three seasonal monitoring events at 10 tributary sites across Tompkins and Tioga Counties, measuring temperature, pH, dissolved oxygen, and conductivity—key indicators of trout habitat health. **Results showed generally suitable conditions: temperatures remained below the 24°C tolerance threshold, conductivity stayed under 500 µS/cm, and pH ranged from 6.75 to 8.5**. Some sites experienced low dissolved oxygen during July, dipping below the 5 mg/L threshold critical for brook trout, highlighting the need for continued monitoring across seasons.

Volunteers (L-R) Lou Church, Anne Johnson, Robert Johnson, and Janice Glover monitored Sulphur Springs Creek in 2025.

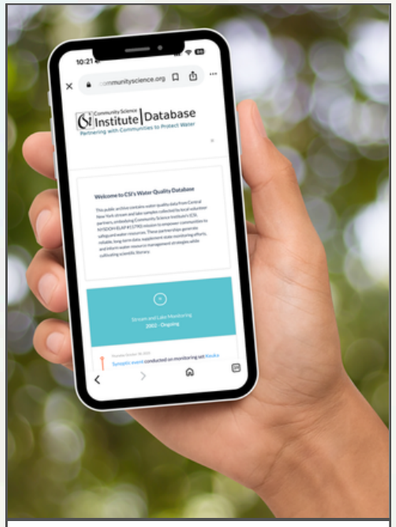
Designated a priority by Trout Unlimited, the Owego Creek watershed is one of the most intact brook trout systems in western New York and supports a range of sensitive species. Future efforts will focus on restoring stream connectivity, enhancing climate resilience, and supporting the successful reintroduction of native, wild trout populations.

CSI's Water Quality Database

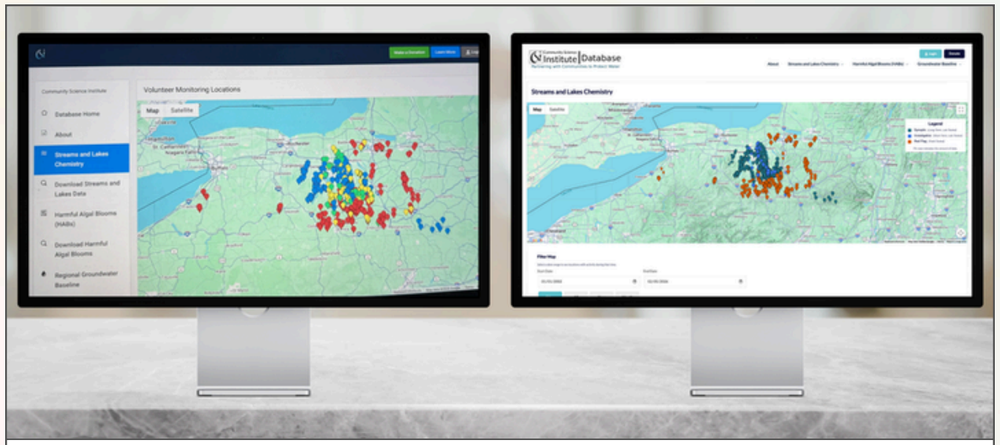
In 2025, Community Science Institute made a series of upgrades to its public water quality database and website to improve accessibility, usability, and data transparency. This public archive contains water quality data from Central New York stream, lake, and groundwater samples collected by local volunteer partners, embodying CSI's mission to empower communities to safeguard water resources. These partnerships generate reliable, long-term data, supplement state monitoring efforts, and inform water resource management strategies while cultivating scientific literacy.

Key improvements in 2025 include:

- Mobile-friendly database for easier access on any device
- Modernized interface and branding aligned with CSI's main website
- Accessibility improvements including color-blind-friendly maps and site themes and clearer graph symbols
- Enhanced data tools:
  - Graphs can be downloaded directly as image or PDF files
  - Streams and Lakes Map can be filtered by date
  - Monitoring regions, locations, and graph analytes listed alphabetically
  - Stream and site names reformatted for readability
- HAB database export feature now includes analyte results and microscopy data
- Database security has been enhanced to reduce automated bot traffic while supporting more human users
- Updated Terms of Use including detailed instructions on acknowledgements which are required by those making use of CSI's data



Swipe, tap, explore:
Central NY water quality on the go!



Old vs. new: CSI's water quality database gets a fresh, modern look.

These upgrades were made possible by CSI's database developers, Rama Hoetzlein and Aditi Khare, who continue to ensure that CSI's water quality data is reliable, accessible, and user-friendly for volunteers, researchers, and the public.

The Journey of Water: CSI's Youth Education Series

The Journey of Water (JoW) program series engages youth and families through hands-on environmental education experiences that explore watershed science and water quality across the Cayuga Lake watershed. Designed to be accessible and place-based, JoW prioritizes reducing barriers to participation while fostering meaningful connections between communities and their local water resources.

In 2025, JoW engaged 197 participants, up from 149 in 2024, across a wide range of household incomes. Thanks to support from the Park Foundation and M&T Charitable Foundation, all programs were offered at no cost to participants, providing hands-on science learning for youth ages 6–14.

Among 137 unique respondents, 32% self-reported household incomes at or below $58,000—below the U.S. Census Bureau median for Tompkins County. Most participants (76%) are local residents. According to the New York State Community Action Association, 23.1% of Tompkins County households fall below the Asset Limited, Income Constrained and Employed (ALICE) threshold, underscoring ongoing financial strain despite employment. These data reinforce the importance of CSI's free programming in expanding access to environmental education.

The 2025 series included Stream Biomonitoring Fun!; Water Quality Cruises; Wild Wetlands, Fantastic Filters; From Creek to Faucet; From Lake to Faucet; Down the Drain, Into the Lake; and a new Finger Lakes Farm Tour. Hosted at Laughing Goat Fiber Farm in partnership with the Tompkins County Soil and Water Conservation District, the Farm Tour highlighted how land use impacts water quality through stormwater runoff demonstrations, conservation practices, and concluded with an Enviroscape model demonstration.

Season partners included New York State Parks, Discover Cayuga Lake, Montezuma National Wildlife Refuge, Sapsucker Woods Sanctuary at the Cornell Lab of Ornithology, the City of Ithaca, the Southern Cayuga Lake Intermunicipal Water Commission, and the Ithaca Area Wastewater Treatment Facility, concluding with a fun celebration at the Cayuga Nature Center.

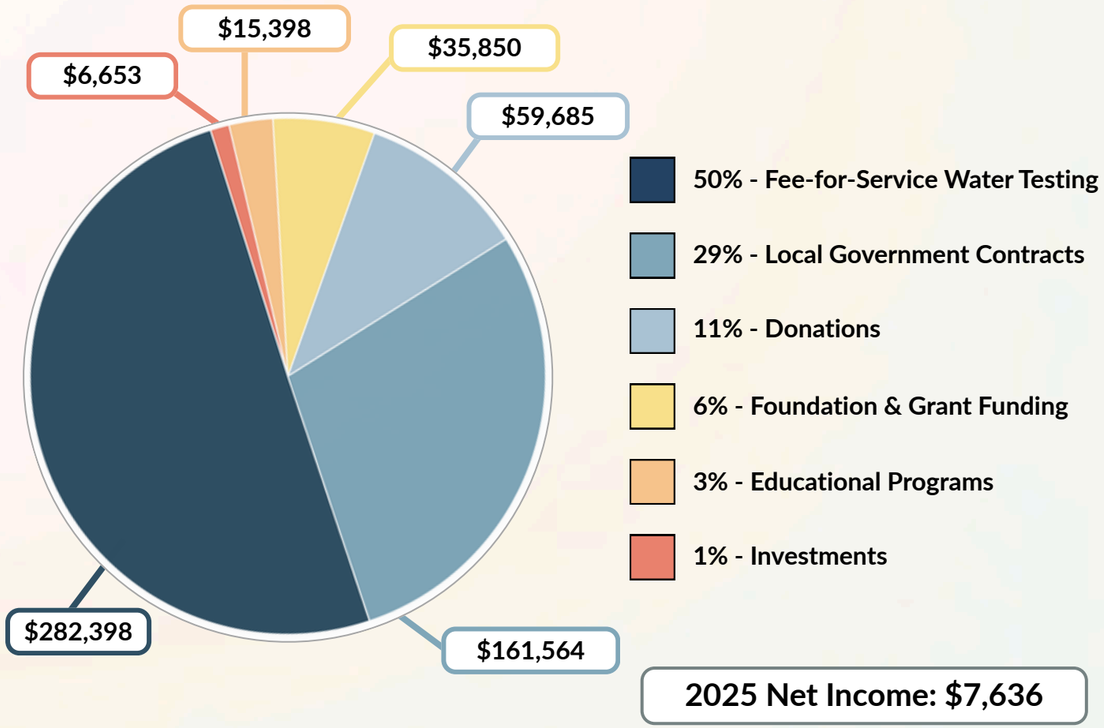
Passport to adventure complete! These 5 young explorers (plus a baby brother) earned their 2025 JoW t-shirts by attending at least half of the programs and completing their passports.

Outreach Efforts

Board members, Deborah Jones and Darby Kiley, attended the "Tru/Uly Earth Care Day" in May 2025 in Trumansburg.

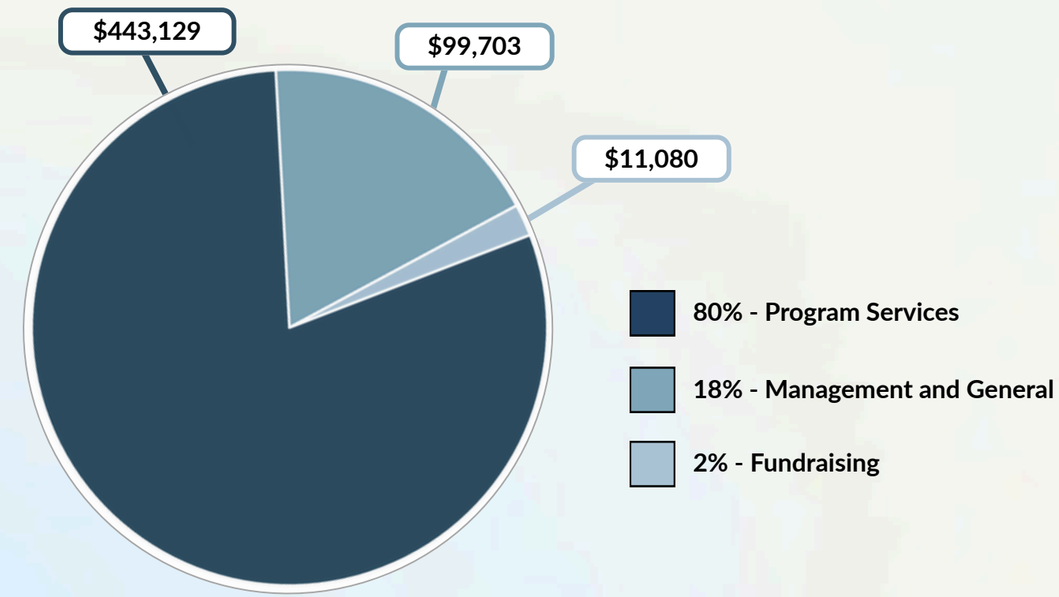
In 2025, CSI completed over 50 public engagement efforts, reaching a wide range of community members through the Journey of Water youth series, local presentations, participation in festivals like Ithaca Reggae Fest, conferences such as the Cayuga Lake Watershed Network's Community Conference, and HABby Hour event. The revived Outreach Committee, made up of staff and volunteers, played a key role in planning, promoting, and supporting these activities, helping to ensure each event was well-organized and widely publicized. **More than half (53%) were CSI-hosted programs, 26% involved attending festivals or fairs, and 21% were presentations for municipalities and community groups,** reflecting both the diversity and scale of CSI's outreach in 2025.

Total 2025 Income: $561,548



2025 Net Income: $7,636

Total 2025 Expenses: $553,912



Local Government Support for Water Quality Monitoring

- Cayuga County: $31,140
- Seneca County: $13,125
- Tompkins County: $37,530
- City of Ithaca: $9,450
- Town of Caroline: $3,570
- Town of Danby: $4,552
- Town of Dryden: $11,880
- Town of Enfield: $2,706
- Town of Ithaca: $23,766
- Town of Lansing: $7,428
- Town of Newfield: $6,795
- Town of Ulysses: $6,832
- Village of Cayuga Heights: $2,790

Grants & Other Financial Awards

- Community Foundation of Tompkins County
  - The McPheron Family Fund $500
  - The Howland Foundation: $7,500
- Cornell University: $7,350
- The Legacy Foundation of Tompkins County: $5,000
- The Park Foundation: $10,000
- Rotary Club of Ithaca: $1,500
- The Cayuga Fund: $1,500
- The M&T Charitable Foundation: $2,500

2025 CSI Individual, Family, & Group Memberships

Community Science Institute is honored to recognize a generous memorial contribution made in memory of M. Louise Cannon.

*We are also deeply grateful to have received memorial contributions in honor of **Helen Mandeville** and **Maria E. Ossman**. We carry this work forward with gratitude and a strong sense of responsibility in their memory.*

John Abel
Amanda Agan
Paul Allderige
Victoria Armstrong
Robert Barton
Grace Bates
Diana Beckenhaupt
Harriet & Franklin Becker
Diane Beckwith
Harry Miller & Deb Bilinski
James Bobnick
Raymond Brisson
Linda Brisson
Taylor Buhler
Stephen* & Sherie ***Carroll*
Tom & Amy Casella
Barbara Chase
Steven Chenenko
Diane Chu
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David Cleveland
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Karen Comstock
Denise E. Costich
Marilyn Crooker
Marnie Cryer
Edward Currier
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Sheila Ann Dean
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Sara Hess & Jeff Furman
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Glenn & Sandy Galbreath
Alison Gelsleichter
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James Peter Gregoire
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Robert & Anne Johnson
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Judith Abrams & Sherman Kelly
****Darby Kiley***
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Liz Kreitinger
Andrew Yale & Brenda Kuhn
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Lynn Leopold
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Louise Mudrak
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Elaine Quaroni
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David Wolfe
Tina Wright
Stephen & Amy Yale-Loehr
Trista Yip
Aleah Young
Courtney Zempel
Anonymous Donors (3)

Cayuga Lake Watershed Network
Cayuga Shoreline
Ithaca Reggae Fest
Taughannock Garden Club
West Shore Neighborhood Association

****2025 CSI Board Members***

Percentage of donors at each membership level:

- Creek $25: 17%
- Stream $50: 15%
- River $100: 37%
- Lake $250: 10%
- Estuary $500: 6%
- Watershed $1000+: 15%

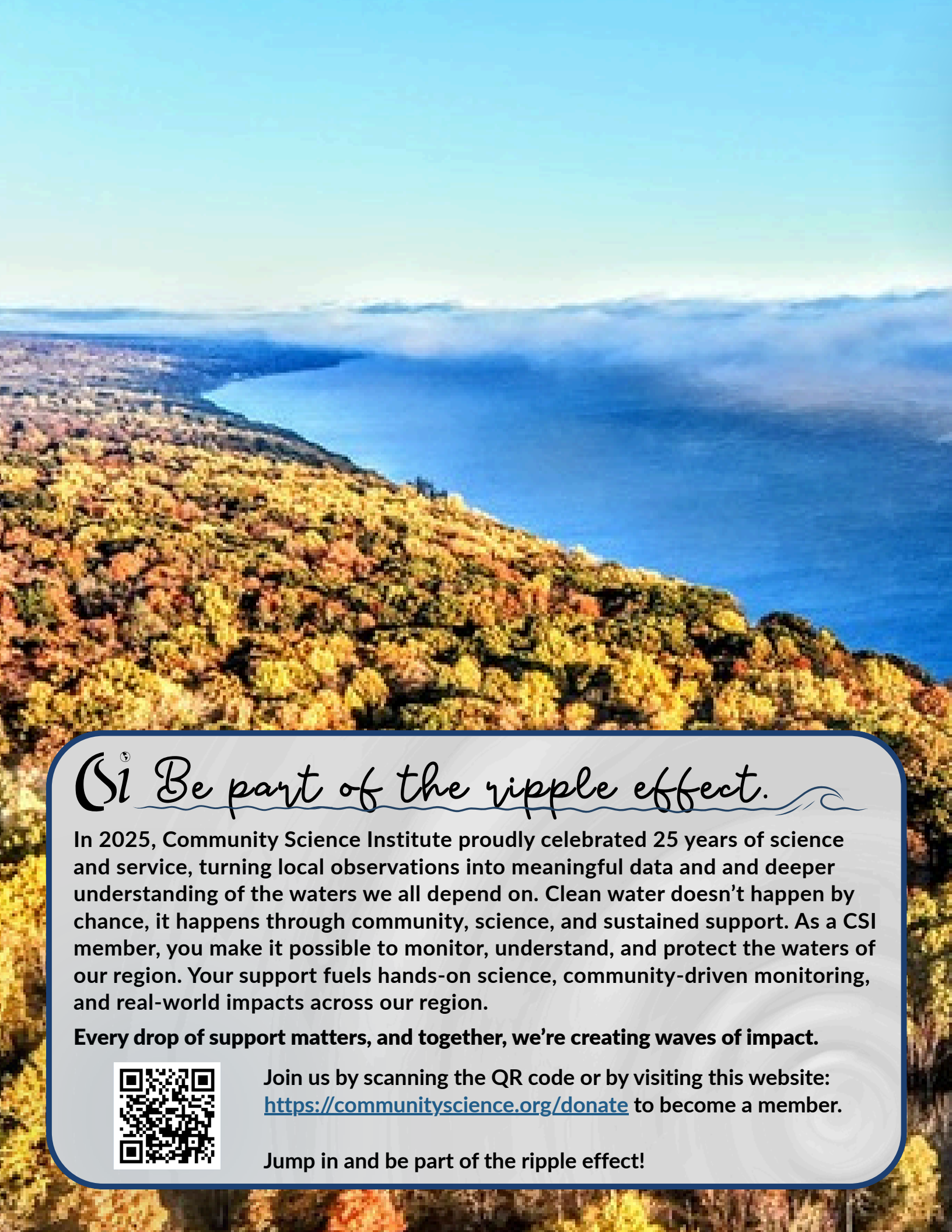
2025 Business Memberships

In early 2025, CSI launched its Business Membership Program to engage local businesses in protecting the health of our streams, lakes, and watersheds. This new initiative offers businesses opportunities for community engagement, recognition, and branding— all while supporting our water quality monitoring programs, our outreach and education initiatives, and our ability to offer water testing services to hundreds of residents and business owners each year.

We gratefully acknowledge our Business Members for their vital support. Their commitment to environmental stewardship strengthens our mission to protect water quality and engage communities through scientific monitoring and education across the Finger Lakes region and beyond!

Stream Stewards: $250 – $1,000

Lake Leaders: $1,001 – $5,000



Be part of the ripple effect.

In 2025, Community Science Institute proudly celebrated 25 years of science and service, turning local observations into meaningful data and and deeper understanding of the waters we all depend on. Clean water doesn't happen by chance, it happens through community, science, and sustained support. As a CSI member, you make it possible to monitor, understand, and protect the waters of our region. Your support fuels hands-on science, community-driven monitoring, and real-world impacts across our region.

Every drop of support matters, and together, we're creating waves of impact.

Join us by scanning the QR code or by visiting this website: https://communityscience.org/donate to become a member.

Jump in and be part of the ripple effect!