

onondaga lake cleanup 2014 update



partners in progress:

A STORY OF GROWTH
AND RENEWAL



Honeywell

Wildlife Returns to Restored Wetlands

On the shores of Onondaga Lake and along the lake's tributaries, Honeywell is improving up to 50 acres of wetlands and planting about **1.1 million plants, shrubs, and trees** to enhance habitat for fish and wildlife in the Onondaga Lake watershed. By the end of September, **37 acres of wetlands** had been restored. **More than 110 species of fish, birds and mammals** have already returned to the restored wetlands and nearby areas.

Improvements at Geddes Brook and Nine Mile Creek are enhancing habitat and supporting a diverse population of wildlife. Brook trout and largemouth and smallmouth bass have been observed in the new Geddes Brook, and beaver and mink have returned to restored wetland areas. Work was completed to restore forested wetlands at Nine Mile Creek that feature silver maples, box elders, and a swamp white oak.

In 2014, work began to recreate wetlands at the mouth of Harbor Brook, which will support spawning for northern pike. Plants will help re-establish habitat at Harbor Brook, once dominated by invasive plant species. The habitat restoration work along the western shoreline in 2014 is visible to community members walking along the county's new Onondaga Lake west shore trail extension.



New England aster at Geddes Brook

Dredging 100% complete



“It’s a story of a community coming together to improve not only Onondaga Lake, but the quality of life in Central New York.”

–Cornelius B. Murphy, Jr., Ph.D., SUNY senior fellow for Environmental and Sustainable Systems and former president of SUNY-ESF

The Onondaga Lake cleanup is making terrific progress; the project is on schedule to be finished in 2016; dredging was completed in 2014, a year ahead of schedule.

Honeywell is working closely with Central New York partners including State University of New York College of Environmental Science and Forestry (SUNY-ESF), Parsons, O’Brien & Gere, Anchor QEA, Syracuse University, Audubon, Upstate Freshwater Institute, Severson Environmental Services, and hundreds of scientists, engineers, and skilled craft laborers to clean up and return Onondaga Lake to the community as a healthy, sustainable asset for future generations.

Significant milestones have been achieved. In addition to the dredging progress, the restoration of Geddes Brook wetlands was completed and remediation of the western

shoreline began; work to restore Nine Mile Creek was finished in 2014.

100+ SUNY-ESF students have

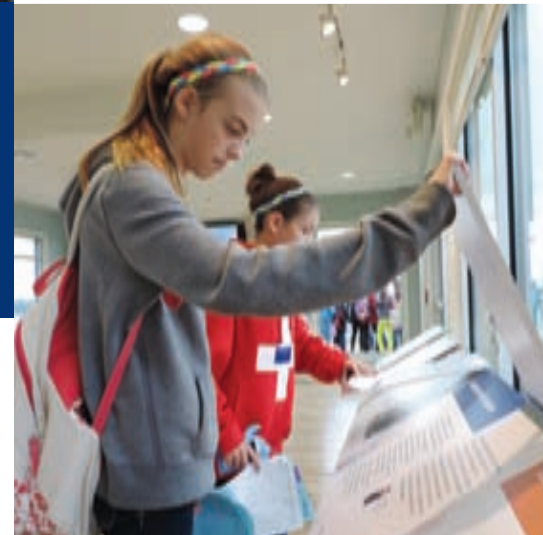
conducted studies on the Onondaga Lake watershed and its aquatic communities. Community input has played a vital role in shaping the Geddes Lakeshore and providing a vision for the southwest lakeshore.



Onondaga Lake Visitors Center Tours Open to All

7,600+ people have visited the Onondaga Lake Visitors Center, designed and built by Honeywell to provide public access to the significant work taking place by hundreds of scientists, engineers, and skilled craft laborers from this region.

To schedule a group tour, please call **315-552-9751** or submit the form on our website, lakecleanup.com. Open houses are held on Friday from 12-4:30 p.m. from mid-April to mid-November. There is no fee to visit.



“Our trip to the Onondaga Lake Visitors Center brought research to life. These authentic learning experiences, coupled with classroom instruction, enabled the students to make connections between the history of the lake and the community. They developed wonderful plans for the lake’s future and understand the importance of citizenship and community involvement.”

–Sue Verbeck, Pine Grove Middle School science teacher

Plant a Tree, Get Your Hands Dirty, Become an Environmental Steward

JOIN THE ONONDAGA LAKE CONSERVATION CORPS

Hundreds of community volunteers have become

environmental stewards of Onondaga Lake since the formation of the *Onondaga Lake Conservation Corps* in summer 2012.

The *Corps* is an expanding organization of community volunteers who are contributing to restoration projects that are creating or improving wildlife habitat in the Onondaga Lake watershed. The *Corps* seeks to inspire future stewards of Onondaga Lake and its watershed through a hands-on, experience-based program that offers citizens and organizations the opportunity to participate in activities that help restore and sustain Onondaga Lake and its value as an Important Bird Area.

Founding partners of the *Corps* include Montezuma Audubon Center, Onondaga Audubon Society, Parsons, O’Brien & Gere, and Honeywell.

Schools, community groups, local organizations, and individuals are welcome. To learn more or participate in future activities, please contact montezuma@audubon.org or call **315-365-3588**.



Honeywell

Learn more about the individual cleanup areas at: lakecleanup.com/map


Local Partnership Produces Scientific Success

One of the objectives of the lake cleanup is to lower the concentrations of contaminants in fish tissue, including mercury. This is being accomplished by dredging; installing a new, clean lake bottom; and treating the deep-water sections during the summer months. The lake bottom also will be monitored for natural recovery.

Local scientists from the Upstate Freshwater Institute in Syracuse and Syracuse University worked together to develop a solution to reduce mercury levels in the lake. Initial results have shown tremendous improvements in water quality and lower levels of mercury in fish such as smallmouth bass.

“To date we’ve seen a 95 percent reduction in methylmercury in the lake water. Much of this is due to Onondaga County’s efforts at the Metropolitan Syracuse Wastewater Treatment Plant in addition to the deep-water remedy. This is a remarkable achievement.”

–David Matthews, Ph.D., technical director and senior research scientist at Upstate Freshwater Institute



Nitrate barge on Onondaga Lake



Sound Science Drives Results

AIR MONITORING PROTECTS HEALTH AND SAFETY

Onondaga Lake operations are the culmination of years of investigations, engineering, discussion and dialogue, planning, and design. The cleanup plan is based on sound science and incorporates input from top national and local scientists, engineers, experts in the field, government agencies, and community members.

Working with hundreds of Central New Yorkers, Honeywell cleaned up former factory sites and built the infrastructure that paved the way for dredging and capping operations. Habitat has been enhanced along the lakeshore with native plants selected by the community.

About **2.2 million cubic yards of material** was removed from Onondaga Lake. The material was pumped to a consolidation area at former industrial property off Airport Road for drying and safe long-term isolation.

Community health and safety remain a top priority, and air quality is continuously monitored in accordance with the plan at the perimeter of the work zone. To date, all air quality criteria have been met.

Approximately 450 acres of the lake will be capped to provide a new habitat layer, prevent erosion, and isolate remaining contaminants.

Dredging was completed a year ahead of schedule. The early completion was the result of the focused execution of a carefully designed project plan. Capping and habitat restoration are on schedule to be completed in 2016. The cleanup is being done under the supervision of the New York State Department of Environmental Conservation (DEC), the U.S. Environmental Protection Agency (EPA), and the New York State Department of Health (DOH).

The use of biofuels, recycled materials, and other sustainable solutions are key elements of Honeywell’s Onondaga Lake remediation.

COMMUNITY PARTNERSHIPS

Community Shows Enthusiasm for Future Use of Onondaga Lake and Its Shoreline

Thousands of community members learned about the past, present, and future of Onondaga Lake and its shoreline at the 2013 New York State Fair. Fairgoers spoke with experts, watched educational videos, observed fish from the lake, saw a bald eagle, and more. The “Onondaga Lake: A Fresh Gateway to the New New York” exhibit was created by a volunteer partnership of **more than a dozen** organizations to show New Yorkers how coordinated remediation efforts between state and local partners are changing the region and providing for future economic vitality.

The exhibit showcased how the work being done on Onondaga Lake is tied to economic growth far beyond the lakeshore.

The exhibit was a cooperative effort among SUNY-ESF, Onondaga Historical Association, Onondaga County and its Save the Rain

program, Honeywell, New York State Department of Environmental Conservation, Audubon New York, COR Development, Destiny USA, Morrisville State College, Milton J. Rubenstein Museum of Science & Technology, O’Brien & Gere, and The Great New York State Fair.

“We are proud of the dramatic change seen in Onondaga Lake...this will be a great recreational and tourism resource for Central New York for generations to come.”

–Onondaga County Executive Joanne M. Mahoney

“The lake is being cleaned, I see it every day.”

–Penny Mercer, fairgoer, Lakeland, N.Y.



Left and bottom right photos courtesy of the New York State Fair.



Onondaga Lake Community Participation Working Group

By Jeff Freedman, Ph.D., Chair

The Community Participation Working Group (CPWG) meets monthly with the Department of Environmental Conservation (DEC) and Honeywell to both raise community awareness and deepen our understanding of the complex issues surrounding the lake cleanup. Meetings with Onondaga County, public health officials, the U.S. Environmental Protection Agency (EPA), and scientists have helped us to achieve these goals.

In addition to dredging and capping progress, the following were most welcome:

- 1. Honeywell made substantive efforts to prevent, lessen or contain odors originating from the consolidation area
- 2. The deep-water remediation program, which is designed to minimize the formation of methylmercury that accumulates in fish, offers hope for an enhanced edible fishery in Onondaga Lake
- 3. Investigations and possible preservation of underwater historical vessels continued
- 4. Cleanup of Nine Mile Creek and the county’s success in reducing the occurrence of combined sewer overflows have further reduced the inflow of contaminants into the lake

We also appreciated visits to the consolidation area, the Geddes Brook habitat restoration area, and close-up views of dredges and lakeshore construction sites.

Honeywell, DEC, and EPA have provided ample opportunities for CPWG committee members to be informed, ask questions, and engage in dialogue. The CPWG will continue to update the community. We invite anyone to participate in our meetings.

For a list of Frequently-Asked Questions, more information, or to contact us, please visit onondagalake.info.

**HONEYWELL EDUCATORS
@ SPACE ACADEMY**

Nineteen Central New York teachers were awarded scholarships to attend *Honeywell Educators @ Space Academy* at the U.S. Space & Rocket Center in Huntsville, Ala., in 2013 and 2014. Space Academy is designed to help teachers move beyond the standard math and science curriculum with supplemental teaching techniques developed through real-life astronaut training. Since 2006, **28 Central New York teachers** have participated in the program.

In addition, **410 students** from LaFayette Junior/Senior High School and the Syracuse City School District's Lincoln Middle School met former astronaut and Director of Towson University's Hackman Academy of Mathematics and Science Donald A. Thomas, Ph.D. Thomas shared his experience in space and explained how to prepare for careers in science.



"Space Academy was such an incredible experience. Honeywell's willingness to invest in this program speaks volumes to how much they value teachers and believe that they can inspire their students. It truly is a once-in-a-lifetime experience."

—David Amidon, 2013 Honeywell Educators @ Space Academy alumnus



EXPLORING SCIENCE IN NEW AND EXCITING WAYS



HONEYWELL SUMMER SCIENCE WEEK AT THE MOST

During the past nine years, **more than 500 Central New York eighth-graders** have completed *Honeywell Summer Science Week at the MOST*. The weeklong exploration of the Onondaga Lake watershed inspires students to pursue science, technology, and math education while becoming environmental stewards in their community.

"It's important to learn how to preserve the environment correctly, to keep the ecosystem in balance. I would highly recommend this program, it is quite the experience. You see things that you wouldn't see every day, you meet new people, you meet scientists and engineers, and it is an incredible opportunity to learn what Honeywell is doing for the Onondaga Lake cleanup. I think it's an incredible job that they are doing."

—Honeywell Summer Science Week at the MOST participant Ezra McKeon from West Genesee Middle School (shown above, right)



Honeywell's Commitment to Sportsmen and Enhanced Recreational Opportunities Continues

HONEYWELL SPORTSMEN'S DAYS AT CARPENTER'S BROOK

Nearly **7,000 people** learned about habitat and wildlife conservation and participated in outdoor sports including fishing, archery, turkey calling, and skeet shooting during the 2014 *Honeywell Sportsmen's Days at Carpenter's Brook*.

"Honeywell's support of Sportsmen's Days demonstrates a commitment to working with, and getting our input for, habitat restoration in and around Onondaga Lake. Honeywell continues to be a great supporter of our sporting community and has given our members the opportunity to share our knowledge of conservation practices to benefit wetland redevelopment, habitat improvements, and restoration activities."

—David Simmons, president, Onondaga County Federation of Sportsmen's Clubs



FMA LIVE!

FMA Live! Forces in Motion, the award-winning, action-packed show created by Honeywell and NASA, brought science to life for **more than 1,400 students** at three Central New York schools. The show uses hip-hop music and dance, larger-than-life demonstrations, and audience participation to engage middle school students to learn the basic principles of physics. Performances were held at LaFayette Junior/Senior High School, Pine Grove Middle School in the East Syracuse Minoa School District, and Lincoln Middle School in the Syracuse City School District.

"FMA Live! is an amazing and entertaining live-action way to get students interested in science. The show helps spark student curiosity about STEM education. The performance, videos, and demonstrations all entertain, teach, and intrigue their audience."

—Carolyn Scott, sixth-grade math and science teacher at Pine Grove Middle School



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at Nine Mile Creek*

calendar

2014

Dear Community Members,

Visible progress continues throughout the Onondaga Lake watershed. Honeywell has finished the dredging of Onondaga Lake, a year ahead of schedule. Many in the Central New York community are passionate about the cleanup and there is truly a sense of pride in the progress to date. It is inspiring to see how the team is committed and focused on getting the project done.

Rebuilding natural habitat along the lake's tributaries and southwestern shoreline is a vital ingredient of the cleanup of Onondaga Lake. Dozens of acres of wetlands have already been restored, allowing for the return of wildlife.

Our partners have made this story of progress possible. Thank you for your ongoing support of the cleanup. We hope you all will get involved and learn more about the Onondaga Lake cleanup by coming to the Onondaga Lake Visitors Center or by becoming a member of the *Onondaga Lake Conservation Corps* to participate in hands-on, experience-based programs that help restore and sustain the lake and its value as an Important Bird Area. For more information, please visit our website, lakecleanup.com, or call **315-552-9784**.

Thank you,

John McAuliffe
Syracuse Program Director

Construction Projects

Onondaga Lake dredging and capping resume	Spring
Upper Harbor Brook remediation	Spring
Nine Mile Creek dredging and capping	Spring/ Summer/Fall
Southwest Shoreline property grading	Spring
Western Shoreline groundwater collection system; wetlands and shoreline stabilization	Throughout the year

Habitat Improvement Projects

Nine Mile Creek forested wetlands (adjacent to Onondaga Lake)	Spring
Upper Harbor Brook wetlands	Spring
Shrub Willow Farm expansion	Spring/ Summer
Nine Mile Creek	Summer/Fall
Mouth of Harbor Brook at Onondaga Lake	Summer/Fall
Western Shoreline wetlands	Summer/Fall
Southwest Shoreline planting	Summer/Fall
Geddes Brook and Nine Mile Creek wetlands habitat monitoring	Throughout the year

Citizen Participation & Community Enhancement Projects

Community Participation Working Group (CPWG)	Monthly
<i>Onondaga Lake Conservation Corps</i>	Spring/ Summer/Fall
Free Fishing Weekend	June
<i>Onondaga Lake Visitors Center</i> tours/meetings	Throughout the year
Community planning for former industrial property in Camillus and Geddes	Throughout the year
Website/Progress Updates/E-newsletters	Throughout the year

Honeywell Hometown Solutions

<i>Honeywell Hometown Heroes Award</i>	April
<i>Honeywell Educators @ Space Academy</i>	June
<i>Honeywell Summer Science Week at the MOST</i>	July
<i>Honeywell Sportsmen's Days at Carpenter's Brook</i>	September

For more information or to sign up for our e-newsletter, please visit our website, lakecleanup.com.