

Conference '98, a Great Success!!

The 15th annual conference of NYSFOLA was convened on beautiful Lake Moraine on Friday May 1, 1998. The White Eagle Conference Center was the location and 174 attendees were there for a weekend of networking and learning. Friday evening, after a hearty meal, we settled in for an open discussion period. Saturday morning was the beginning of the concurrent sessions and the opening of the exhibitor area.

With interest on the progress of the Watershed Planning Project, this session soon became overflowing. The lakes involved in this project were reporting on their activities and problems and many questions were asked of the presenters. With other sessions on GIS, Biological Control of Aquatic Plants and an introduction to the upcoming Citizens Pollution Control Program being offered at the identical time, many Associations were glad they had more than one attendee at the conference. With these sessions scheduled for all morning, a short break was appreciated and another opportunity to visit the exhibition area was available.

After a lunch break and visit with the Exhibitors the second sessions involved education on CSLAP, Role of Wetlands in Lake Management, Chemicals in Lake Management and Lake Nutrients. Our Annual meeting was conducted shortly before the evening meal. The keynote speaker was Congressman Sherwood Boehlert. His presentation discussed the environmental issues of New York and our lakes. Entertainment by the Colgate 13 closed the evening's activities.

Two sessions were held Sunday morning relative to Agricultural Environment Management and a successful conference concluded at 11:00 A.M.. Thank you to all attendees and exhibitors. We hope to see you next year the first weekend in May. Mark your calendars now.



Mark Randall enjoying a conversation with Lewis Stone. Mark is one of the early founders of our organization and has been active for many years.

NYSFOLA'S mission is to protect the water resources of New York State by assisting local organizations and individuals through public dialogue, education, information exchange, and collaborative efforts.

from the President

Over the last few years NYSFOLA has become a more dynamic, effective organization. As the number of formal outreach programs have increased, so has our membership. The Federation membership now numbers some 200 property owner associations and 500 individual memberships.

More than 125 lakes now participate in the Citizens Statewide Lake Assessment Program (CSLAP). While CSLAP has gained national recognition, the key to its success is not really the DEC or the Federation. The backbone of this program is the many volunteers who dedicate time and effort to collect water samples, prepare them, and ship them to the Dept. of Health.

Volunteerism also controls the successful outcome of our Total Watershed Planning Program. While the DEC provides essential funding through the Federation, it is again the dedicated volunteers that really make the program work. The list includes lake managers and their various committees who work pro bono with the lake users, Soil and Water Districts, Planning Boards, and the educational and scientific community etc.. These are the people who really produce the end product, a State of The Lake Report. In layman's terms, this report is a priority list of programs and information necessary to improve or maintain the water quality of a particular watershed. The Federation, through the able leadership of George Kelley and his committee, has approved three additional NYSFOLA lakes to participate in this important program.

Another new Federation initiative is the N.Y.S. Citizens Pollution Control Program. A program which is designed to identify and reduce non-point pollution from septic systems. Community volunteers are again responsible for the success of a pollution control survey. As opposed to using a Code Enforcement Officer, the community volunteer accounts for the "non threatening approach" which is acceptable to the property owner.

Although the CPCP has already been piloted by many lakes in N.Y.S., this is the first year the Federation has made it available to our membership as a formal, fully funded program. Five of our lakes encompassing about 1000 dwellings are currently participating in this new project and we hope to expand the number of participating lakes next year.

Finally your Federation and indeed many of its members have been actively lobbying to extend the slow speed zone for motorized watercraft from 100' to 200'. Many important environmental groups and members of the law enforcement community as well as individual citizens have joined our effort. I will keep you advised of our progress and ask for your personal input in future **WATERWORKS** publications.

In the meantime, don't hesitate to interact with your Federation. Only by working together can we create a positive impact on your lake environment.

Best wishes for a great summer!

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Where to go for a clip? *Aquatic Plant Harvesting with Vision or Vengeance*

by Sandy Engel

Think of an aquatic plant harvester as a fancy set of shears, a mechanical shark with an enormous appetite for plants. Allowed to run wild, it can defoliate shallow lakes and become a weapon against aquatic habitat. Guided by a plant harvesting plan, the same monster can become a tool that improves lake use . . . for people and water life.

Mechanical plant harvesters snip plants underwater and gather the cuttings at the water surface (Engel 1990a). Given enough water to float, they can go almost anywhere the water flows. Small harvesters with shallow draft, and mechanical cutters that only snip plants, can open lanes near shore and groom the edges of piers: large harvesters that load tons of dripping plants onboard can enlarge water space offshore (Cooke et al. 1986).

Large or small, mechanical harvesters can be outfitted for a variety of special jobs adding skimmers to remove surface scums of algae, side rakes to trim shorelines, and extension bars to cut deepwater plants can make a mechanical harvester the consummate "Barber of Lakeville." Yet where best to harvest, and harvest properly, depends as much on managers as on machines.

Macroharvesting

With a lake choked by rank vegetation, few lake management groups today would resist using a mechanical plant harvester to "clean out" shallow bays and expand open water for swimming, skiing, and boating. To think of wilting lake plants cut and hauled to a vacant lot, biomass that once ruined many a summer vacation, is to think macroharvesting: clear-cutting with a vengeance. Macroharvesting aims to open area of water surface as machine, budget, and daylight allow. Consider 153-acre White Asti Lake, only 9 feet deep in northwestern Wisconsin. American elodea, coontail, curly-leaf pondweed, filamentous algae, and water lilies turned the two lake basins into salad bowls, elbowing out boaters and swimmers. After years of herbicide treatment followed by contract harvesting, families living around the lake gave \$300 apiece to buy a \$39,000 harvester able to work in 18 inches of water and haul 1.5 tons of cut plants. The blaze-orange snipper arrived on June 15, 1985, and went to work clearing the shallows before the Fourth of July. By August 7, after 275 hours of daily operation, nary a shoot could be seen within reach of the cutterbars. Even wild rice was soon cut from the channel between the basins. So much for habitat. In clear-cutting shallows for boaters and swimmers, macroharvesting exposes the lake shore to wave scour that increases bank erosion, water turbidity, and sediment loss to deep water (Nichols and Shaw 1983, Engel 1990b). Clearing out plant beds destroys habitat for invertebrates, fish, and waterfowl. Spawning beds are lost and microhabitats are destroyed. Weeds like Eurasian water milfoil can even spread and grow faster after harvesting (Crowell et al. 1994). Filamentous macroscopic algae can also increase after prolonged intensive harvesting (Nichols 1973). Although nutrients are removed with harvested plants, macroharvesting rarely offsets nutrient loading to lakes (Peterson et al. 1974).

Yet macroharvesting can dedicate sites for water sports, remove exotic foliage that stymies less aggressive native plants, and reduce stunting by plant-dwelling sunfish. It can also reduce fish winterkill by removing aquatic plants before they decay in autumn.

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Travel the Internet with us!!!

For all the computer buffs it is now possible to contact the NYSFOLA Office by E-Mail. We try to check the mail box every evening for messages or questions that you have. We can be reached at ;-

folia@cecomet.net

or check-out the NYSFOLA homepage at;-

http://ourworld.compuserve.com/homepages/nys_lakes

NALMS can be reached at;- <http://www.nalms.org>

NYSFOLA-NYSDEC WATERSHED MANAGEMENT PILOT PROJECT
A FIRST YEAR ASSESSMENT
by
REBECCA SCHNEIDER AND GEORGE KELLEY AS CHAIR

There is currently considerable focus on using watersheds as the basis for managing water quality, flooding and erosion. At the Spring 1997 annual meeting NYSFOLA began a cooperative venture with NYSDEC to develop watershed management plans Associated with five NYSFOLA lakes throughout New York state. These lakes are Queechy, Findley, Cossayuna, Owasco, Oscawana and Chateaugay Lakes. (Cossayuna and Owasco Lakes are funded separately but report their progress to NYSFOLA).

One obvious goal of the project is to develop a Watershed Management Plan for each lake and its watershed which will outline activities needed to maintain or improve both the lake and its watershed's health and for people's enjoyment of the whole watershed. The actual written Management Plan will also provide leverage to access future sources of government or other funding needed to remediate such problems as excessive aquatic weed growth. However, the project is also a pilot study to determine a suitable approach for developing watershed management plans when there is only a limited budget and resources. These models would be useful as a tool for other lakes to follow. It was hoped that the NYSFOLA lake associations could provide a strong initiative because of their networking, established organizational structures, and interest in the health of their lakes and the related watershed.

The development of watershed management plans follow a typical series of stages in public policy decision-making. These can be visualized as (1) expressions of concern; (2) Involvement; (3) identifying issues (4) identifying alternatives for resolving the issues; (5) evaluating the consequences of each alternative, (6) making choices for implementation; and (7) Implementation. The core groups who seek funding for developing a Watershed Management Plan usually come in at about Step 2. The State of the Lake Report is Step 3. Seeking consensus and involvement of watershed interest in the preparation of the Watershed Management Plan includes Steps 1 through 4, and may include some of Steps 5 and 6.

NYSDEC provided an approach for the lakes to follow. Briefly, each lake created a core team consisting of a manager, a scientist and a mentor. It was up to the team to then work with any relevant groups or persons throughout the watershed to develop two specific products. The first product is a State of the Lake Report which summarizes the health of the lake and associated watershed and identifies problems which should be addressed. The second product is the Watershed Management Plan which actually outlines the needs and recommendations for action. As these teams were forming, NYSFOLA's board of directors decided to appoint a Watershed Committee to keep in touch with the NYSFOLA lake members and to provide oversight and balance to the NYSDEC approach.

Over the past year the initial lakes have made good progress. Most lakes have finished or are completing drafts of their State or the Lake Reports. Some have developed questionnaires seeking input from all stakeholders. Findley Lake is developing a unique evaluation of natural milfoil control as part of their State of the Lake report.

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Watershed Management

From talking with the lake teams during the past year, the committee has been able to get perspective on what works and what doesn't. It has become apparent that the major outcome of a project is not the written products, but the dialogue created among all the stakeholders of the watershed, and particularly among the stakeholders who have different interests or influences on the lake. Lakeshore owners are an appropriate focus group because they have vital interests in water quality and lake health. They cannot and should not, however, be developing a watershed management plan by themselves. Improved watershed quality will not happen unless all of the relevant groups -lakeshore owners with septic systems, farmers along feeder streams, the local highway department, and all others -are involved and committed. Obtaining this involvement is really the key to the success of these projects and this depends on the functioning of the core team.

Several things seem to be important for the core team to succeed. First, this project takes a considerable amount of management time. It requires as much as ten hours a week or more throughout the year to make phone calls, organize meetings, and help organize information. Such a commitment places a burden on volunteers who are also juggling a full time job and family, and the project becomes a stress instead of a challenge.

Projects seem to proceed most smoothly when the leadership roles can be included as part of people's job duties within a relevant agency, instead of relying solely on volunteers. Agency people also seem to have knowledge of the significant groups and stakeholders. Selection of the right people and agency however, is not a minor issue. Many agencies are viewed as having a biased agenda or as a regulatory threat. This reduces their effectiveness for involving all relevant stakeholder's.

Second, the project requires a dedicated leader with good leadership skills. The team leader needs to have the skills necessary to identify the relevant stakeholder groups, identify the key issues, and diplomatically bring these groups and issues into discussion. The personality of the team leader is truly important.

The ability of the scientist to accurately evaluate lake health is another critical factor. Data are often inadequate to determine causes of problems such as weed growth. Limited budgets may not allow water chemistry or other data to be collected. It is important, however, that the scientist be able to identify these limitations. Such limitations need to be highlighted as part of the recommendations in the final plan for which future grant funds may be sought.

The initial pilot projects involved with the NYSFOLA-NYSDEC collaborative program are about midway in the development of their plans. It is already clear that a combination of good leadership, accurate science and complete and continuous stakeholder involvement are critical to the success of the Watershed Management Plans.

"WATERWORKS" would appreciate information on your Lake Association. I attempt to have a page set aside each issue for a different Association. Let's make your's next! Forward your write-up to the office by mail, fax, E-mail or pony express, but start now. Pictures can be included.

Thank you, Editor



Ask Dr. Lake

In this issue, Dr. Lake discusses on-site (septic) wastewater systems

Dr. Lake, All the cottages around our lake have septic tanks to treat sewage. Other than I once had to have the tank pumped, I don't know that much about my septic system. How does it work?

A septic system consists of a large underground tank, usually made of pre-cast concrete tank and a leach field. Human wastewater flows into the septic tank, where the solid material settles to the bottom. In the septic tank, bacteria break down much of the solid organic matter. The clear (but not purified) effluent flows out of the tank's overflow into a network of underground pipes that make up the leach field. The pipes in the leach field are filled with holes, so that the effluent can leach out into the surrounding soil. The soil and its associated microorganisms purify the effluent further. The soil also acts as a filter and removes pathogenic bacteria and viruses that cause disease. (see the April 1998 issue of Waterworks). The nutrient phosphorus is also removed by the soil in an efficient manner.

How do I know if my septic system is working properly? It sounds like a maintenance-free perpetual motion machine!

That's the problem with septic systems. They follow the adage, "Out of sight, out of mind". Septic systems were designed with rural land owners in mind. Septic systems do an excellent job of purifying household wastewater, use no energy and are almost maintenance free. Despite this ringing endorsement, I should add that Dr. Lake has a plumber friend Murphy, who spends much of his time fixing failed septic systems. Murphy claims to be a direct descendent of Dr. Horace P. Murphy, the Oxford University Professor of Statistics who coined Murphy's Law. As you remember, Murphy's Law states that "Whatever can go wrong, will go wrong and at the moment when you least expect it." And thus it goes, with septic systems. As long as a cottage owner can flush the toilet and the front lawn is not a big stinky puddle of sewage, the owner assumes that the septic system is working properly.

What Does it mean when a septic system "fails"?

There are two types of septic system failure. The first is what is called hydraulic failure. The septic tank fills up with solid material and the solid material flows into the leach field and blocks the perforations in the pipes. With the leach field blocked, the water overflows from the septic tank onto your lawn. Sometimes the plumbing in your cottage backs up with sewage. When hydraulic failure occurs, you must call a septic tank maintenance company. They will come out with a special truck (My friend Murphy calls his truck a "honey wagon") and pump out the septic tank. If the leach field does not unplug, it might need to be dug up and new piping installed. There are various degrees of hydraulic failure. Watch for wet spots on your lawn near the location of the leach field. If your plumbing starts to drain more slowly than normal or if you smell sewage-like odors outside your house, hydraulic failure of your septic system may be imminent. Failures are more likely in wet, rocky and clay soils, where water doesn't drain as well.

continued next page

What's the second type of septic system failure?

The second type of failure is much more subtle. The soil is an incredible "magnet" for removing the nutrient phosphorus. As we know, phosphorus is generally the nutrient that limits the growth of nuisance algae in lakes. So, usually, your septic system and surrounding soils prevent the phosphorus in human wastes from reaching the lake. After many years, however, or if the leach field is very close to the lake shore, a stream or the shallow water table, the soil's capacity for phosphorus removal can be exhausted. There is no known method to replenish the phosphorus removal capacity of the soil, short of digging up the entire system and adding fresh soil. The symptoms of "nutrient" failure are difficult to sense. The best indicator is whether you see growths of algae attached to rocks along the shoreline. These algal colonies tend to grow where nutrient rich groundwater is seeping out of the soil. The late humorist, Irma Bombeck put it best when she said "The grass is always greener around the septic tank."

I heard that a "dye test" can be used to determine whether my system is failing. What is a dye test?

If the septic system is in hydraulic failure, wastewater may be seeping out somewhere on your property. To tell the difference between untreated wastewater and other natural types of groundwater seepage ("springs"), you can do a dye test on your septic system. Special dye tablets or liquid dye is flushed down a drain in your cottage. The levels of dye in samples of seepage and shoreline lake water are then measured with an extremely sensitive meter. The best meters can accurately detect the special dye even when a cup of dye has been diluted with over a billion gallons of groundwater. If you detect dye in seepage or lake water, then you have hydraulic failure. If you don't find dye, it is still possible that the system is failing, but you just didn't look in the right spots for the seepage.

How can I make my septic system work better?

As we discussed, on-site wastewater (septic) systems use the natural purification capacity of the soil to remove bacteria, solids, organic matter and nutrients found in human wastes. If your septic system is not designed or working properly, untreated wastewater will enter the lake. Keep your septic system in good working order. Here are some suggestions:

1. Have an septic tank maintenance company check the system on a regular basis and pump out the tank if necessary.
2. Reduce water usage. The more water that you flush down the drain, the more likely that your system will fail.
3. Limit the amount of food wastes and grease that you flush down the drain. Use septic tank "friendly" household cleaners and toilet paper.
4. Keep an eye out for the previously noted symptoms of failure. Contact a plumber or septic tank contractor if you have any questions. Prevention is cost-effective. In some case, a new septic system can cost up to \$10,000, depending on site limitations.

Where else can I get help with my septic system?

John Miller, the President of NYSFOLA has authored a guide for lake associations on how to maintain septic systems. I highly recommend that you obtain this guide from NYSFOLA. It explains how volunteers can test and maintain septic systems. John has also started to train citizens at various lakes in the State, using his manual. This project is called the Citizens' Pollution Control Program and is based on a pilot program started by John at Twitchell Lake. Local Health Departments, Soil and Water Conservation Districts and Cornell Cooperative Extension staff can also be helpful in assisting land owners with septic system problems.

Littoral Zone-News From Around the State

Summer Boating in New York will be Safer

Two statewide boating laws went into effect this summer to promote safer boating on New York's lakes. The first law requires all boats to carry life jackets, instead of floatation cushions. This change brings New York into compliance with Federal legislation, which only covered certain waterways in New York State. The life jacket law takes effect this Fall, although the Office of Parks, Recreation and Historic Preservation is encouraging boaters to begin using life jackets this summer. The second law requires operators of personal watercraft (PWCs, often referred to as "jet skis") to complete an instruction course. The law will take effect in January, 2000 and be phased in over four years. A third statewide legislative proposal that would have extended the 5 mph speed limit from 100 feet to 200 feet from shore is still in Committee of both houses of the State Legislature. Further action on this bill may occur in the fall. FOLA has been a strong supporter of the "no-wake zone" extension and encourages its members to contact their members of the State Senate and Assembly.

Elsewhere, this is the first summer that the new 45 mph speed limit takes effect on Saratoga Lake. The speed limit bill was signed into law last year. At nearby Lake George, the Lake George Park Commission (LGPC) continues to study the boat noise issue. The LGPC is considering lowering the noise limit for power boats, due to complaints. There is opposition from the thousand member Lake George Power Boaters Association., which feel that the present noise standard is strict enough.

DEC Announces Grant Program for Comprehensive Watershed Management

In June, DEC announced that it would be accepting proposals from New York State regional planning boards and local governments for projects to promote comprehensive watershed-based water quality management. as described in the New York State Environmental Conservation Law, Article 17, Title 14, (~17-1409, § 1-a). The purpose of this grants program is to solicit proposals for planning and implementation projects related to watershed management, but not eligible under other State funding sources such as the New York State Clean Water/Clean Air Bond Act Projects. Eligible projects are: 1) to develop new management plans for specific waterbodies, 2) to implement activities identified in existing watershed management plans, or 3) to conduct elements of comprehensive watershed management on a regional or statewide basis. The deadline for this grants program was July 24, 1998. NYSFOLA, in cooperation with the Central New York Regional Planning and Development Board requested funding for two projects: The first is to continue the Pilot Watershed Project., which is designed to develop management plans for lakes in New York State. Participating lakes have been Findley, Cossayuna, Owasco,Queechy, Oscawana and Chateaugay lakes. The project will be expanded this year to include Brant Lake, Melody Lake and the entire Wappingers Creek watershed. The second proposed project is the Citizens' Pollution Control Program.. a volunteer-based approach to reduce pollution from on-site wastewater (septic) systems. Citizens are trained to perform simple septic system inspections and dye testing. This program, based on a combination of pollution prevention and education, was piloted at Twitchell Lake by NYSFOLA President, John Miller. NYSFOLA is seeking NYSDEC funding to expand the program to add 4 to 6 lakes. For more information on these efforts, contact the NYSFOLA office at (800) 796- FOLA.

Experimental Introduction of Weevils Undertaken at Lake Moraine

The milfoil-eating weevil is the subject of a detailed evaluation at Lake Moraine in Madison County. Weevils were stocked in Lake Moraine during the last week of June. Through a cooperative effort involving SUNY Oneonta's Biological Field Station, the Lake Moraine Association., Madison County Planning Department, DEC and EnviroScience. EnviroScience is the fledgling company that is raising and providing aquatic weevils to scientists, lake associations and consultants for control of Eurasian watermilfoil. The purpose of this study, according to Dr. Bill Harman, the Director of the SUNY Field Station, is to assess milfoil damage caused by the introduction of the weevils. Milfoil populations in Lake Moraine were assessed prior to stocking. Milfoil damage and the size of weevil populations will be monitored throughout the summer and fall of 1998. Eurasian watermilfoil is an extremely pesky aquatic plant, that threatens many of our State's waterways. The study is designed to demonstrate whether the weevil is a viable option for controlling milfoil in New York State.

CSLAPenings

The 1998 CSLAP sampling season is well underway, with hordes of volunteers ducking raindrops and dodging big winds, battling great mosquitoes and greater paperwork, all for keeping on top of what makes their lake tick. As we move into the second month of summer, the following points bear reference:

Many thanks to all the volunteers who, once again, endured the elements and participated in the second annual group training session at the NYSFOLA Conference at Lake Moraine. While this is (quite seriously) my 10th or so consecutive visit to this lake accompanied by rain and/or, biting winds, or the maddening threat thereof, the session once again proved successful and beneficial to all participants. That said, I'd like to again apologize to all interested parties who enrolled in the session without realizing that participation was limited to lake associations invited into CSLAP from the waiting list. This "requirement" was not presented in the announcements and program and a few conference attendees believed that their participation in the training session assured their enrollment in CSLAP. Participation in CSLAP is contingent upon enrollment on the waiting list and NYSFOLA membership beginning no later than the start of the calendar year (in other-words, 1998 participation in CSLAP required enrollment on the waiting list beginning no later than December 31, 1997) and sufficient participation slots in the program to include all eligible lake associations. If there are fewer available slots than eligible participants, lake associations are added to the program in chronological order of enrollment on the waiting list. This information will be presented in a different and hopefully more succinct fashion prior to the 1999 sampling season and NYSFOLA conference.

12 more new lakes enrolled in CSLAP in 1998, bring the cumulative total of participating lakes to 164. More than half of these lakes are involved in active sampling in 1998. Although we are quickly depleting our claims of boldly going where CSLAP has never gone before, and thus cannot announce a pioneering presence in a new county, 1998 brings many interesting new lakes, mostly well off the beaten path.

For those of you with good memories or at least easy access to back issues of Waterworks, you'll recall that I proclaimed, and promised, that "...At the risk of great personal embarrassment, I can boldly claim that the individual lake summaries will be completed by the time of the 1998 FOLA conference". While for many CSLAP lake associations, particularly those attending the conference, such a claim appeared valid (at least for their lake), I must confess, with great (promised) personal embarrassment, that all of the reports have still not been completed. And while the usual digressions associated with training, new season startup, and other tangential distractions contributed to the "oops" delay, it is a promise I was not content to break. By the time these words are read, nearly all of the reports will have been sent and will be sent to NYSDEC regional offices and other interested parties in near subsequence. I apologize for the delay and appreciate your patience, and please don't hesitate to contact me (518-457-0734 or sakishba@gw.dec.state.ny.us) or Betsy Hohenstein (518-457-3345 or bxhohens@gw.dec.state.ny.us) if your report remains unacceptably late.

<p>Assistance wanted—</p>	<p>Bill Billerman of the Lake Placid Association has requested assistance in methods of stenciling storm drains. If your organization has done this or knows of an organization that has, please contact Bill at 518-523-3419.</p>
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Microharvesting

With the novelty of harvesting *gone* and experience the better part of valor sonic people find creative approaches to plant control. To think of narrow lanes cut near shore and piers groomed or encroaching plants is to think microharvesting selective cutting with a vision. Microharvesting aims to reshape as much habitat as lake users need, leaving much of the rest for aquatic communities. Experienced harvester operators use mechanical cutters to clear wading sites near shore, remove foliage around boat landings and cut boat channels out from piers. They use big harvesters off shore to connect these channels to open water, remove canopy foliage of exotic plants, and form cruising lanes through plant beds (Engel 1987). Selective cutting of plant beds can create horizontal or vertical mosaics. A horizontal mosaic of channeled plant beds can give predator fish access to plant dwelling prey. A vertical mosaic of clearings within plant beds can open casting pockets for black-bass anglers. Channeled or pocketed, understory plants gain increased sunlight and reduced competition from canopy.

Reshaping the lake environment

Macroharvesting that opens expanses of water surface to swimmers and boaters, and microharvesting that reshapes plant beds and grooms boat piers, can be coordinated for a planned approach to multiple lake use (Nichols et al. 1988). Lake sites can be dedicated for different uses. The concept of space zoning becomes reality when macro and microharvesting are coordinated (Engel 1987). Macroharvesting can enlarge a central open space to improve safety during water skiing or create several smaller open spaces—perhaps an uplake site for canoers and a downlake site for runabouts. Microharvesting can build a network of interconnecting channels through plant beds that allow boaters access to open water, yet minimize harm to native habitat. In forming a boating network, narrow lanes can function as service ramps that join piers to water highways able to handle heavy boat traffic. Both types of harvesting can be integrated with shoreline cleanup crews and use of bottom fabrics to prevent weed growth (Engel 1995).

Even open space, macroharvested for water sports, can be tailored for unusual purposes. Monotonous stands of exotic plants can be harvested and replaced with seeds, shoots, or root crowns of native plants less apt to trouble boaters. Strips of plant beds left parallel to shore can snag cuttings left adrift during harvesting.

Beware of overharvesting

Too much harvesting can be as bad as improper harvesting. Macroharvesting to excess—intensive and prolonged—can turn clear waters turbid, invite exotic plant invasions, heighten noise from motor boating, and deny people use of the water for canoeing, still fishing, and nature observation. Yet microharvesting to excess—channels and pockets cut everywhere—can so fragment habitat that breeding congregations and brood care by waterfowl are no longer possible. Even moderation can lead to incremental harvesting, the gradual increase in harvesting effort and intensity as bigger harvesters are acquired, attachments are added to the harvesters, and more people join in removing plants by hand. Such gradual buildup can result in habitat loss and water quality change that go unnoticed. Anglers no longer find fishing so good, nature buffs seek other shores for waterfowl, and the lake becomes a haven for speed boaters. Such incremental harvesting—a channel cut here, a bay opened there—can ultimately destroy "the solitude and beauty" many people seek in buying lakeshore property (Klessig 1973). The dangers of overharvesting can be avoided through lake-use planning (Kusler 1970, Engel 1989). Such planning can help set goals, define user sites, conserve aquatic habitat, suggest funding sources, and realize new opportunities. Lake-use planning can include a harvesting plan or guidance document to show where and how plant beds can be cut and the clippings removed. It can also include plans to reduce shore erosion, improve sportfish production, prevent fish winter kill or beautify the shore.

All such plans can be coordinated into lake basin, watershed, or ecoregion plans that consider aquatic habitat, water quality, and recreational use on different scales.

note; This article is reproduced in part from NALMS LAKELINE March 1998 issue.

Available at the office of NYSFOLA!!!

"DIET for a Small Lake"; Joint Publication of NYSFOLA and NYSDEC relative to watershed and lake.

Detailed instructions for preparing a Lake Management Plan; complete descriptions of Lake Restoration and Watershed Management Techniques; Comprehensive discussion of Lake Ecology.

Cost:- \$10.00, plus \$3.00 s&h

"Managing Lakes Through Community Participation"; 25 minute video, Why Associations are formed, how they get started, tackling priority issues, case study, ties with local government and lake community.

Cost:- \$15.00, plus \$3.00 s&h

"Water Quality Monitoring in Lakes and Tributaries"; video; demonstrates the techniques used for water quality monitoring, based on procedures used for CSLAP. Useful for starting a monitoring program.

Cost:- \$15.00, plus \$3.00 s&h

"NYSFOLA 1995 Conference Proceedings"; attend the 95 Conference at Cooperstown from your armchair.

Cost:- \$3.00 includes s&h

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NYSFOLA

2701 Shadyside Rd. PO Box 342

Findley Lake, NY 14736

Calendar of Events

October 2 - 4, 1998, Environment '98. Environmental Advocates' annual conference at the Silver Bay conference center on the shores of beautiful Lake George. Contact 518-462-5526

October 21-23, State of the Lakes Ecosystem Conference, Buffalo, NY. Contact Paul Bertram, 212-353-0153 or Nancy Stadler-Salt 905-336-6271. Also on the web at <www.cciw.ca/solec> or <www.epa.gov/glindicator>

NALMS 18th International Symposium - Banff Springs Hotel, Banff, Alberta, Canada on **November 11-13, 1998.** For more information contact Brian Kotak - 403-525-8431

Third Annual American Wetlands Month Conference takes to the road next year. Meeting in New Orleans Feb. 18 - 20, San Francisco March 18 - 20, Indianapolis on April 8 - 10 and finishing in Andover MA on May 6 - 8, 1999. For more information contact Terrene Institute at 703-548-5473.

Conference Exhibitors

May 1-3, 1998 was a memorable time for NYS-FOLA. At our Annual Conference we were endowed with many Commercial Exhibitors. It is with their participation that makes it very informative and enjoyable to attend. The Officers, Board of Directors, Scientific Advisory Board and all attendees wish to thank all the exhibitors for their presence and wish for their safe return next year.

When your association has a question to ask or needs information please contact the office and we will give you their address and phone number.

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