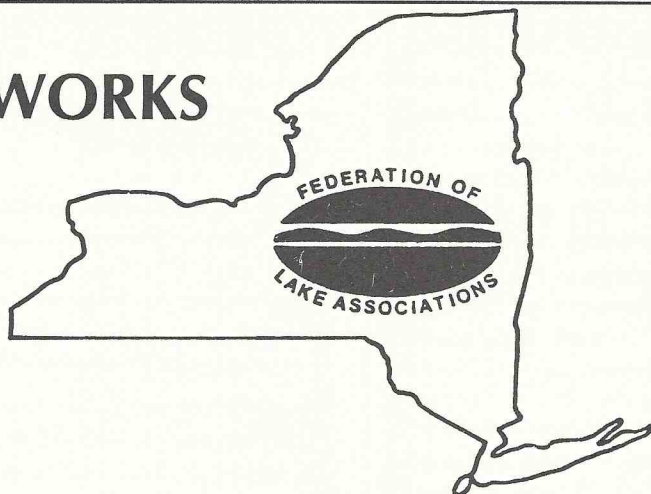


# WATERWORKS



SPRING 1988  
Volume 4  
No. 2

## PRESERVING WATER RESOURCE LANDS THROUGH PRIVATE INITIATIVE

by

Elizabeth Byers, Project Manager,  
The Trust for Public Land\*

*The Federation of Lake Associations, Inc. will be holding its annual conference on June 10th, 11th, and 12th at Keuka College. The conference this year will be co-sponsored by the Keuka Lake Association, Inc., and the Water Resources Board of the Finger Lakes Association, Inc.*

*Several of the articles found in this issue of "WATERWORKS" are written by people who will be presenting information at this conference (e.g., E. Byers, Trust for Public Land, and J. Coon, State of New York Department of State), and other articles are included because they deal with some of the lake and watershed management issues which will be addressed.*

*Please join us in June for this informative and enjoyable weekend.*

Natural waterfront lands provide recreational opportunities and scenic amenities, support environmentally sensitive wetlands and wildlife habitats, and contribute to a safe drinking water supply. The rapid development of waterfront lands, however, is of growing concern since residential, commercial or industrial use may preclude public use and threaten the environmental quality of both land and water.

Many organizations have been established to protect river corridors, lakes and coastal areas. These local and regional land conservation groups — called land trusts — can complement a locality's land use regulations by effectively preserving water resource lands. A land trust is a private, nonprofit entity, controlled by local citizens, that acquires land or interests in land for the protection of open space, recreational and resource lands. There are

over 560 land trusts across the country and over 25 in New York alone. The Thousand Islands Land Trust is an example of a New York land trust that was established a few years ago to protect waterfront lands along the St. Lawrence River.

Local citizens often determine that a land trust is needed because their community has significant environmental resources as well as intense development pressures and a lack of government funding for acquisition of open space. With enough interest, community residents can set up a land trust by establishing land preservation objectives, identifying a geographic focus, and then incorporating and applying for federal tax-exempt status. A broad-based and enthusiastic board of directors is key to the land trust's success.

How does a land trust work to protect important open space resources? A land trust offers landowners a variety of land protection methods. Many land trusts acquire the land's fee simple interest (outright ownership of the property) to provide recreational opportunities to the public. Several land trusts are also now setting up to use conservation easements as a preservation tool. A conservation easement is a legal agreement between a landowner and a land trust in which the landowner gives up all or some of his or her development rights to protect the land's environmental values, but maintains fee ownership to the property. The conservation easement runs with the land, regardless of future property owners, and the land trust is the recipient of this property interest with the ongoing responsibility of ensuring that the terms of the easement are never violated.





A conservation easement is a very flexible tool which might restrict all development or it may allow for additional houses which would not impact on the environmental integrity of the site. The way an easement is structured depends upon the landowner's needs and desires and the conservation interests of the land trust.

Land trusts will find that many landowners interested in land conservation will donate easements, making preservation of open space very cost effective. If the conservation easement meets specific conservation purposes as defined by the Internal Revenue Service, which insure that the easement provides for the public benefit, the landowner may consider the easement donation a charitable donation for income tax purposes. To determine the amount of the charitable contribution, an appraisal must be completed and the difference between the value of the land before an easement is placed on it and the value of the land after it is restricted is the value of the conservation easement, and thus the contribution.

The Thousand Islands Land Trust accepted its first conservation easements over almost 175 acres on Grindstone Island. These easements will prevent further development of the land, permanently preserve some of the island's scenic vistas to and from the river, and will prevent disturbances of one of the two remaining muskellunge spawning grounds by prohibiting cultivation, timbering, and construction within one hundred feet of the mean high water mark.

There may be times when a landowner wants to sell his or her property that the land trust is interested in preserving, so a simple conservation easement transaction would not be a workable solution. It may be possible for the land trust to acquire a piece of land, restrict its future uses through a conservation easement, and successfully resell it. To do this, a land trust would need to buy the land at a bargain sale, which is a sale to a qualified nonprofit organization at below the property's fair market value. The difference between the land's fair market value and the sale price can be considered a charitable contribution and thus a tax deduction for the seller. With a significant bargain sale, the land trust may be able to afford to restrict almost all development on the land before reselling to a private party. Conservation easements and bargain sales are just a few of the preservation tools which a land trust can use to protect important open space and waterfront lands.

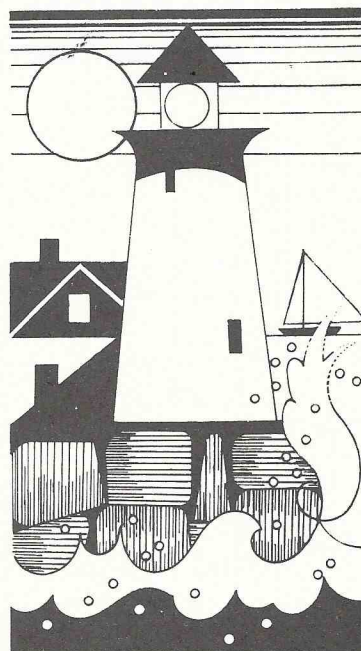
Nationwide, hundreds of land trusts have effectively protected their communities land resources by responding quickly to preservation opportunities when they arise. Collectively, the nation's land trusts have protected almost 700,000 acres through outright ownership and the use of conservation easements. Land trusts can provide the local leadership and commitment necessary to protect environmental resources for the public benefit.

\* The Trust for Public Land (TPL) is a national organization dedicated to the preservation of land for public use.

Using a variety of nonprofit real estate skills, TPL has protected over 379,000 acres since its inception in 1972. Through its Land Trust Program, the TPL helps community groups in rural and urban areas acquire and protect scenic, recreational, agricultural and wild lands for community benefit. TPL has helped incorporate over 90 land trusts across the nation, and has assisted community groups with several hundred land protection projects. •

## ***Welcome New Members!***

Putnam Lake Community Council  
Lake Craine Lot Owners Association  
Dr. & Mrs. F.J. Fouquet  
DeRuyter Lake Association  
Schuyler County Soil & Water Conservation District  
Finger Lakes Association  
Mayfield Lake Association



## ***1987 CONFERENCE PROCEEDINGS***

Proceedings are available from the 1987 Federation of Lake Associations Conference which was held last June in Oswego, New York. Guest speakers at the conference covered topics such as the holistic perspective to understanding lake and watershed interactions, the use of microcomputers as a management tool, the development of water quality programs on a watershed basis, Adirondack Lake shorelines, aquatic vegetation control and water quality monitoring programs in New York State, and methods of obtaining funding for lake management projects.

The FLA Proceedings are available for \$12.00 and checks should be made payable to the Federation of Lake Associations, Inc. Requests for the Proceedings, along with your return address, should be directed to Dr. John Colgan, President, 273 Hollywood Avenue, Rochester, New York 14618. •



## HOW LOCAL PLANNING AND LAND USE CONTROLS CAN BE USED TO PROTECT LAKES

By James A. Coon, Deputy Council  
State of New York, Department of State

Numerous land use regulatory techniques are available to protect lakes. This discussion will identify only a few of the most significant.

### **Zoning**

Probably the most protective control measure is zoning. Zoning regulates three basic aspects of how land is used: **use** (i.e., residential, commercial, industrial, etc.), **density** (i.e., how much of the allowed activity can occur on a unit of land), and **siting** (i.e., how an allowed land use is to be situated on a parcel of land). All of these aspects influence watershed development and protection of lakes.

It is important to remember that zoning is not an end in and of itself. It is a **means** to achieve the municipality's development or resource protection objectives which are developed in a planning process. Once the planning process has identified objectives for the protection and/or development of lakes, decisions can be made concerning appropriate uses, densities of development, and siting constraints. These decisions would be implemented in the zoning law.

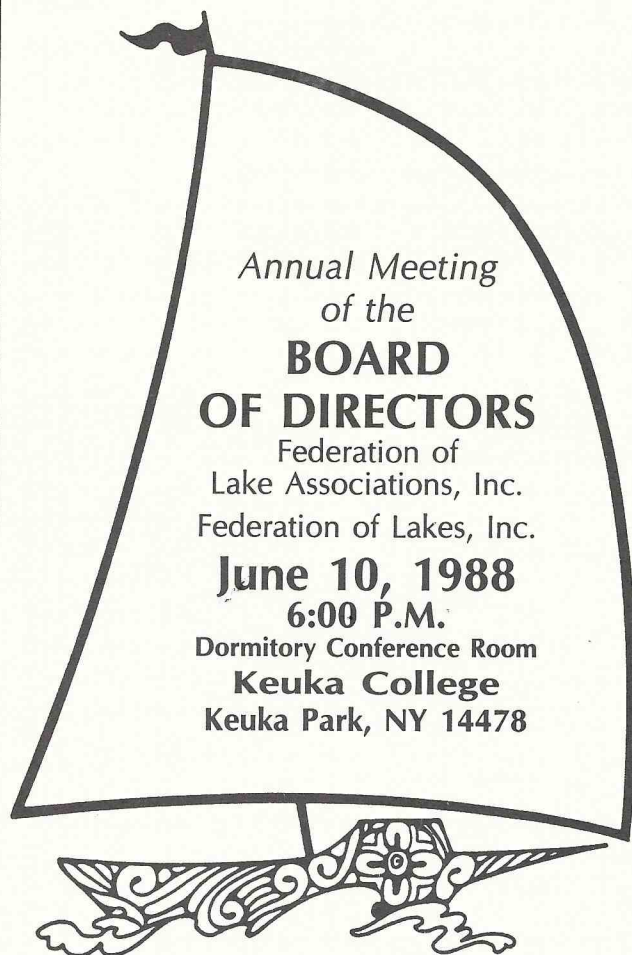
### **Special Permits, Site Plan Approval**

Special permit uses (sometimes called special exceptions or conditional uses) are allowed by the local zoning law, but also specify that certain criteria must be met. These criteria could be designed to protect lakes against possible adverse impact. Thus, for example, restaurants might be allowed by special permit in certain lake shore areas if they provided adequate parking, adequate screening, or met architectural criteria.

Site plan approval is a technique for reviewing the layout and design of a proposed new development or parcel. Although site plan approval does not address the acceptability of the kind of use, it does review the details of such factors as drainage, traffic circulation, architectural design, vegetation, signs, etc. Factors selected for review and the standards or criteria for approval can be designed with the lake protection in mind.

### **Cluster Development**

Cluster development is a technique which is used when both zoning and subdivision regulations are in effect. It permits (or requires if necessary) the grouping, or "clustering", of the allowable zoning density (number of dwelling units per acre) for a parcel of land being subdivided onto one portion of



the parcel. Thus, housing units are gathered onto one section of the parcel instead of being spread out evenly across the subdivided property.

### **Bonus or Inventive Zoning**

This is a technique by which a developer is permitted a "bonus" — usually increased density — if certain amenities are provided. The amenities are usually those beyond the power of the municipality to require such as public access to or along the lake shoreline. Amenities appropriate to lake protection and watershed development are usually identified by the local planning process.

There are many other techniques that are available to protect lakes, such as transfer of development rights, overlay zones, and performance zoning. All of the techniques require careful consideration of lake development objectives — whether they be protection, development, or a combination of both. Special attention should also be given to the conditions and circumstances under which development of lake shoreline property is deemed appropriate. Only then can specific regulatory techniques and measures be decided upon and drafted. ●



## THE GOVERNOR'S MESSAGE ON WATER QUALITY

*The following article covers the Water Quality section of Governor Mario Cuomo's State-of-the-State address which was presented on January 6th, 1988.*

### Water Quality

The protection of our water resources from pollution caused by traditional pollutants and toxic chemicals remains an important part of our environmental protection efforts.

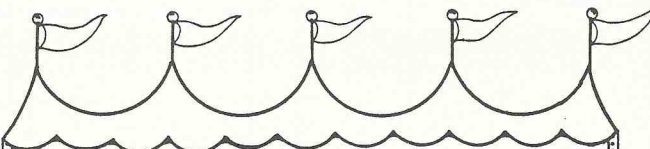
For two decades, State and federal grants have provided billions of dollars to New York's local governments for the construction of wastewater treatment facilities. Construction of these facilities has led to vast improvements in water quality. The Federal Water Quality Act of 1987 phases out federal grant funds for sewage treatment plant construction and instead provides funds to capitalize state revolving loan programs. I will propose legislation to establish a State revolving loan fund designed to provide subsidized loans to municipalities for new sewage treatment facilities.

We must continue our efforts to protect one of our most valuable natural resources, the Great Lakes. With funds from responsible parties and the 1986 Environmental Quality Bond Act, the remediation of hazardous waste sites that may be impacting water quality in the Lakes will continue. In addition, I will provide funds for the Department of Environmental Conservation to develop the required Remedial Action Plans for areas of the Lakes that have particular pollution problems. Finally, I will propose legislation again this year to implement the Great Lakes Charter. Our active involvement is essential if we are to do all we can to protect the waters of the Great Lakes from diversion outside of the Great Lakes Basin.

Conservation of our existing water resources should be an essential element of our efforts to assure sufficient drinking water supplies for New Yorkers. Therefore, I will again propose legislation to require the metering of all water for residential and industrial use.

The protection of our water resources should include a comprehensive program protecting vital aquifers, lakes and streams from pollution caused by inappropriate activities occurring nearby. I will propose that we implement controls on the use, storage and disposal of hazardous substances over aquifers in the state. We will also develop a wellhead protection program focusing on areas surrounding public water system wells and wellfields threatened by contaminants. Finally, we will develop a non-point source pollution management program to control sources of pollution, chiefly agricultural and urban runoff, which are a major cause of water pollution.

One of the principal threats to ground and surface water quality is leaking petroleum and chemical storage



*Annual Meeting of the*  
**Members**  
Federation of Lake Associations, Inc.  
Federation of Lakes, Inc.

**June 11, 1988**  
**5:00 P.M.**

Main Auditorium  
**Keuka College**  
Keuka Park, New York 14478

tanks. I will request additional staff, within available revenues, to enhance our leak prevention program through increased inspections and enforcement efforts. In order to assure a prompt response to the thousands of spills that occur annually, I have provided additional field staff for the Department of Environmental Conservation and, if necessary, will further augment these resources within available revenues.

The well-publicized problems that confront marine waters all across our nation, such as brown tide and contaminated and closed fisheries, remind us all that we cannot continue to treat our oceans as the repositories of society's waste. A Governor's Task Force on Coastal Resources will develop a long-term plan for managing these resources, and I will ask it for recommendations by October 15 to improve the State's management of our coastal resources, a responsibility now scattered among a number of State agencies.

We will continue our efforts to protect vital estuaries, including Long Island Sound, the New York Harbor and the Hudson River. In pursuit of this objective, I have nominated Long Island Sound and the New York Harbor for inclusion in the National Estuary Program. Pursuant to legislation I signed last year, we will develop a management plan for the Hudson River Estuarine District.

Last year I signed legislation which required fishing licenses for commercial fishermen in the marine district. My Executive Budget will propose that we utilize revenues from these licenses to fund strategies and management practices designed to protect and restore our marine resources. ●



# FEDERATION OF LAKE ASSOCIATIONS, INC.

## Annual Conference

June 10-12, 1988

Keuka College

## CONFERENCE AGENDA

### Friday, June 10

- 5:00 PM Registration
- 6:00 PM Federation of Lake Associations Board of Directors Meeting
- 8:00 PM RAP SESSION:  
**Value of Lake Resources to the Community**  
**Moderated by** - Conrad Tuney, Finger Lakes Association. Discussions will focus on assessing the value of small lake resources to the communities that live around them and use them. Discussions are also planned on initiatives being taken by different levels of governmental organization regarding lake management (e.g. Madison Co.)

### Saturday, June 11

- 8:00 AM Registration
- 8:30 AM - Commercial Exhibitors will be at their booths
- 5:00 PM demonstrating their products
- Poster Presentation:** New York DEC's **Evaluation of Aquatic Vegetation Control with Sterile Grass Carp.** Ed Woltman and Pat Festa, NY DEC
- 8:30 AM Conference opening Statements - Dr. John Colgan, President FLA
- 8:45 AM "DEC Assistance for Lake Management" Langdon Marsh, Executive Deputy Commissioner, NY DEC, Albany, NY
- 9:30 AM "FLA Legislative Initiatives and Directions in Lake Management" Donald Mazzulo, Esq., Harter, Secrest & Emery, Rochester, New York
- 10:00 AM BREAK
- 10:30 AM "Comprehensive Lake Management - The Why, What and How of It" Charles C. Morrison, Director, Land Resources Planning, NY DEC, Albany, NY
- 11:00 AM "Don't Do It In The Lake - So You Say Your Watershed Activities Are Safe?" Warren Flint, Assoc. Director, Great Lakes Program, SUNY Buffalo, NY
- 11:30 AM "Citizens Statewide Lake Assessment Program: Where Are We Going in the Future?" Scott Kishbaugh, Program Specialist, NY DEC, Albany, NY
- 12:00 PM LUNCH
- 1:00-  
2:30 PM **WORKSHOP: Methods for Resource Assessment and Evaluation With in Lake Watersheds**
- **Introduction** - Dean Long, LA Partnership, Saratoga Springs
  - "Traditional Dat Capture and Analysis" - Dean Long
  - "Computer Assisted Data Capture and Analysis" -Bob Brower, Cayuga Country Planning Board and Environmental Managment Council, Auburn, NY
  - "The Integration of New Understanding into Decision Making" Dean Long and Bob Brower
  - **Discussion**

2:30 PM BREAK

2:45 - **WORKSHOP: Protective Measures for Land and Water**

5:00 PM **Resources**

**-Introduction** - Moderator, William B. Morton, Assoc. Environmental Analyst, NY DEC, Albany, NY

Panel Presentations:

- "How Local Planning and Local Land Use Controls Can Be Used to Protect Lakes" James A. Coon, Deputy General Counsel, Dept. of State, Albany, NY
- "Opportunities For Protecting Lakes and Unique Watershed/Land Resources Through Acquisition" Elizabeth K. Byers, Field Rep., Trust for Public Lands, New York, NY
- "How Lake Associations Can Help in the Control of Nonpoint Sources of Pollution" David H. Pendergast, Executive Secretary, NY State Soil & Water Conservation Comm., Albany, NY

- **Discussion**

5:00 PM Federation of Lake Associations, Inc. - Annual Business Meeting, Dr. John Colgan, President

5:30 PM Wine & Cheese Reception, sponsored by The Keuka Lake Association, location: The Barn

6:30 PM Dinner, Chicken Barbeque

7:30 PM Evening Speaker, Daniel M. Barolo, Director, Divison of Water, NY DEC

### Sunday, June 12

- 9:00 AM **Lake George Watershed Management Plan: Case History**
- "Implementing the Plan for the Future of the Lake George Park", Charles Morrison, Land Resources Planning, NY DEC, Albany
  - "Modeling for Implementation of Storm Water Management Controls for Sub-Watersheds of the Lake George Basin", Mr. John Banta, Adirondack Park Agency (Representing the Warren County Intermunicipal Planning Program)
- 10:00 AM BREAK
- 10:15 AM "Walloon Lake in Michigan: Case History of Comprehensive Lake/Watershed Management", Paul Rogers, LTI - Limno Tech, Inc. Ann Arbor, Michigan
- 11:00 AM "Grass Carp Stocking in Walton Lake NY: Problems and Perspectives", Bud Goeing and Gerald Lauer, Ecological Analysts, Middletown, NY
- 11:40 AM "When Does Municipal Regulation Become a Taking of Private Property?", John Blyth, Harter, Secrest & Emery, Rochester, NY
- 12:00 PM Conference Conclusion



## KEUKA LAKE

### *The Use of a Survey as Part of a Lake Management Plan*

by John Powell, Cornell University

During the Summer of 1987, a survey was conducted of property owners in the Keuka Lake Watershed under the direction of the Yates County Aquatic Vegetation Committee. The survey is part of a broad study being conducted on Keuka Lake, one of the Finger Lakes of New York State, to assess aquatic vegetation growth, to estimate lake nutrient loading, and to develop long range plans to solve these problems.

The survey was designed to study four general areas:

- Characteristics of property owners in the watershed;
- Property owners' perception of water quality in Keuka Lake;
- Property owners' attitudes concerning regulations for protecting lake water quality; and
- Property owners' willingness to pay for the costs of water quality protection. These names had been taken from Yates and Seuben County tax rolls, which provided us with the property location, as well as the property owners' permanent address.

A seven page questionnaire was sent to 1,326 homes, which accounted for 17% of the property owners in the watershed. These names had been taken from Yates and Steuben county tax rolls, which provided us with the property location, as well as the property owner's permanent address.

The survey was conducted using the "total design method" which involves four mailings at prescribed intervals.

Initially, the questionnaire and a cover letter were mailed to the entire sample group. One week later, a reminder letter was mailed to the people who had not yet responded. Ten days later, a second survey and cover letter were again sent to non-respondents. A final reminder was mailed out after another week.

This four-step process resulted in a response rate of 70%. When the surveys were returned the information was first loaded onto a microcomputer using the Lotus 1-2-3 Spreadsheet package. Due to the large data set, the information was later transferred to a mainframe computer for statistical analysis.

The final report is almost complete and will be available shortly. The survey has provided us with some basic information concerning the percentage of residents with lake frontage, the percentage of year-round vs. seasonal residents, the percentage of residents who are members of the lakeshore property owners association, the average length of residence, and education and income levels. It was found that, although general perception of the lake water quality was considered to be good or excellent by a large percentage of those sampled, 80% agreed that there was a weed problem in Keuka Lake. Attitudes to regulations were generally favorable, and a watershed-wide district was felt to be the most suitable form of government for controlling land use around the lake. Through the survey, we established that there were significant differences in attitudes between identified groups within the watershed (e.g., between those with and without lake frontage, between recent and more established residents, and between property owner association members and non-members).

This information will be used to help the decision makers in the Keuka Lake watershed identify where they can best direct their efforts. Significant survey results show that homeowners are generally in favor of regulations for protecting lake water quality, that they are willing to contribute to the cost of that protection, and those with lake frontage are more favorable to regulations and prepared to pay more than those without lake frontage. This type of information can help decision makers develop effective and acceptable regulations to protect lake water quality.

I would be interested in hearing from any person or group that either has conducted, or is planning to conduct, a similar survey of lakeside or watershed-wide residents. I can be reached at the Department of Natural Resources, Fernow Hall, Cornell University, Ithaca, NY 14853. Ph. (607) 255-3191. •

## THE CITIZENS' STATEWIDE LAKE ASSESSMENT PROGRAM 1988

The Federation of Lake Associations (FLA) and the New York State Department of Environmental Conservation (NYS DEC) is looking forward to another busy summer with the Citizens' Statewide Lake Assessment Program (CSLAP). We are hoping to add nineteen additional lakes this year, for a total of 53 located throughout the state. Inclusion in CSLAP is based on membership to the Federation of Lake Associations, Inc., adequate funding (\$1,800 per lake), and the joint approval of the FLA and NYS DEC. In addition to water quality sampling, volunteers at each lake (at least two primary and two secondary chosen for each lake) will also participate in dissolved oxygen profiling, aquatic vegetation sampling, or precipitation gauging.

Assistance will be offered to lake volunteers by the following people:

### **S. Kishbaugh**

CSLAP Program Coordinator, DEC  
(518) 457-7470

### **A. Saltman**

Federation of Lake Associations  
(315) 655-2236

### **S. Brol**

DEC Region 1  
(516) 751-7725

### **R. Austin**

DEC Region 2  
(212) 482-4933

### **L. Myerson/C. Manfredi**

DEC Region 3  
(914) 761-6660

### **T. Blanchard**

DEC Region 4  
(518) 382-0680

### **F. Dunlap**

DEC Region 5  
(518) 891-1370

### **J. Luz**

DEC Region 6  
(315) 793-2554

### **C. Branagh/L. Flocke**

DEC Region 7  
(315) 428-4514

### **P. Jangbari**

DEC Region 8  
(716) 226-2466

### **G. Palumbo**

DEC Region 9  
(716) 847-4590



## CITIZENS' STATEWIDE LAKE ASSESSMENT PROGRAM 1988 CANDIDATE WATERS

The following list contains 1988 candidate lakes for the Citizens' Statewide Lake Assessment Program. The first twenty five (25) lakes listed here participated in the 1986 CSLAP program. The following nine lakes (numbers 26 through 34) were added for the 1987 program. The next sixteen lakes (35 through 50) may be added to the 1988 program through funds allocated to Finger Lakes region counties, as part of the 1988 Aquatic Vegetation Program funding. The final three lakes (51 through 53) are the likely candidates for inclusion in the 1988 program as part of the NYS DEC allocation for CSLAP.

<u>Lake Name</u>	<u>Region</u>	<u>Town</u>	<u>County</u>
1. Lake Lucille	3	New City	Rockland
2. Lake Carmel	3	Carmel	Putnam
3. Lake Mahopac	3	Mahopac	Putnam
4. Lake Waccabuc	3	South Salem	Westchester
5. Copake Lake	4	Craryville	Columbia
6. Nassau Lake	4	Nassau	Rensselaer
7. Adirondack Lake	5	Indian Lake	Hamilton
8. Glen Lake	5	Glens Falls	Warren
9. Goodnow Flowage	5	Newcomb	Essex
10. Loon Lake	5	Chestertown	Warren
11. Indian Lake	5	Mountain View	Franklin
12. Butterfield Lake	6	Redwood	Jefferson
13. Fulton Second Lake	6	Old Forge	Herkimer
14. Joe Indian Lake	6	Parishville	St. Lawrence
15. Eagle Crag Lake	6	Tupper Lake	St. Lawrence
16. Twitchell Lake	6	Big Moose	Herkimer
17. Crooked Lake	7	Tully	Onondaga
18. Lake Moraine	7	Hamilton	Madison
19. North Sandy Pond	7	Sandy Creek	Oswego
20. Petonia Lake	7	Greene	Chenango
21. Tuscarora Lake	7	Erieville	Madison
22. Conesus Lake	8	Livonia	Livingston
23. Cuba Lake	9	Cuba	Allegany
24. Findley Lake	9	Findley Lake	Chautauqua
25. Silver Lake	9	Perry	Wyoming
26. Wolf Lake	3	Wurtsboro	Sullivan
27. Sacandaga Lake	5	Lake Pleasant	Hamilton
28. Brant Lake	5	Brant Lake	Warren
29. Babcock Lake	4	Petersburg	Rensselaer
30. Oquaga Lake	7	Deposit	Broome
31. Melody Lake	7	Willet	Cortland
32. Arnold Lake	4	Milford	Otsego
33. Chautauqua Lake	9	Maple Springs	Chautauqua
34. Schroon Lake	5	Schroon Lake	Essex-Warren
35. Gorton Lake	7	N. Brookfield	Madison
36. Hatch/Bradley Brook L.	7	West Eaton	Madison
37. Lebanon Reservoir	7	Lebanon	Madison
38. Craine Lake	7	Hamilton	Madison
39. Eaton Reservoir	7	West Eaton	Madison
40. DeRuyter Reservoir	7	DeRuyter	Madison
41. Cazenovia Lake	7	Cazenovia	Madison
42. Cross Lake	7	Meridian	Cayuga
43. Little Sodus Bay	7	Fair Haven	Cayuga
44. Duck Lake	7	Conquest	Cayuga
45. Lake Como	7	Moravia	Cayuga
46. Skaneateles Lake	7	Skaneateles	Cayuga/Onondaga
47. Tully Lake	7	Tully	Onondaga
48. Waneta/Lamoka Lake	8	Weston	Schuyler
49. Sodus Bay	8	Sodus Point	Wayne
50. Port Bay	8	Wolcott	Wayne
51. Lake Bonaparte	6	Lake Bonaparte	Lewis
52. Black Lake	6	Hammond	St. Lawrence
53. Queechey Lake	4	Queechey	Columbia



## WATERSHED MANAGEMENT

### A Cazenovia Lake Report

*"by Linda Muschenheim, Member, Board of Directors", Cazenovia Lake Association.*

Cazenovia Lake has been blessed in many ways. Located in a beautiful rural setting, just close enough to Syracuse to promote growth but not so close as to cause a stampede, its location has given the residents time to learn about the problems of lake eutrophication without serious pollution. For thirty years, the Cazenovia Lake Association has attempted to keep the water pristine and the development well planned. In many ways, their stewardship has been successful.

Major problems in Cazenovia Lake began with the introduction of Eurasian Milfoil. Cazenovia Lake is a small, shallow, fertile lake that has been the perfect breeding ground for this pernicious weed. For the first few years, the Association thought it could control the weed with chemicals and cutting. The chemicals were not applied heavily enough, however, to stop the weed's spread. The cutting was often not followed by careful harvesting so that the remedy unwittingly helped in the spread. For the last two years the weed has spread rapidly, entering the more populous south end of the lake, choking the village swimming beach and making motor boating almost impossible. The immediate response to the problem was to hire a commercial cutting firm with a larger cutter and a more efficient harvester. In heavily used areas, the cutting was done twice during the summer months.

The Lake Association soon realized that chemical treatment and weed harvesting was not enough. The influx of nutrients from the surrounding watershed was promoting weed growth and had to be reduced if there was to be any long term solution to the problem. The first step, therefore, was to legally define the lake watershed and get an ordinance passed into the town laws declaring the watershed an area for special consideration.

Since the lake watershed ordinance has passed, there have been new ordinances written in an attempt to decrease lake pollution. One ordinance, for example, increased the building lot size to 80,000 square feet in order to decrease development and minimize surface runoff.

Because the Cazenovia Lake watershed has steep slopes, runoff water moves downhill quickly, carrying suspended silt and nutrients directly into the lake. The Lake Association is therefore considering the reduction of runoff pollution through the use of catchment basins which would slow the rate of the water and allow the silt and nutrients to settle out

before the water enters the lake. Since marshlands are nature's perfect catchment basin, protection of many of these areas within the watershed is also regulated by local town ordinances.

Provisions in the town land disturbance ordinance also help with the runoff problem. Builders are required to contain any bare soil so that it will not wash off the property when it rains. Any new building lot must be graded and designed so that there is no increase in the rate of surface water runoff. There can be no structures within fifty feet of the shore, and septic systems must be located one hundred feet back from any body of water. This last provision is a state law but is only as good as the local enforcement.

Cazenovia is fortunate to have a conscientious zoning officer and an active Cazenovia Advisory Conservation Commission (CACC). The CACC is an appointed, voluntary group of experts that are called in at the preliminary stages of any building permit process. This group carefully assesses the building and land grading plan and suggests changes which will protect the lake. Their suggestions are given great weight in the building permit process.



A. Salzman

In order to assess the possible problems arising out of faulty septic systems, the Lake Association conducted a survey of property owners with septic systems adjacent to the lake, offering a dye test and handing out a brochure on the care of a septic system. The Lake Association and other organizations in town encouraged the town board to develop an ordinance that requires strict monitoring of the condition of the septic systems in the watershed. The Cazenovia Advisory Conservation Commission encourages the owners of any summer house being converted to a year-round house to maintain the proper working of its septic system and have a backup system planned before any renovation to the house is begun. The Village of Cazenovia, which borders on the lake, has had sanitary sewers and storm sewers connected to a sewage disposal plant for some time.



The Lake Association will continue to explore ways to protect the lake through watershed management. Some methods do not require laws but can be implemented through educating members of the community. Lakeside owners should be encouraged not to fertilize their lawns. If the majority of the waterfront is planted in low shrubs or trees with their lower limbs removed, the owner can still enjoy the beauty of the lake while decreasing surface water runoff from compacted lawns. None of these solutions provide a quick resolution of the problem, but in the long run, we hope that lake water quality will improve and be enjoyed for generations to come. ●

*We could use your input! **Waterworks** is a way to share your lake issues and experiences with other lake associations throughout the state. If you have stories, artwork, or photography to contribute, please contact the editor.*

## ATTORNEY GENERAL PLANS ENVIRONMENTAL FORUM SERIES

A series of open forums on the environment has been planned by the Environmental Protection Bureau of the New York State Attorney General's office to seek citizen input on such issues as pesticides, lawn care, toxic chemical accidents, community right to know, acid rain, solid waste, air pollution, land use, wetlands protection, asbestos, and radon.

These open forums are scheduled at various locations throughout New York State and will continue to be held until June 6.

For more information, call the Attorney General's offices in Albany at (518) 486-5469 or New York City at (212) 341-2446. ●

Numerous publications have been written by the NYS DEC Division of Water. The partial list found below contains some of the publications which are available and the price of each document.

To receive ordering information and a complete, updated list, contact either:

**The Bureau of Information and Bulk Storage**, Room 310, 50 Wolf Road, Albany, N.Y. 12233-3501,  
(518) 457-7463

or

**Health Research, Inc.**, Health Education Services Division, Post Office Box, Albany, N.Y. 12224,  
(518) 439-7286

title	number of pages	year produced or updated	available from	price
Bulk Storage of Petroleum	1	1985	BIBS	\$0.00
Siting Manual for Storing Substances, A Practical Guide	97	1985	HES	\$10.00
Adm. and Legal Options for Storing Hazardous Substances	28	1984	HES	\$3.00
Recommended Practices for Underground Storage of Petroleum	86	1984	HES	\$15.00
Tech. For Storage of Hazardous Liquids: State-of-the-Art Review	223	1983	HES	\$15.00
Petroleum Bulk Storage - PBS Regulations Booklet	34	1985	BIBS	\$0.00
Recommended Practices for Above-Ground Petroleum Storage	83	1987	BIBS	\$0.00
Generic Env. Impact Statement on Development of W.Q. Standards	120	1985	BIBS	\$30.00
Technical and Operational Guidance Series (DOW)	320	1987	BIBS	\$80.00
Annual Data Report, DOW	100	1987	BIBS	\$25.00
NYS's Continuing Planning (DOW)	84	1985	BIBS	\$0.00
Dam Safety	2	1985	BIBS	\$0.00
Guidelines for Design of Dams	30	1988	BIBS	\$0.00
An Owners Guide Manual for Inspection and Maintenance of Dams in NYS	118	1987	BIBS	\$0.00
Flood Warning	6	1986	BIBS	\$0.00
Flood Control	5	1985	BIBS	\$0.00
Ice Jams	5	1986	BIBS	\$0.00
Flood Protection Projects	38	1981	BIBS	\$0.00
Patrolling and Treating Flood Problems	20	1980	BIBS	\$0.00
Prototype Local Flood Warning and Preparedness Program	94	1984	BIBS	\$0.00
Tech. Guidance Manual for Local Flood Warning and Prep. Program	88	1984	BIBS	\$0.00



# SNAPSHOT OF NEW YORK'S WATER RESOURCES

## PRECIPITATION AND WHAT HAPPENS TO IT

Average precipitation in NYS: 90 billion gallons per day (40 inches per year). Of this, one-half (45 billion gallon per day) is lost by evapotranspiration. Approximately 27-31 billion gallons per day run off into surface waters; 14-18 billion gallons per day seep into and recharge the groundwater.

## THE COMMUNITY SERVED

State Population (1985):  
17,735,200  
State Area: 49,576 sq. mi.  
Number of River Basins: 17  
Number of Counties: 62  
Number of Towns: 932  
Number of Cities: 62  
Number of Villages: 553

## HOW THE WATER IS USED

1985 State Estimates in million gallons per day - mgd

Withdrawals	Amount	% of Total
Public Supply	3,054mgd	20
Agriculture	57	1
Industrial (Self-Supplied)	1,030	7
Thermoelectric Power	8,390	56
Nuclear Power	2,472	16
Total	15,003mgd	100

## CONSUMPTIVE USE

(excludes municipal discharges to saline waters)

Public Supply	326mgd	61
Agriculture	57	11
Industrial (Self-Supplied)	102	19
Thermoelectric Power	37	7
10 Nuclear Power	2	
Total	532mgd	100

## WHERE IT OCCURS

### On the Surface

Miles of rivers and streams: 70,000 miles  
Miles of rivers bordering other states and Canada: 242 miles  
Miles of coastline: 3,100 miles  
Number and square miles of lakes and ponds: 7,500 (at least 5,300 square miles)

Square miles of marshes/wetlands: 1,477 square miles

Volume of surface waters: 22,164 billion gallons or 68 million acre feet annually

Number of reservoirs: 324

Volume of reservoir storage capacity: 4,074 billion gallons or 12.5 million acre feet

### Under the Ground

Percent of NYS land underlain by sand and gravel aquifers: 11.2%

Percent of NYS land underlain by primary public water supply aquifers: 3.9%

NYS population served by groundwater: 6.2 million

Formally designated "Sole Source"

Aquifers: Long Island, including Nassau, Suffolk, Kings & Queens; Schenectady Aquifer System; Highlands Aquifer; Binghamton-Endicott-Johnson City and Tioga-Waverly Aquifer Systems; Cattaraugus Creek Aquifer.

## POINT SOURCE DISCHARGES

Point source discharges to ground and surface waters require a DEC permit.

Total Number of sources with a permit: 7,464

- Number of sources discharging to surface waters: 2,922
- Number of sources discharging to groundwaters: 4,542

Municipal (Publically Owned Treatment Works POTWs)

- Total number of municipal sources: 555
- POTWs requiring pretreatment programs: 91 (56 programs covering 91 POTWs)
- POTWs with combined sewer overflows: 99
- Number of certified operators: 3,500

Industrial

- Total number of permitted industrial sources: 1,318
- "Significant" permitted industrial sources: 761

Private/Commercial/Industrial (P/C/I)

- Total number of permitted P/C/I sources: 5,591
- Number of "Significant" permitted P/C/I sources: 225

## NONPOINT SOURCE IMPACTS

Initial research shows adverse impacts on 4,151 miles of rivers and 32,524 acres of lakes from a broad variety of nonpoint sources of contamination. Comparable data for coastal waters and the Great Lakes are incomplete at this time.

## BULK STORAGE AND SPILL RESPONSE

Bulk Storage

- Number of Petroleum storage tanks: 117,830 (1,127 million gallons)
- Number of Chemical storage tanks: 10,000 (30 million gallons)

Spill Response

- Responses to oil and hazardous material spills in 1987: 10,377

## RESOURCE MANAGEMENT PROGRAM STATISTICS

Flood protection projects

- Total number in state: 81
- Damages prevented (\$): 51 million in 1986 alone

Floodplain Management Program

- Total number of flood-prone communities: 1,485
- Floodplain population: 1,429,200

Coastal Erosion Program

- Miles of coastal shoreline: 3,100
- Number of municipalities with coastal shorelines: 235
- Number of shore protection projects: 45

Dam Safety Program

- Total number of dams: 5,994
- Number of dams with sizeable communities below them: 323

Water Supply Program

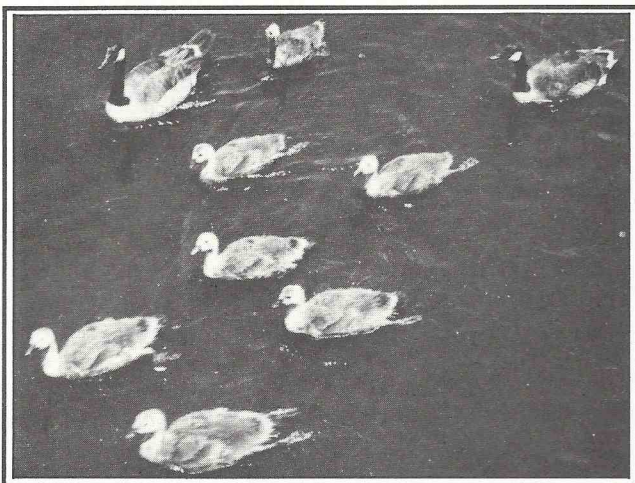
- Number of public and investor-owned municipal water systems: 1,800
- Population served by these systems: 90% of total state population

## MONITORING

- Intensive basin studies of chemical and biological water quality are conducted on a 6 year cycle.
- Permanent stations for monitoring toxic and conventional pollutants: 30 Stations monitoring fish flesh: 70

Courtesy of NYS DEC Water Bulletin





**Waterworks** is published four times a year. Individuals who wish to submit articles, artwork, or photography to **Waterworks** are welcome to contact the editor, Anne Bregy Saltman, 2175 Ten Eyck Avenue, Cazenovia, New York 13035. For additional copies of **Waterworks** and address changes, contact Dr. John Colgan, President, 273 Hollywood Avenue, Rochester, NY 14618 (716) 271-0372. Please note that all mail should be sent to the Rochester office.

### DO YOU HAVE QUESTIONS ABOUT NEW YORK STATE GOVERNMENT?

The New York State League of Women Voters provides a CITIZEN INFORMATION SERVICE. Call toll free:

**1-800-462-6204**  
**(465-4162 in Capital District)**

for assistance with questions regarding the State legislature, status of bills, elections, ballot issues, courts, taxes, budget, constitutional amendments, and the executive branch.

This service is available from 10:00 AM to 4:00 PM, Monday through Friday during the legislative session.

*Additional copies of **Waterworks** are available for local distribution among lake association membership at a cost of \$.50 per copy. Requests can be made by marking the appropriate section on the membership form.*

## The Federation of Lake Associations

We are a coalition of organizations dedicated to the preservation and restoration of all lakes, ponds and rivers throughout New York State. We welcome and encourage the memberships of lake associations, property owner groups, fish and game clubs, corporations and individuals. The Federation is incorporated under two mirror organizations with the same officers and board of directors.

The Federation of Lake Associations, Inc. purposes are:

- \* to provide a clearinghouse of environmental information and expertise in all matters pertaining to lake management.
- \* to promote by education the wise use and appreciation of the lakes in New York State.
- \* to provide a pool of technical knowledge and expertise to advise and assist member associations and individuals.
- \* to establish liaison with other environmental groups and agencies.
- \* to provide a coordinating structure for lake-related research projects.

The Federation of Lakes, Inc. purposes are:

- \* to monitor and report to members on legislation and administrative actions affecting the waters of New York State.
- \* to support and lobby for legislation and administrative actions which promote the sound management of the waters of New York State.

### MEMBERSHIP CATEGORIES

Associations with up to 99 members	\$30.00/yr.
Associations with 100 to 199 members	\$50.00/yr.
Associations with 200 or more members	\$100.00/yr.
Individual	\$15.00/yr. Corporate \$100.00/yr.
Additional Copies of <b>Waterworks</b>	\$.50 each

Membership dues over \$5.00 are tax deductible contributions to the Federation of Lake Associations, to be used for educational, scientific and public information activities of the Federation.

### APPLICATION FOR MEMBERSHIP

THE FEDERATION OF LAKE ASSOCIATIONS, INC., 273 HOLLYWOOD AVE., ROCHESTER, NY 14618

Type of Membership (please check)

☐ Association

☐ Individual

☐ Corporate

Association Name: \_\_\_\_\_

Assoc. Address: Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ County \_\_\_\_\_

President/Contact Person: \_\_\_\_\_

Summer Address \_\_\_\_\_ Winter Address \_\_\_\_\_

Summer Phone ( ) \_\_\_\_\_ Winter Phone ( ) \_\_\_\_\_

Total number of newsletters requested of each issue: \_\_\_\_\_



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## **HELPFUL HINTS FOR LAKE PROPERTY OWNERS**

Lake eutrophication, or aging, is a natural process, but the rate at which this occurs can be accelerated by the cultural activities of the people who live around the lake. Efforts to reduce the amount of nutrients flowing into the lake will improve water quality. Improvement will come only if we treat the problem as a community project, with the participation of all lake residents. Let's keep our lakes beautiful! Here's how you can help:

- Septic systems should be maintained. The septic or holding tank should be pumped out every 2-3 years. A system which isn't operating correctly could cause untreated sewage to flow directly into the lake. Old septic systems should be replaced to meet new standards.

- Eliminate, or at least minimize, lawn and garden fertilization. If you do use fertilizers, never exceed the recommended application rates. Gardening and agricultural practices can be modified by regulating the timing and extent of fertilizer application and avoiding fertilizer usage within the border along the edge of the lake.

- Items should not be washed directly in the lake if a soap or cleaning agent is to be used. Avoid washing boats or cars near the lake where detergent and oil may pollute the water.

- Remove nuisance aquatic plants by pulling them from the roots and carry all the plant parts away from the lake.

- Branches, leaves, or grass clippings should never be discarded in the lake, in drainage ditches, or on flood control lands.

- Check all boats for weeds before putting them in the lake or leaving them on shore. The unintended transporting of plants when moving a boat from one lake to another is a common way of introducing new and potentially problem-causing plant species into your lake.

- Never throw ashes from your fireplace or woodstove into the lake. Ashes contain phosphorus, nitrogen, and carbon which act as fertilizer for aquatic plants.

- Restrict household water usage to reduce stress on your septic system.

- A strip of trees or shrubs planted along the lake shoreline can serve two purposes. The plant roots reduce the level of erosion and the vegetation can absorb fertilizer runoff before it reaches the lake.

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**The Federation of Lake Associations, Inc.**  
273 Hollywood Avenue  
Rochester, New York 14618

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