



Richard L. Elander, P.E., *Commissioner*

Nicholas J. Pirro, *Onondaga County Executive*

## *A popular fishing spot*

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Onondaga Lake is becoming a popular catch-and-release fishing spot. The 2001 "WTVH 5 Ultimate Fishing Challenge" attracted thousands of recreational anglers to the lake.

This event received national media attention but there are other recreational fishing derbies held in Onondaga Lake. The Izaak Walton League, CNY Bass Masters, Salt City Bass Masters, and the Bucket-mouth Bass Masters are some of the recreational fishing groups that have sponsored fishing derbies.

Public interviews during

the "Ultimate Fishing Challenge" revealed that many people are unaware that Onondaga Lake is open for fishing. This brochure was developed to provide information about the Onondaga Lake fishery and to ask for your help in managing this community resource.

If you already fish the lake you are probably aware of its recreational and sport fishing opportunities. Anglers report success with bass (both largemouth and smallmouth), panfish, and carp. If you have not fished Onondaga Lake yet, we encourage



*Walleye caught in Onondaga Lake.*

you to visit the Onondaga Lake Park (see **Fishing Access**) and take your fishing gear along.

Please call Onondaga County Department of Water Environment Protection (315-435-2260 x360) with your suggestions on how to improve the Onondaga Lake fishery.

### Special points of interest:

- *Onondaga Lake is a productive warm water community. Major fish species include bass, sunfish, and gizzard shad.*
- *Recreational anglers find the lake a popular fishing spot*
- *Water quality conditions have shown a steady improvement for over a decade*

## *What about the health advisories?*

Fishing was banned in the lake in 1972 due to mercury contamination. The ban was modified in 1986 to allow a "catch-and-release fishery", that is, recreational fishing was permitted but possession of fish from Onondaga lake was not. In 1999, the New York State Department of

Health (NYSDOH) revised its advisory regarding consumption of gamefish from Onondaga Lake.

The current recommendation is to eat no walleye from Onondaga Lake and restrict consumption of all other species to no more than one meal per month.

The fish advisory con-

tinues to be based on mercury levels in fish flesh. As in all New York waters with health advisories, the Health Department advises that women of childbearing age, infants, and children under the age of 15 eat no fish from these waters.

## *A brief history of Onondaga Lake's fishery*



*Atlantic salmon were found in Onondaga Lake in the early 1800's.*



*Catching a brown trout in Onondaga Lake during spring is not such a rare occurrence anymore.*

*...recent studies have found the lake supports a productive warm-water fishery.*

In the early 1800's, Onondaga Lake and its tributaries supported a unique and productive cold-water fishery that included migratory Atlantic salmon. The famous Onondaga Lake whitefish was considered a delicacy. It was shipped to markets and restaurants as far as New York City. This lasted until the 1890's when whitefish were last caught in the lake. The decline in their population is thought to have been a consequence of the deterioration of the lake's water quality.

During the past two centuries, industrial pollution, urbanization, sewage, and agricultural activities in the watershed brought lower levels of dissolved oxygen, higher turbidity, elevated ammonia concentrations, higher salinity, habitat degradation, and mercury contamination to Onondaga Lake. These changes contributed to the reduction of spawning areas for some fish species by decreasing the number of aquatic plants growing in the lake and its tributaries.

During the first half of

the 20th century the fish community of Onondaga Lake was documented to consist of a limited number of species that were tolerant of degraded conditions. In 1928 a survey identified only 10 species in the lake. In 1946 a three-day study found that 93% of all fish captured in the lake during that period were carp.

For most of the 1900's many people thought of Onondaga Lake as a septic mix of chemicals and waste that could not possibly support any fish life. But recent studies have found the lake actually supports a productive warm-water fishery.

The last 20 years have shown an increase in the number of fish species in the lake. Fifty-four (54) species have been captured in the lake since 1990. Some of the species present include desirable sport fish such as large-mouth and smallmouth bass, walleye, and northern pike.

Studies done over the past two decades have shown that the fish community is dominated by

white perch, gizzard shad, bluegill, and pumpkinseed. The catch rate for large-mouth and smallmouth bass in Onondaga Lake is similar to other lakes in the area.

Cold-water fish do not currently inhabit Onondaga Lake year-round because the deeper, colder waters of the lake do not hold enough oxygen to support them. However, cold-water fish such as brown and rainbow trout can be found in the lake in the spring when the upper, oxygen-rich waters are cold.

Oxygen levels in the deeper waters of Onondaga Lake have shown a steady improvement over the last ten years. Onondaga County is monitoring oxygen levels in the lake and working to improve overall water quality and habitat conditions.

To help in this effort the County has installed a water quality monitoring buoy that records information on several relevant parameters. Near real-time results from this buoy can be viewed at [www.lake.onondaga.ny.us](http://www.lake.onondaga.ny.us)



*Electrofishing boat used by County personnel to conduct adult fish sampling.*

## *Onondaga County's fish monitoring program*

Onondaga County has started a large construction program to improve its wastewater collection and treatment system. As part of this effort, the County is monitoring the fish community of Onondaga Lake. Improved water quality condi-

tions should result in an improved fish community.

To monitor the fish community, the County conducts surveys at four different stages in the life-history of a fish: reproduction, larvae, juveniles, and adults.

The purpose of the nest survey is to find out how many fish are nesting and which areas of the shoreline provide the best habitat. The larvae survey tells us which species are reproducing in the lake. A

*(Continued on page 3)*

(Continued from page 2)

survey of the juvenile fish stage illustrates what species are surviving past the larval stage. The adult fish survey gives us a better idea of what species are found in the lake, both from actual in-lake reproduction and through migration from connecting rivers and streams.

These surveys began in 2000 and are scheduled to continue through 2012. They are conducted by trained Onondaga County Department of Water Environment Protection personnel.

Several methods are used to gather the information needed, including the

use of seine nets, and tagging fish in order to track their movements, growth rates, and ultimate fate.

In addition to these surveys, the County is conducting a census of the Onondaga Lake anglers to assess the success rate of the recreational fishery.

The objectives of the census are: to compare catch rates in Onondaga Lake with other waters; to describe the fishery in relation to water quality improvements; to identify the impact of anglers on fish populations; and to identify anglers' expectations.

The County is actively recruiting volunteer anglers to help with the data collec-

tion efforts (see **Become a Partner** below) and promoting Onondaga Lake as a catch-and-release sports fishery.

County technicians will be present during fishing tournaments held in Onondaga Lake and sponsored by several fishing clubs. They will examine and tag the fish caught, and record their length, weight and species. This information will be added to the County's database.

The database will help the New York State Department of Environmental Conservation in their efforts to bring back a sustainable sport fishery to Onondaga Lake.



County technicians demonstrate data collection techniques.

## What to do if you catch a tagged fish?

Onondaga County has tagged hundreds of fish as part of their effort to monitor the Onondaga Lake fishery. The County's tags are yellow and bear the name of the county and a number (see detail at right).

If you catch a tagged fish, you should *record*

where and when you caught it, either using the Catch Cards (see **Become a Partner** below) or as part of your Angler Diary records, and *release* it. Releasing the fish will give the County an opportunity to gather more information about it in the future.

Let us know where the

fish was caught, the date/time, species, and tag number.

It is important that you call the County (315-435-2260 ext. 360) if fish with an Onondaga County tag (see picture at right) are caught. Your cooperation will help improve the Onondaga Lake fishery.

Please Release Me!



Let Me Go!



Tagged fish and tag detail.

## Become a partner in the Lake's fishery program!

You can help the County in its efforts to assess the success of Onondaga Lake as a popular catch-and-release fishery.

If you fish the lake, Seneca River, and/or Oneida River frequently, you could qualify for the Angler Diary program. This program requires some diligent record-keeping of time spent

fishing, numbers/species caught, fish kept, and area fished. The system is divided into four zones: Seneca River upstream of the lake, Onondaga Lake, Seneca River downstream of the lake, and Oneida River to Caughdenoy Dam and Lock 23.

If you fish these areas only occasionally, the

Catch Card program would be right for you. These cards have some very simple questions, such as, how long did you fish that day, how many and what kind of fish you caught? The cards are available at the pavilions in Onondaga Lake Park.

For information on the Angler Diary Program or the Catch Cards, call Nick Capozza at (315) 435-2260.

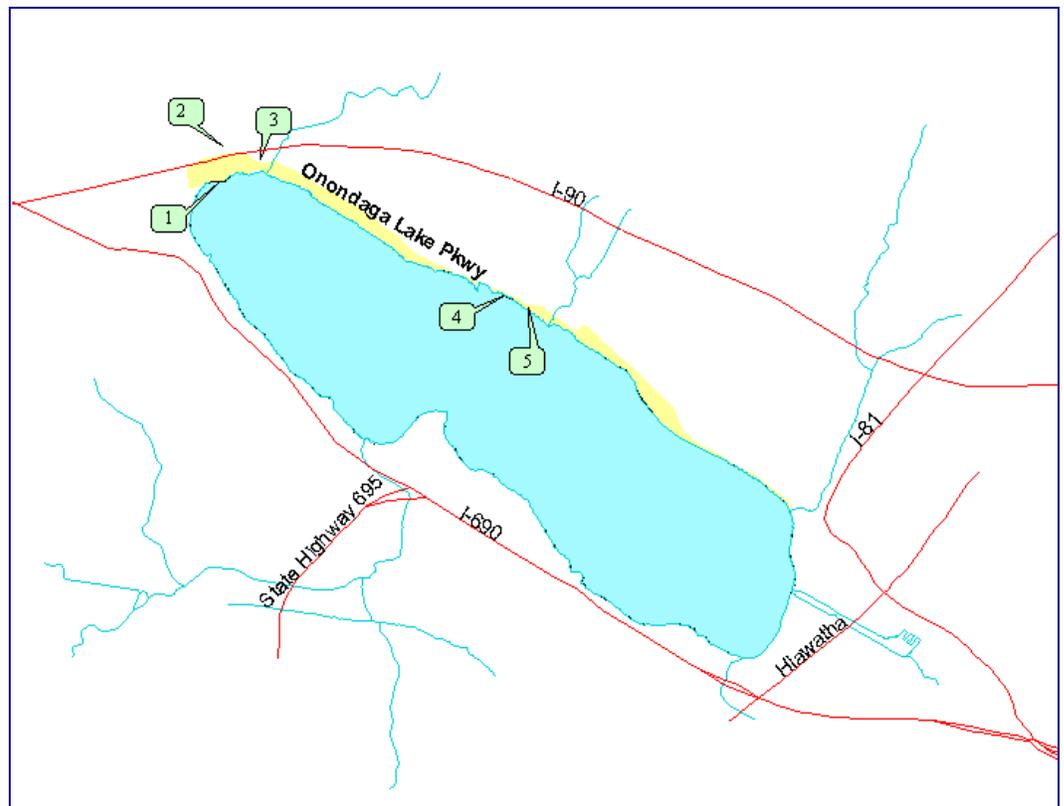
# Fishing access to Onondaga Lake

Shoreline fishing is permitted in several areas around Onondaga Lake. The easiest access is through the Onondaga Lake Park. The park is open from dawn to dusk every day of the year. Admission is free and parking is easy.

Boat fishing access is available through the Onondaga Lake Park Marina and Launch. There is a small fee for using the Marina.

Catch cards and their drop-off boxes (see **Become a Partner**, p.3) are located throughout the park. The map at right indicates their location:

- 1- West Trail entrance
- 2- Sebastian's Café dock
- 3- Green Pier access
- 4- Onondaga Lake Marina
- 5- Fishing access dock



Shoreline fishing areas in Onondaga Lake Park are highlighted in yellow.

## Aquatic weeds: a blessing in disguise

Sometimes getting to that fishing spot from shore is not easy—the way is choked with weeds! But if you look at these aquatic plants from a fish's point of view, they are perfect habitat for escaping bigger fish, finding food, nesting, or just relaxing.

Aquatic plants were largely absent from the shoreline of Onondaga Lake for many years but are slowly making a comeback. Onondaga County conducts surveys of this progress in relation to the fish habitat they provide and their function as an anchor for

sediments in shallow water.

So, next time you have to wade through these aquatic plants, think of all the benefits they provide and all the fish that might be hiding there!



Aquatic plants near Onondaga Lake Park's shoreline.

Onondaga County Department of  
Water Environment Protection

650 Hiawatha Blvd West  
Syracuse, NY 13204-1194

Phone: 315-435-2260  
Fax: 315-435-5023

Visit our Web site:  
[www.ongov.net](http://www.ongov.net)