

Community Science Institute

2013 Annual Report

Partnering with communities to protect water since 2002

2013 Highlights

- ◆ Completed our 11th year of water quality monitoring in **Southern Cayuga Lake's** seven major tributary streams
- ◆ Redesigned our **online database** to include results from groundwater wells
- ◆ Published an article about baseline testing in the peer-reviewed journal *New Solutions*
- ◆ Added 35 new **Red Flag** monitoring sites in NY's Southern Tier
- ◆ Tested more than 80 private wells for pre-fracking **baseline data**
- ◆ Assessed stream ecology with **Biological Monitoring** at 15 locations
- ◆ Grew our **certified lab's** capacity by moving to a larger lab and upgrading equipment
- ◆ Involved 150+ volunteers in water quality monitoring programs



This monitoring site on **Cayuta Creek** in Lockwood, NY, was one of the first Red Flag monitoring locations established in 2010. **The Red Flag program now has over 80 active sites spanning twelve counties.** Many original sites, like this one, are still monitored regularly by volunteers for baseline parameters.

Cayuga Lake

Our 7 synoptic volunteer monitoring partnerships continued to thrive in 2013. Volunteers held 18 monitoring events, including 7 under high flow conditions. Certified data from these events is being used by agencies and researchers to help understand and manage nutrients, sediment, and pathogenic bacteria.

Certified Lab

Our lab moved to a larger space, from 600 ft² to 870 ft². We passed our biannual 3-day on-site inspection by the NY State Dept of Health. Aging lab equipment was replaced, including an incubator for bacteriological testing. Our lab performed over 6,000 certified water tests in 2013.

Online Database

The vehicle for disseminating monitoring results to the public, our database underwent major behind-the-scenes structural changes. The new database holds pre-fracking baseline test results from 300+ private wells across New York State in addition to results from our volunteer stream monitoring partnerships.

"Tell me and I forget. Teach me and I may remember. Involve me and I learn." - Benjamin Franklin

Biological Monitoring

Collecting and identifying aquatic insects (Benthic Macro Invertebrates or BMI) is an effective method for evaluating water quality. In 2013, 38 CSI volunteers collected samples from 15 locations - our biggest year yet! We completed a successful "BMI in the Classroom" module at Newfield High School. We collaborated with the Sciencenter in Ithaca to involve dozens of summer campers and their families in collecting and identifying insects from nearby Cascadilla Creek.

The best part? BMI Results show mostly **excellent stream health**, with exceptions at locations near intensive agriculture and Trumansburg's wastewater treatment plant.



Alan Steinberg of Afton identifies a mayfly from Bump's Creek in Chenango County

Our Mission

The mission of the Community Science Institute is to foster and support local environmental monitoring in partnership with volunteers in order to gain a better understanding of natural resources and how to manage them for long-term sustainability.

Our Donors

Watershed (\$1000+)

Anonymous
Patricia Nelson
Dylan Penningroth
David Weinstein & Christina Stark

Lake (\$250+)

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Steve Penningroth & Judy Roberts
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Chris Riley
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Creek (\$25)

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Creek, continued (\$25)

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Hilary Lambert
Lili MacCormick

Roberta & Anto Parseghian
Nancy Skipper
Risa Sokolsky
Mike Straight
Gary Street
Don & Sue Rakow
Gerri Wiley

Regular Grants & Contracts:

Tompkins County - \$25,250
Town of Ithaca - \$18,740
Town of Dryden - \$12,282
City of Ithaca - \$10,488
Town of Ulysses - \$5,496
Town of Newfield - \$4,541
Town of Danby - \$3,590
Town of Caroline - \$2,817
Cornell University - \$1,700
Town of Hector - \$1,000
Community Foundation of
Tompkins County - \$500
Town of Spencer - \$450

CSI Board of Directors

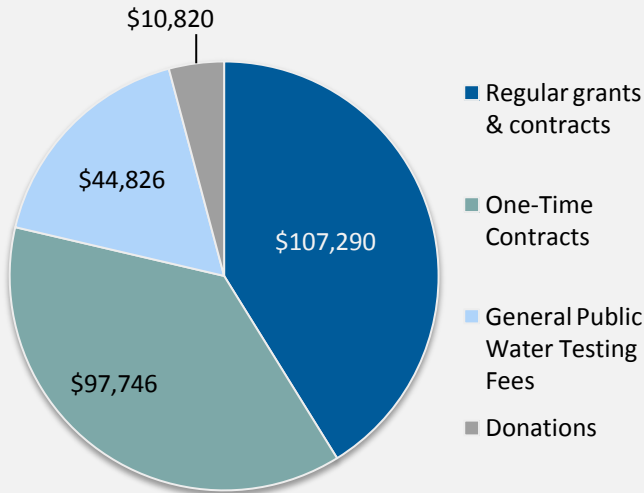
David Weinstein, *President* Angel Hinckle, *Vice President* Eric Evans, *Secretary* Stephen Penningroth, *Treasurer*
Gerald Van Orden Deborah Jones Robert Barton Patricia Nelson

CSI 2013 Income

Total: \$260,682

Regular Income: \$162,936

One-Time Contracts: \$97,746

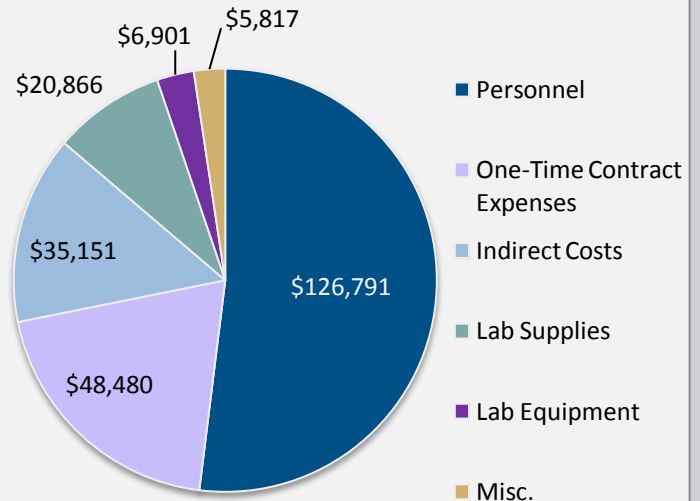


CSI 2013 Expenses

Total Expenses: \$244,006

Regular Expenses: \$195,526

One-Time Expenses: \$48,480



Executive Director's Message

In pursuit of our mission to produce and disseminate scientifically credible water quality data, CSI accomplished a lot in 2013, as the highlights in this report show. Our team at 283 Langmuir Lab is a lean, mean, data-generating machine! We produced in our lab and through our sub-contract labs -- and posted on our website -- over 11,000 nationally (NELAC) certified data items; coordinated and supported 38 teams of volunteers in 15 New York counties; hosted a dozen public forums and workshops; collected and identified more than 5,000 aquatic organisms (BMI) to assess stream health; and published a peer-reviewed article on our initiative to establish pre-fracking baselines for groundwater and surface water quality in New York's Marcellus Shale region.

The charts of 2013 income and expenses on this page show that in order to accomplish our goals, we had to rely on several one-time contracts which, though wonderfully fortuitous, are unlikely to come our way again. CSI's core income has hovered between \$160,000 and \$170,000, and our regular expenses have hovered around \$200,000, in each of the past three years. This persistent budget gap of \$30,000 to \$40,000 is due to a combination of factors: Cuts in support by New York State and Cornell University, the reluctance by some municipalities to contribute to our Tompkins County-wide monitoring efforts, increased staff expenses as we have expanded our biological (BMI) monitoring activities and public outreach programming, the need to replace aging equipment, and the relentless ascent of the cost of laboratory supplies.

Our board launched a membership campaign in 2012, and I am pleased to report that many of our friends and volunteers have stepped forward to become members -- and then renew their memberships in 2013. Thank you!!! We are expanding our fundraising activities this year under the leadership of CSI's new Director of Outreach, Becky Sims. We must plug our budget gap without compromising our mission.

With your help, we will!

Stephanie L. Penningroth



Community Science Institute

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Certified Water Quality Testing Lab
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EPA Lab Code NY01518

Send To:

Partnering with communities to protect water



Red Flag Monitoring

Our newest volunteer program has the goal of establishing baseline data for small streams and creeks prior to "hydrofracking". Volunteers test for temperature, pH, dissolved oxygen, total hardness, and conductivity. We held two series of training workshops in 2013, training 39 new volunteers to monitor 31 new locations. The Red Flag program now has a total of 101 volunteers monitoring 82 stream locations in 12 New York counties.



The Vestal-Endicott "Stream Team"

Do you know What's In Your Watershed?

CSI's "What's In Your Watershed?" lecture series was successful throughout 2013, highlighting important water quality issues in the Cayuga Lake watersheds where teams of CSI volunteers are actively monitoring. More than 100 citizens and local government officials attended the series, engaging in meaningful conversations about how to protect our water resources for long-term health.



Community members discuss water quality issues at a "What's In Your Watershed?" event.