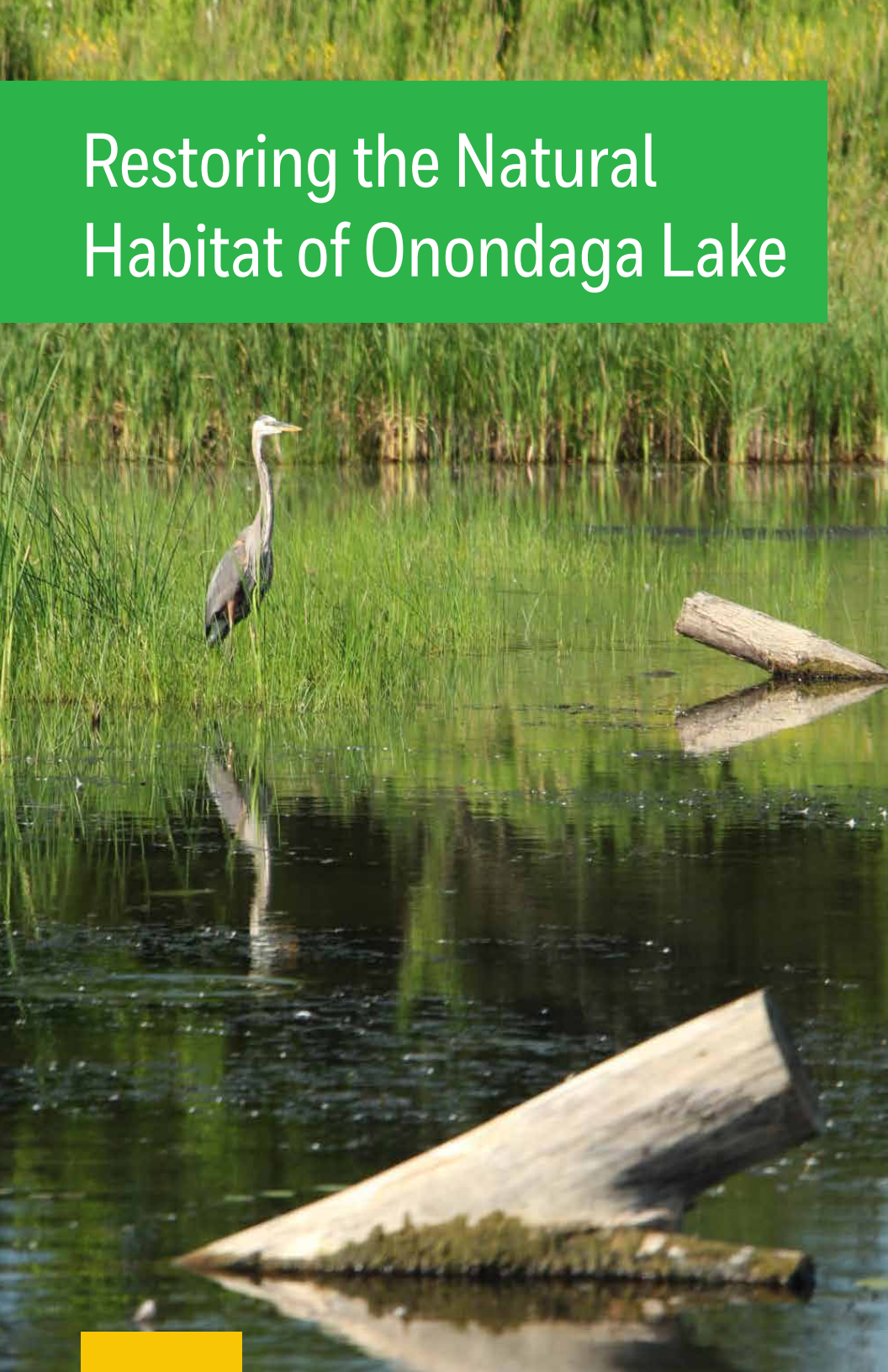
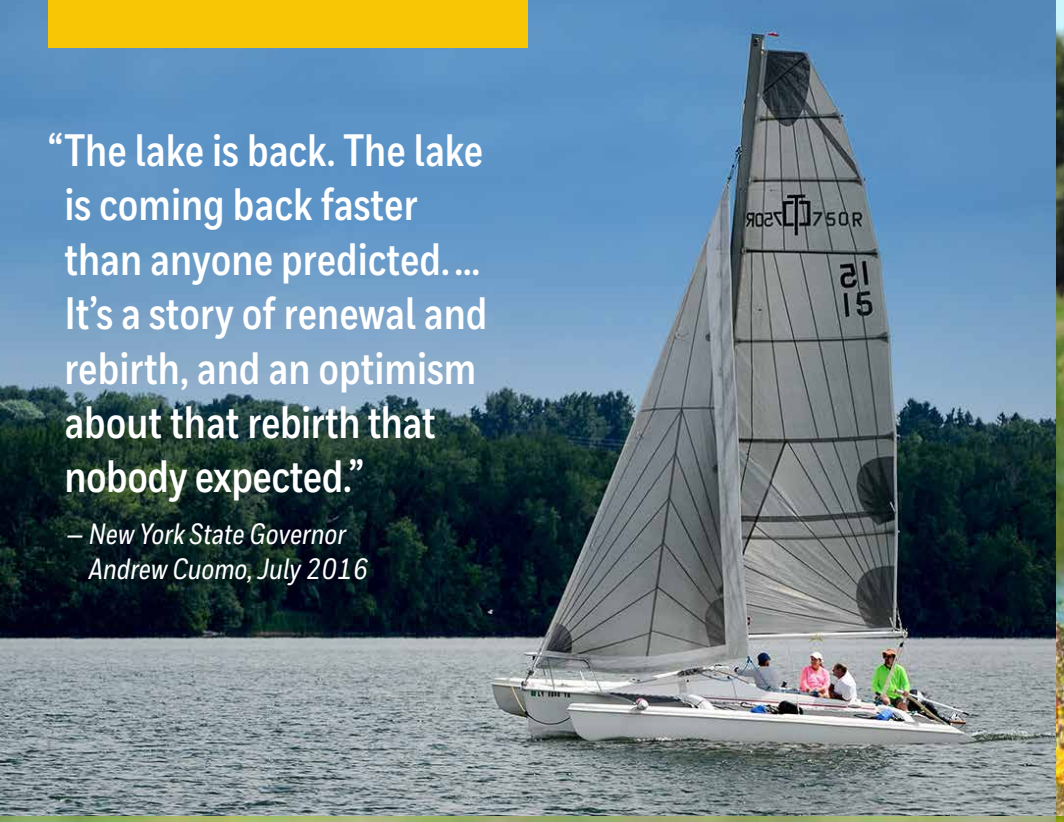
Restoring the Natural Habitat of Onondaga Lake





“The lake is back. The lake is coming back faster than anyone predicted.... It’s a story of renewal and rebirth, and an optimism about that rebirth that nobody expected.”

– New York State Governor Andrew Cuomo, July 2016

Honeywell received Audubon New York’s “Thomas W. Keesee, Jr. Conservation Award” in November 2015 for its leadership on the cleanup and restoration of Onondaga Lake. The award honors those in New York State who have shown remarkable leadership and commitment “to Audubon’s mission to conserve and restore natural ecosystems.”

Honeywell was honored with the “Vision for America Award” in October 2016 by Keep America Beautiful. The award recognized Honeywell for its corporate commitment to sustainability.

“The remediation of Onondaga Lake has been one of the most exciting remediation projects in the United States, and is making the lake and the surrounding area one of the most interesting landscapes in upstate New York.”

– Donald Leopold, Ph.D., Distinguished Teaching Professor at SUNY-ESF

Community and Wildlife Return to a Renewed Onondaga Lake

Onondaga Lake is well on its way to becoming a sustainable ecosystem for generations to come. Through thoughtful planning and input from local scientists, wetland ecologists, and the community, dynamic and diverse wetlands are becoming the cornerstone of a renewed watershed.

Lake water quality is the best it has been in more than 100 years and wildlife is returning faster than expected. About 90 acres of wetlands have been restored and about 1.1 million native plants are being planted. Native vegetation, including plants with links to Onondaga Lake's rich history, highlights the resurgence.

More than 250 wildlife species, some that have not been seen in decades, are now calling these areas home, and more than 120 unique bird species have been identified in and around Onondaga Lake, a priority Audubon Important Bird Area. Bird species on New York State's threatened list, including pied-billed grebe, northern harrier, and bald eagle, have returned to the re-established wetlands.

Habitat Enhancements: A Top Priority

Creating an environment where habitat can thrive became a major focus of Onondaga Lake's remediation and restoration – especially in areas that had diminished over several decades.

The Onondaga Lake Cleanup Plan was issued in 2005 by the New York State Department of Environmental Conservation (DEC) and the U.S. Environmental Protection Agency (EPA). The cleanup included dredging 2.2 million cubic yards of lake material, capping 475 acres of lake bottom, and habitat restoration. The cap provides a new, clean lake bottom and a new habitat layer to promote underwater vegetation growth and fish spawning. This work was completed in 2017.

In 2010, a comprehensive approach to restoring habitat in and around the lake was released. The Onondaga Lake Habitat Restoration Plan described how habitat conditions, including new wetlands, shoreline improvements, and a robust habitat layer for the bottom of the lake, would contribute to the lake's revitalization.

Experts and Community Work Together

The Habitat Plan was developed by a Habitat Technical Work Group, which included DEC, EPA, U.S. Fish and Wildlife Service, Honeywell, the State University of New York College of Environmental Science and Forestry (SUNY-ESF), Parsons, Mississippi State University, Terrestrial Environmental Specialists, Anchor QEA, and OBG. These local and national experts represented several hundred years of collective experience in wetland ecology, limnology (the study of inland waters), biology, restoration ecology, fisheries biology, and sediment remediation. The Onondaga Nation and local stakeholder groups also provided input.

Realizing the importance of habitat restoration for lake users, Honeywell, in partnership with DEC, also created a working group of community leaders, environmental groups, fishing and wildlife enthusiasts, and interested stakeholders and citizens to share their vision for the future.

Get Involved

The Onondaga Lake Conservation Corps was founded by Honeywell in partnership with Audubon to inspire future stewards of Onondaga Lake and its watershed. More than 780 volunteers have become environmental stewards and continue to be involved with habitat restoration efforts. For more information, visit **ny.audubon.org/OLCC**.

Achieving Significant Success Restoring Habitat

Careful consideration was taken to select plants with cultural or historical significance. Many were selected to re-establish natural plant communities that once dominated the area. The wetlands now support a diversity of habitats, including a floodplain forest, hardwood swamp, and emergent wetlands.

Habitat structures in restored wetlands and tributaries help ensure that species find ideal conditions in which to return. To improve the fishery, native vegetation was planted in shallow-water areas, and over a thousand fish habitat structures were added to the lake bottom to attract game fish for anglers.

The aquatic plant community has expanded from less than 12 percent of shallow-water lake areas to about 80 percent. Sixty-five species of fish have been documented in recent years, up from nine to 12 counted in the 1970s. Many wildlife species also use the lake, including mink, beaver, turtles, herons, egrets, and more.

Green Corridor Emerges in Onondaga Lake Watershed

With native vegetation continuing to thrive and diverse habitats returning, a green corridor is emerging, connecting the lake to restored tributaries and beyond. These physical connections are creating critical linkages between a restored lake and the broader Onondaga Lake watershed, which over time will continue to flourish and provide expanding habitat benefits.

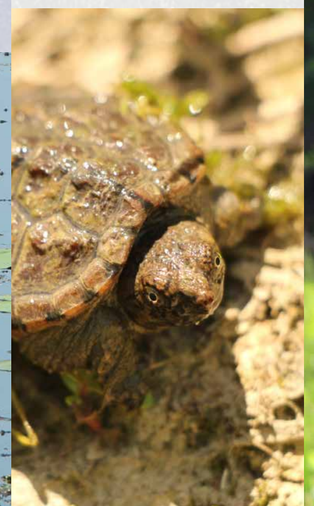
While significant work has been completed, monitoring and maintenance will continue for years to come to ensure vegetation is established and returning wildlife is documented. Monitoring also helps identify invasive species so they can be removed.

LCP Wetlands

- About 25 acres of restored habitat with native vegetation, including 12 acres of wetlands
- Approximately 12,000 native trees and wetland plants
- Lily pads to establish habitat not present elsewhere around the lake
- More than 70 varieties of fish, birds, and other wildlife, including pied-billed grebe

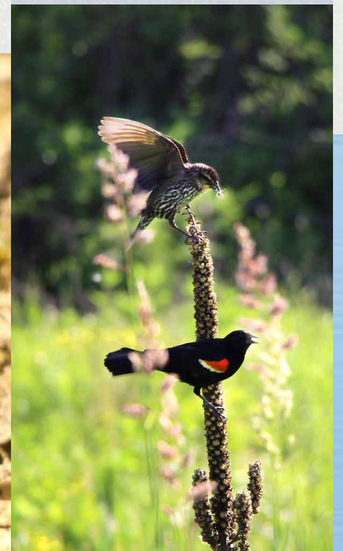
Geddes Brook Wetlands

- 21 acres of restored habitat, including more than 13 acres of wetlands
- About 50,000 native plants, shrubs, and trees
- More than 170 species of fish, birds, and other wildlife, including threatened bird species in New York State



Nine Mile Creek

- 24 acres of restored habitat, including 5 acres of wetlands
- More than 2 miles of stream restored
- More than 41,000 native plants, trees, and shrubs
- More than 145 species of fish, birds, and other wildlife, including osprey and great blue heron



Onondaga Lake Wetlands – Mouth of Nine Mile Creek

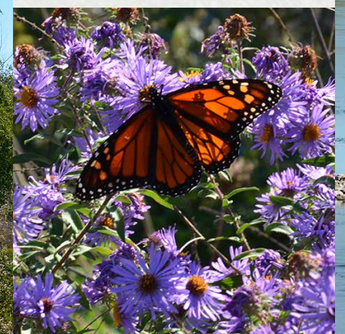
- More than 18 acres of restored in-lake and shoreline wetlands
- Approximately 150,000 native plants
- Wide array of wildlife, such as osprey, great blue heron, and great egret, a bird rarely seen at the lake over the past decade
- More than 60 species of fish and wildlife within one year after restoration

Onondaga Lake Wetlands – Western Shoreline

- About 10 acres of restored wetlands in low-lying areas
- Approximately 70,000 native plants in 30 acres
- New habitats for turtles and amphibians
- Shorebirds, including American avocet and dunlin
- 45 varieties of birds, amphibians, reptiles, and mammals

Onondaga Lake Wetlands – Southwest Shoreline and Harbor Brook

- 14 acres of wetlands and 4 acres of shoreline habitat
- Shallower parts to benefit wetland spawning fish, such as northern pike
- Slightly deeper areas to benefit popular sport fish, such as largemouth bass
- Approximately 167,000 native plants, including several thousand trees and shrubs
- Several rock berms installed to provide additional shelter for small fish and wildlife



Habitat Structures in Onondaga Lake

- More than 1,000 habitat structures, such as boulder and rock piles, to improve habitat for fish
- 475-acre cap, creating a new habitat layer

Former Settling Basins

- About 5 acres of historically significant inland salt marsh; non-tidal salt marshes are now considered globally threatened and among the rarest natural communities in New York
- More than 170 native plant species thriving

Looking Toward the Future

For the first time in decades, residents are positive about Onondaga Lake. Each year, more than 1.5 million visitors utilize Onondaga Lake Park, and the demand for public access continues to grow.

In 2017, the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation announced a plan for 20 new projects to restore and protect wildlife habitat and water quality, and increase recreational opportunities. Highlights include:

- Connecting the Erie Canal Trail from Camillus to Onondaga Lake
- Extending the Loop-the-Lake Trail
- Creating 100 acres of native grassland habitat
- Providing increased access for fishing and recreation
- Preserving wetlands, restoring habitat, and conserving more than 1,400 acres within the Onondaga Lake watershed
- Planting 50 acres of rare native grassland habitat at the former settling basins

This remarkable habitat restoration is helping to sustain a diverse Onondaga Lake ecosystem that the community will enjoy for generations to come. For details on the restoration of Onondaga Lake, visit **lakecleanup.com** or call 315.552.9784.

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301 Plainfield Road, Suite 330
Syracuse, NY 13212

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