



CASE STUDY

Scholastic Aquatic Partnership Project Educates Young Women in STEM Fields

Delta Environmental, formerly Delta Laboratories, has a rich history of environmental advocacy and education with hands-on programs for K-12 students on water resources and quality.

The Scholastic Aquatic Partnership and Adopt-A-Stream curriculum creates grassroots efforts to test, advocate and protect water resources. The program has taught hundreds of K-12 students' values and strategies to protect our waterways. Through this program Delta Environmental has educated the community on the importance of water quality and the integrity of local watersheds.

Delta Environmental partnered with Rochester's two all-girls schools. Young Women's College Prep is Rochester's first and only all-girls public school that educates more than 220 students in grades 7-9 in an urban setting. Our Lady of Mercy School for Young Women is an all-girls private school that has been educating students since 1928. This partnership supported young women interested in the STEM (science, technology, engineering, and math) fields by demonstrating the role of science in protecting our urban and suburban communities.

CHALLENGE

Lake Ontario is listed as the most stressed of the Great Lakes, according to research completed by the Great Lakes Environmental Assessment and Mapping Project. This program found 34 stressors, including coastal development, climate change, invasive species and toxic chemicals. Many Western New York residents rely on Lake Ontario and surrounding waterways to swim and recreate. Year after year, beaches along Lake Ontario are closed because of unhealthy water quality.

SOLUTION

Scholastic Aquatic Partnership aimed to educate a new generation about the state of the Lake Ontario watershed. Using over 40 years of experience, the project connected experts in the field, two school districts, and key community members. By measuring and documenting actual lake conditions and identifying respective contributory effects, students were able to gain hands-on experience in STEM fields and create a final report summarizing their results. Students also discussed and outlined individual and community-wide solutions that can be implemented to remediate the pollution sources impacting Lake Ontario.



(Photo Credit: Delta Environmental)

GM Engineer Cynette Cavaliere assists students participating in Scholarship Aquatic Partnership field trip

CHALLENGE

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SOLUTION

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- Students discussed and outlined individual and community-wide solutions that can be implemented to remediate the pollution sources impacting Lake Ontario

RESULTS

- A hands-on environmental program that tested the waters of Irondequoit Creek and Lake Ontario through water chemistry tests and biotic indices was completed
- The program included student and teacher pre- and post-survey development and distribution, 120 lab manuals printed, 9 lessons conducted, 15 posters created, 2 videos produced, and 6 community and government presentations that reached 68 people

CONTACT INFO

KAETI STOSS
Program Director
585-305-2226
kstoss@adopt-a-stream.org

Delta Environment
410 White Spruce Blvd.
Rochester, NY 14623

RESULTS

A hands-on environmental program that tested the waters of Irondequoit Creek and Lake Ontario through water chemistry tests and biotic indices. Female scientists from the Rochester Operations of General Motors and faculty from SUNY Buffalo helped run this field trip.

The program included 95 8th grade students from two Rochester area schools, Our Lady of Mercy School for Young Women and the Young Women's College Prep. Students saw the impact of pollution on the health of their local waterways, collaborated with students from other schools on the analysis and the reporting of their data, and presented this information to the local community and their families.



(Photo Credit: Delta Environmental)
Students participating in Scholarship Aquatic Partnership field trip

The program included student and teacher pre- and post-survey development and distribution, 120 lab manuals printed, 9 lessons conducted with educators from the Stormwater Coalition and H2O Hero (prior to field trip), 15 posters created, 2 videos produced, and 6 community and government presentations that reached 68 people, include the Rochester City mayor and Monroe County officials.

ONLINE MEDIA

[Website](#)

[Facebook](#)

[Twitter](#)

[Video 1 - Scholarship Aquatic Partnership field trip](#)

[Video 2 - Scholarship Aquatic Partnership field trip](#)



¹ <http://www.greatlakesmapping.org/home>

TESTIMONIAL

"The New York State Pollution Prevention Institute's Community Grant Program made it possible for us to fully support two local schools in their effort to expand STEM offerings. Our Scholastic Aquatic Partnership was highly successful in that the students involved gained invaluable hands-on learning about their local natural environment, and actively problem-solved how to prevent pollution."

-Karen Kessler, Board President
Delta Environmental

"It is exciting to meet kids our age and we all come from different backgrounds. It is nice to meet new people. We were testing a bunch of water samples, and it is exciting to see exactly what is in it"

- Sarah Hentschke, 8th Grade
Mercy High School

"Our water right now isn't very clean. Pollution in the air and water is bad for animals. We need cleaner water. I like it (the program), because I love science."

- Robynnique Ford, 8th Grade
Young Women's College Prep

NYSP2I PARTNERS

R.I.T



University at Buffalo
The State University of New York



New York Manufacturing Extension Partnership

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For more information please contact us:

111 Lomb Memorial Drive, Bldg. 78
Rochester, NY 14623

Tel: 585-475-2512
Web: nysp2i.rit.edu
E-mail: nysp2i@rit.edu

