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Organizing the Watersheds: Environmental Protection for the Western Finger Lakes

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ORGANIZING THE WATERSHEDS: ENVIRONMENTAL PROTECTION FOR THE WESTERN FINGER LAKES

by Stephen Lewandowski*

LOCATION

The Finger Lakes region of central and western New York State includes the land around eleven lakes. The western Finger Lakes include Seneca Lake and the five lakes to the west. Some of the western lakes drain through the Oswego River to Lake Ontario, and others drain to Ontario through the Genesee River. They range in size and elevation from small, high Canadice Lake to low, large Seneca Lake.

There are numerous differences in the western Finger Lakes and in the communities surrounding them, but they share a need for protection from the pressures of development, soil erosion, agricultural pollutants, inadequate septic systems, and recreational overuse. We’ll examine some of the differences and similarities among the lakes and what’s being done to protect them.

DIFFERENT VIEWPOINTS: IN-LAKE VS. WATERSHED

In recent years, the focus of protection has been changing. Previously, attention and efforts centered on the lakes themselves. From an in-lake point-of-view, the science of limnology (study of lakes) is the primary approach. Publications such as Birge and Juday’s 1914 A Limnological Study of the Finger Lakes of New York and Bloomfield’s 1978 multi-volume Lakes of New York State are the "bibles" of lake management. Unfortunately, few management options, other than fish stocking rates and "weed" harvesting, can be accomplished in the lakes themselves; such major factors as the invasion or addition of exotic species and the influence of changing land uses, which cannot be addressed by limnologists, continue unabated.

The focus of protection of the western Finger Lakes has broadened to acknowledge the importance of watersheds to lakes, including watershed management as a means of improving

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water quality. Watersheds are the land areas whose runoff and groundwater flows contribute to the accumulated water of a particular river, stream, or lake. Watersheds are also the land areas on which people live, play, and work. The western Finger Lakes are sensitive to land use in their watersheds. Typically, the watershed area of a Finger Lake is ten to fifteen times the size of the lake itself. In terms of sheer runoff, an inch of rain on the saturated or frozen ground of the watershed in February or March could yield eight to twelve inches of rise in the lake levels, causing spring floods.

The quality, and quantity, of the water delivered to the lake is affected by conditions in the watershed. Since water runs downhill, a spill of septic sludge, salt or PCBs will naturally move toward the lake. Its rate of progress will be affected by the roughness of the topography (pipes are smooth; natural streams are rough), the pollutant’s solubility in water (salt is; PCB isn’t), and how readily the pollutant adheres to soil and other particles in its way (phosphorus adheres; nitrogen doesn’t).

Much has been made of nature’s ability to accept and rebound from such insults. You may have heard someone allege "that spill of sewage isn’t so bad- a couple of hundred feet of riffles over a gravel bed will clean it up." By and large, such claims are nonsense. Though sunlight and oxygenation on a stretch of stream will kill most disease-causing bacteria in sewage, the nutrients may flow all the way to the lake, fueling unwanted algal growth there.

Would anyone seriously propose using our streams and lakes to treat sewage? Our policies should lead to cleaner waters, whether they are in lakes, streams or wells of the watershed. In fact, much of the current movement for cleaner waters in the western Finger Lakes rests on this premise: water connects us, whether we know it or not. And what we don’t know can hurt us.

ORGANIZING THE WATERSHEDS

All of the western Finger Lakes have organizations dedicated to their protection. The oldest of these organizations began as associations of lakeshore property owners; a few grew from the increased environmental awareness of the first Earth Days in the late 1960s and early 1970s. Several were formed in response to specific concerns and proposals. For example, proposals to build a pump-storage power-generating facility on South Hill and Bristol Harbor Village on the west shore of Canandaigua Lake led to the formation of Canandaigua Lake Pure Waters, Ltd. (CLPW). For a variety of reasons, the former proposal never materialized but Bristol Harbor exists, though only partially completed, according to the original plan. CLPW continues as a Canandaigua Lake water quality "watchdog". A summary of watershed organizations for the western Finger Lakes follows.

SENeca LAKE

Seneca Lake watershed has always been considered too large and complex to be organized. It ranges over portions of Yates, Ontario, Seneca, Schuyler, Chemung, Steuben and Tompkins Counties. The lake itself is thirty-five miles long and over six hundred feet deep. The City of Geneva and the Village of Watkins Glen, located at the north and south ends, respectively, use the lake as a source of public drinking water.

Despite many difficulties, in 1990 a dedicated group of environmental activists began the
formation of Seneca Lake Pure Waters Association, Inc (SLPWA). Currently, the organization has several thousand members from various parts of the watershed, keeps a staffed office in Geneva, holds annual meetings, meets regularly as committees, and publishes a newsletter to inform members and citizens of issues, projects, and concerns. SLPWA has been instrumental in the acquisition of a public hiking trail, drawn attention to leaky landfills, published scientific studies of the lake, and influenced the NYS Thruway Authority (which operates the lake outlet gates) to adopt different methods of estimating runoff and regulating lake water levels. Recently, SLPWA announced plans to create a watershed management plan for Seneca Lake.

KEUKA LAKE

With its "y" shape, Keuka is one of the most distinctive Finger Lakes. The Villages of Penn Yan and Branchport are located at the north ends of the eastern and western branches, respectively. The Village of Hammondsport wraps around the south end.

The Keuka Lake Association (KLA), a twenty-five year old cottage-owners organization, has a well-established program to collect and test water samples from the lake and streams. In the past decade, KLA has reconfigured itself and undertaken several major projects. KLA has spun off the Keuka Lake Foundation, a private, nonprofit foundation which rewards acts of private generosity and seeks public grant funds.

The KLA successfully recruited local government in the service of watershed protection. All powers to regulate local land use in New York State lie in the hands of municipal governments (towns, villages, cities). KLA has promoted an association of municipal governments around Keuka Lake known as the Keuka Watershed Improvement Cooperative (KWIC).

After several years of discussion and negotiations, KWIC focussed on two issues of primary importance: private septic systems and lake levels. Through the group's efforts, the gates which regulate lake level in Penn Yan were replaced with more secure and easily-activated structures. After reviewing the incomplete watershed inspection program in place, KWIC promoted a uniform and consistent watershed inspection program to regulate private septic systems. A comprehensive program is now in place and being implemented by a watershed inspector.

CANANDAIGUA LAKE

Canandaigua Lake is fifteen miles long and over two hundred and seventy feet deep. The City of Canandaigua is located at the north end, and the Village of Naples is separated from the south end by three miles of marsh in the NYS Hi Tor Wildlife Management Area. Over 50,000 people depend on Canandaigua Lake for high quality drinking water, and the value of real estate influenced by the lake has been estimated as $650,000,000.

Begun in 1989, the Canandaigua Lake Watershed Task Force (CLWTF) includes organizations such as Canandaigua Lake Pure Waters, agencies such as the Soil and Water Conservation Districts and Cornell Cooperative Extensions, and private individuals from the watershed, which includes parts of Ontario, Yates and Steuben Counties.

CLWTF has coordinated the clean-up of an extensive, illegal private waste dump, promoted uniform docks and moorings regulations along the shoreline, inventoried salt storage and usage in watershed municipalities, promoted revision of the 1953 watershed rules and
regulations for private sewage treatment, and coordinated the clean-out of debris along a constricted, four-mile section of the Canandaigua Outlet.

In 1994, the Task Force published The State of the Canandaigua Lake Watershed, which included analyses of pollution sources and remedial actions, and convened a group of local elected leaders from the watershed area to receive the report. Meeting monthly, this group, the Local Government Watershed Policy Committee (LGWPC), has been sifting through the hundreds of recommendations included in the report. The recommendations selected, funded, and implemented by the LGWPC will form the basis for the first comprehensive watershed management plan for a New York State lake. As a means of informally binding the municipal governments and other parties to the task, the Task Force devised and circulated a Watershed Compact which has been signed by all the participants.

HONEOYE LAKE

As one of the smaller and shallower Finger Lakes, Honeoye Lake faces some special problems. The four-and-a-half mile long lake seldom reaches thirty feet in depth. In the mid-1970s, a perimeter sewer was installed around the lake to alleviate problems from failing or inadequate private septic systems. The shape of the lake itself works against extensive water quality improvements. Using a scientific measure called a "trophic index", Honeoye Lake is classified as "eutrophic" (highly productive), and it is unlikely that any form of restoration will alter this condition or classification.

Honeoye Lake is a good example of a naturally eutrophic water body. The classification, based on water clarity and chlorophyll concentrations, means that the lake supports a lot of life. Some of the life, such as extensive rooted water-plant growth, is a nuisance to cottage owners, but other species, such as walleyed pike, are valued by anglers. Our perspective on the damages and irritations of lake eutrophication depends on how we expect to use the lake. A program of water-plant cutting and removal supported by Ontario County has been underway for a decade.

The Honeoye Valley Association (HVA) was formed in 1987 through the efforts and influence of Professor Bruce Gilman of the Finger Lakes Community College. Though earlier lake associations have come and gone, HVA remains a vital organization. It publishes a newsletter, holds meetings, sponsors annual litter clean-ups, promotes safe boating through the Lake Watch program, cooperates with the shoreline Towns of Richmond and Canadice, and sponsors engineering studies of a flow control structure at the north end of the lake. Honeoye Lake is one of the few Finger Lakes without some sort of lake level control at the outlet.

Recognizing the constraints imposed by nature on the condition of Honeoye Lake, HVA continues to promote policies and practices which will benefit local water quality. One of its most interesting initiatives has been a well water testing program. Basic tests of well water are offered to group members at a reduced rate. While individuals are learning about the quality of their drinking water, HVA is building a data base of well water quality in the community.

CANADICE AND HEMLOCK LAKES

Canadice and Hemlock Lakes are small in size, deeply incised into the hills of Ontario and Livingston Counties, and "owned" by the City of Rochester, which has used them as sources of public water supply since the 1880s. Rochester slowly acquired all the private properties on the shorelines of the two lakes between the 1880s and 1940s and now owns about 7,300 acres
covered with native hardwoods and plantations of evergreens. Consequently, Canadice and Hemlock are some of the least disturbed of the Finger Lakes. The continuing presence of nesting eagles at the south end of Hemlock Lake signifies its relatively "wild" condition.

In 1985, the City of Rochester convened a committee of interested citizens and organizations as the Upland Watershed Advisory Committee. The committee was asked to advise the city on future management of its watershed property and the need for a water filtration plant. The 1987 Report of the Upland Watershed Advisory Committee recommended that the City seek a cooperative management arrangement with the State of New York, through conservation easements, to insure that the Hemlock and Canadice watershed lands remain in a natural state. Construction of the water treatment plant began in 1990, and the plant is currently in operation, filtering thirty-seven million gallons of lake water per day for residents of the City of Rochester.

Formed in 1987, the Coalition for Hemlock and Canadice Lakes (CHCL) promotes the Advisory Committee’s plan which would protect the City’s lands around Hemlock and Canadice Lakes forever. In 1989, CHCL secured passage of State legislation to protect the tax bases of local governments of the watershed by requiring payments-in-lieu-of-taxes from the State in the event of public purchase of property. In recent years, both the Finger Lakes Land Trust and the Nature Conservancy have shown interest in promoting the protection of public and private lands in the Hemlock-Canadice watershed.

MUCH WORK TO BE DONE

The Finger Lakes region is a hotbed of organizational activity for the protection of water quality. A long-term, high level of consciousness of the lakes' importance for water supply, real estate, tourism, and recreation leads to this tradition of activism. The quality of water in the Finger Lakes is generally good, and environmental protection efforts focus on the prevention of pollution rather than its remedy. There are fewer environmental "horror stories" in the Finger Lakes because of the relative absence of heavy industry and its pollution.

The path ahead, however, is neither well-marked nor obvious. Increasing development pressures on sensitive lands around all the Finger Lakes can be expected in the future. In many ways, the Finger Lakes may be too attractive for their own good, and the phenomenon of people "with more money than sense" would provide an interesting study for the sociologist, if not a comfort to the residents. Without proper planning and preparation for growth, the western Finger Lakes could be damaged. It will be little consolation for us to say that "they were loved to death."

PROTECTIVE ASSOCIATIONS:

Seneca Lake Pure Waters, Inc., P O Box 290, Watkins Glen, NY 14891
Keuka Lake Association, P O Box 415, Hammondsport, NY 14840
Canandaigua Lake Pure Waters, Ltd., P O Box 323, Canandaigua, NY 14424
Canandaigua Lake Watershed Task Force, 480 N. Main St., Canandaigua, NY 14424
Honeoye Valley Association, P O Box 165, Honeoye, NY 14471
Coalition for Hemlock and Canadice Lakes, P O Box 943, Canandaigua, NY 14424
Finger Lakes Land Trust, 121 E. Buffalo St., Ithaca, NY 14850