

Chautauqua Watershed Notes
From the Chautauqua Watershed Conservancy
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The Watershed Future of Lake Management
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Stream and lakeshore forests such as this at the Lake Chautauqua Lutheran Center provide essential water filtering functions to protect water quality.

The management of Chautauqua Lake over the last 50 years has largely focused on in-lake approaches (plant harvest and herbicides) to treat the symptoms of a lake overloaded with incoming sediments and nutrients. The sewerage of much of the lake and construction of improved wastewater treatment plants in the 1970's was a major water quality improvement for the lake.

Over the last 30 years it has become apparent with study after study across the country, that much of the pollution impacting our waters comes not from point sources, such as pipes dumping wastes from factories or sewage into our waters, but from agricultural animal wastes, fertilizers, streets, road ditches, rooftops, residential lawns and atmospheric fallout. What contributes most to the quality of our waters for drinking, bathing and recreational use is the quality and health of the land-based systems of the watershed which collect, store and filter the waters feeding our streams and lakes. Can these natural systems trap these pollutants?

With this increasing knowledge, proactive government and not-for-profit agencies have adopted four major approaches to addressing lake and stream water quality: regulation (watershed regulations, land use laws, stormwater and erosion control, impervious surface limits, mandatory open space conservation in development), enhancement (stream bank and lakeshore restoration, stream/lakeshore buffer strip planting, cattle fencing, reforestation, soil erosion control), land conservation (conserving the watershed lands which perform essential water collection, storage,

filtration and delivery functions), and education (teaching watershed residents, businesses, and visitors how to best take care of the watershed).

In New York State, we have multiple examples of effective watershed management programs from which we can learn. In the Finger Lakes, a recent study (Halfman, J.D. and Bush, K.F.) indicated that the lakes with the strongest regulatory programs have the cleanest water. Chautauqua Lake has no specific regulatory program, despite repeated calls from scientists and advisory organizations to establish such. Public drinking water supply waters have been protected by watershed regulations across New York State and the nation. What are we waiting for here? The New York City Watershed waterways are being protected by a massive watershed land conservation program. Waterways need about a 300-foot buffer strip of natural vegetation to separate sources of bacteria from waterbodies to keep those waters as protected as possible from potentially disease-causing bacteria and nutrients. The Finger Lakes Land Trust has watershed land conservation programs underway to protect City of Ithaca drinking waters with 14 conservation easements and one nature preserve protecting 840 acres along Six-Mile Creek. The Skaneateles Lake Watershed Land Protection Program (SLWLPP) is a partnership between the City of Syracuse and Skaneateles Lake Watershed residents. The program is aimed at maintaining high water quality within the watershed by protecting the farmland, forests and other open spaces that act as natural buffers to the region's streams, rivers and other waterways. Over 650 acres had been conserved through that program as of 2006. In our county, The Nature Conservancy instituted effective programs working directly with landowners on French Creek to conserve water quality for endangered mussels and darters, which is a good model for other local waterways.

The Chautauqua Utility District provides filtered Chautauqua Lake water for drinking to the properties on the grounds of the Institution. Children and adults swimming, playing and waterskiing in Chautauqua Lake inadvertently consume unfiltered lake water. Shouldn't our children who regularly drink lake water be as protected from pollution as those who drink the water from other lakes around New York State?

Studies have found that the cost of treating surface water for public consumption is inversely proportional to the percent of forest cover in the watershed. I.e., the water in a lake or reservoir is significantly safer to drink when you get a mouthful, if the lake's watershed is 80% forested, rather than 40% forested. If you are a public water customer, your water rates are going to be significantly lower if your water is coming from a forested watershed, rather than a suburbanized watershed.

Over the last 12 years, the Chautauqua Watershed Conservancy has conserved or facilitated the conservation of 600 acres of watershed lands across Chautauqua County, including 1.8 miles of shoreland helping to protect Chautauqua Lake and its Outlet from additional loads of sediments and nutrients. The CWC is seeking funding to conserve the lakeshore forest at Sandy Bottom near Stow and other remaining functioning lakeshore water quality filtration and habitat sites. Its vision is to partner with landowners to conserve the most important remaining natural shoreland sites on Chautauqua Lake, then conserve stream corridors including wetlands and floodplains, and over time conserve the most important headwater forests where much of the lake's water is

collected, absorbed and filtered as it starts its important journey down to recharge the lake. Remember, "A lake is a reflection of its watershed."

Please get involved! Join the Conservancy. Encourage your elected officials to support the conservation of watershed lands and adopt land use laws to protect watershed functions.

Resources & References:

NYC Watershed website: http://www.nyc.gov/html/dep/html/watershed_protection/home.html

Finger Lakes Land Trust newsletters: <http://fllt.org/newsletters/index.php>

A Preliminary Water Quality Study of Selected Finger Lakes, NY. Halfman & Bush, Finger

Lakes Institute: [http://people.hws.edu/halfman/FL-Lim/2005%20FL-](http://people.hws.edu/halfman/FL-Lim/2005%20FL-Data%20Halfman_Bush.pdf)

[Data%20Halfman_Bush.pdf](http://people.hws.edu/halfman/FL-Lim/2005%20FL-Data%20Halfman_Bush.pdf)

The Skaneateles Lake Watershed Land Protection Program (SLWLPP):

http://counties.cce.cornell.edu/Onondaga/watersheds/Skan_land.htm

Protecting the Source, Trust for Public Land: http://www.tpl.org/tier2_rp1.cfm?folder_id=175

Center for Watershed Protection: http://www.cwp.org/site_map.html

The Chautauqua Watershed Conservancy is a local, not-for-profit, tax-exempt 501(c)(3) organization with the mission to preserve and enhance the water quality, scenic beauty and ecological health of the lakes, streams and watersheds of the Chautauqua region. Its annual fall membership campaign is underway. For more information or to support these efforts call 664-2166 or go to chautauquawatershed.org.