



Newsletter 2003

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Three Lakes Preservation Plan Launched

We on the Board of Directors of the Three Lakes Council welcome you to another summer of bustling activity. As usual, we have not just been shoveling snow this past winter, although we all certainly did our share. No, we've been initiating perhaps our biggest undertaking ever.

Last fall, we decided to put a scientific stake in the ground in our ongoing campaign to preserve the health and beauty of our three lakes. We retained the services of a certified limnologist, Michael R. Martin of Cedar Eden Environmental, LLC to design and implement a comprehensive lake management study. On September 9, 2002, Michael conducted an initial assessment of Lakes Oscaleta, Rippowam and Waccabuc and took

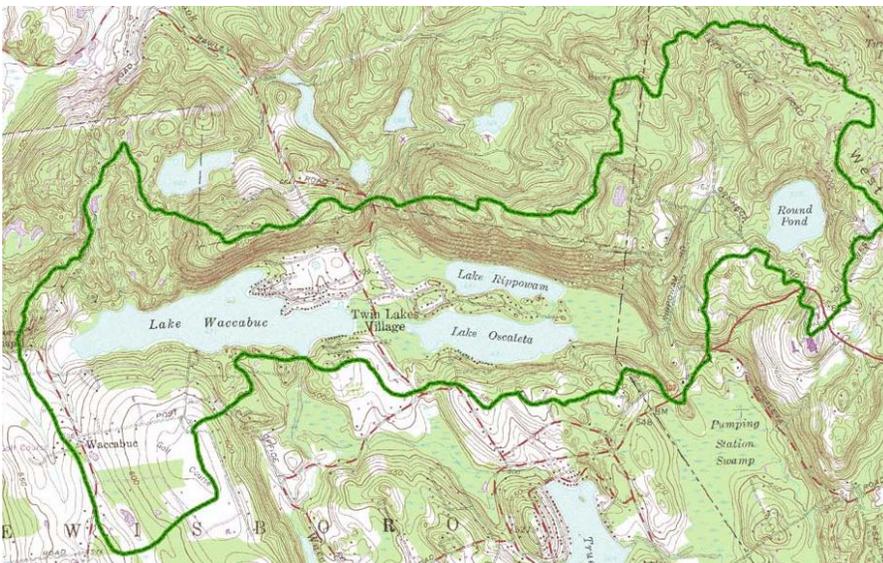
water samples at various locations and depths. Based on his observations, sample test results, and a detailed study of our watershed development using topographic maps and aerial photography (see Exhibit 2), Michael came to the overall conclusion that our lakes were good candidates for a study (i.e., lake management is viable and cost-effective given present water quality) and furnished a set of recommendations on how to set up and implement an ongoing monitoring and remediation plan. (Please visit our web site at www.threelakescouncil.org to view the full report).

The data Michael and local volunteers collect in the next year will be critical in making our case for a cleaner and safer lake community to the town, to the county, and, frankly, to each other... and Michael's initial findings reinforce the view that we need to make that case very strongly and very soon (see *Lewisboro Ledger* editorial as well as detailed article on study inside). Our own data collection

efforts over the past 20 years show an alarming increase in coliform levels in all three lakes.

We've christened the study the Three Lakes Preservation Plan, and it is a mammoth project – a complete physical, if you will, of not only the three lakes themselves, but also the surrounding watershed, which stretches well into Connecticut (see Exhibit 2). It encompasses several tasks that are already underway including an oxygen depletion study (thanks go to Peter Beardsley and Lou Feeney) and bathymetric mapping (thanks to Ron Tetelman, Larry Fryer, Joe Tansey and Don Gale). Longer term studies will require additional volunteer support, as indicated in the following pages. Paul Lewis, the maestro of the volunteer effort and overall Project Coordinator, is awaiting your e-mail at dulcimerpl@aol.com or call at (914) 763-3132. Many thanks to the more than sixty of you who have already joined this effort as volunteers.

Exhibit 1: Topographic map of Three Lakes watershed (outlined in green)



And let me anticipate the gratitude we will assuredly experience when your generous financial donations start rolling in. While we are partially staffing this effort with volunteers, there are many more samples and tests that need to be collected and conducted that require greater skill and specialized equipment than we can bring to the task. Michael Martin will be making regular visits during the coming year and will supervise and supplement our efforts. While a bargain when you consider what the Three Lakes Preservation Plan will mean for our property values, it comes at a price of roughly \$20,000. We need your support, and it should be stressed that all donations are tax-

deductible. You can send checks made out to "Three Lakes Council" to P.O. Box 241, South Salem, NY 10590. If you have any questions or ideas, please feel free to call me at 763-8617.

Have a great summer and please PITCH IN!

-- Dr. Peter Treyz

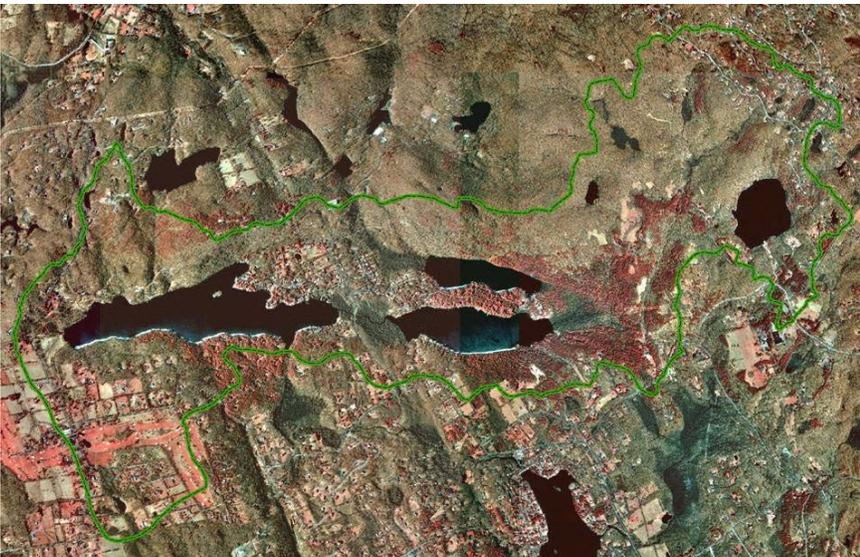
Help Wanted: Preservation Plan Volunteers

Ever wonder what our lakes were like when the only inhabitants of our watershed were Native Americans? While we cannot restore the lakes to their original pristine condition, we can realistically aim to preserve high quality lakes with clear water, few weeds and good fishing. That's what the Three Lakes Preservation Plan is all about. Though we might all yearn for a "silver bullet" solution, one simply does not exist. Many ideas proposed in the past (such as stocking grass carp or adding chemicals) present greater risks than advantages. Our lakes are a delicate, finely balanced, ecological system, and the restoration of their water quality requires a carefully designed scientific approach. The Three Lakes Preservation Plan encompasses not just the Three Lakes

and surrounding properties; it covers our entire watershed, as everything that happens in that watershed has an impact on the health and quality of our lakes. What few people realize is how extensive our watershed is and how directly and profoundly events and disruptions in that watershed affect the Three Lakes. As the photo and map on page 1 indicate, the Three Lakes watershed extends well into Ridgefield, Connecticut. While certain stretches of shoreline on Waccabuc are owned by the Nature Conservancy and Wildlife Preserves, and much of the northern slopes of Waccabuc and Rippowam are too steep to develop (fingers crossed), there are vast expanses within our watershed (particularly to the northeast of Rippowam) that are not conserved presently and that could be developed. Indeed, many new homes are already being built along the Oscaleta Road corridor that stretches into Connecticut.

Humans' impact on the natural environment – particularly a delicate lake ecosystem – is almost universally destructive. New construction, road runoff, fertilizers, gas-powered motors, septic systems – all contribute mightily to a phenomenon known as non-point source pollution. "Non-point source" just means that you can't trace the pollution back to a single source (e.g., a factory effluent pipe) and plug or clean it up.

Exhibit 2: Aerial photo of Three Lakes watershed (outlined in green)



THE LEWISBORO LEDGER Save Our Lakes

Editorial appeared on April 10, 2003

Slowly but surely, Lewisboro's lakes are dying. If something isn't done, future generations will be faced with bodies of water that are choked with weeds and pollutants and devoid of healthy marine life.

Lake residents are only too well aware of the dangers that face their treasured bodies of water, and more than 100 of them turned out recently to hear a presentation by a scientist specializing in restoring lakes to good health. The study was commissioned by the Three Lakes Council, but the findings can be applied to all of Lewisboro's ten lakes.

The plan that Michael Martin of Cedar Eden Environmental of Saranac Lake, New York outlined at the South Salem fire house last Friday night is a simple and straightforward one that calls for area residents to take their lake's destiny into their own hands.

Mr. Martin recommended steps such as planting buffers of native shrubs at waters edge to contain lawn and roadside runoff and pumping out septic systems every three years.

Dr. Peter Treyz, president of the Three Lakes Council, and Edward Delaney, Chairman of the town's Open Space Advisory council (OSAC), added their own recommendations for more regular cleaning of the town's storm water basins and the creation of a special septic district for lake residents.

The fact that the meeting was held at 8 p.m. on a Friday night and still drew a crowd of more than 100 interested and enthusiastic residents is a testament to the high level of interest in saving our lakes along with a willingness to do something about it.

Dr. Peter Treyz and the Three Lakes Council are to be commended for their efforts to save our lakes and congratulated on holding a successful event that will lead to increased attention to an important issue. And the 100 area residents who turned out last Friday deserve equal commendation. Together, you, we, can all make it happen.

Eutrophication: The Aging of a Lake

The major question we need to address with this watershed management plan is how significant is this non-point source pollution... and what are the primary contributing factors? You ask five lake residents, and you'll get five different answers – septic systems, storm drains, fertilizers, motor boats, new construction. So, what we need is baseline data, and that is what we are collecting this year with the help of Cedar Eden Environmental, LLC. Mr. Michael Martin, President of Cedar Eden and a Certified Lake Manager (CLM), will conduct a study of the watershed, guide volunteers, analyze the data collected, and prepare a management plan. Based on an analysis of scientific findings and an integrated method, we can outline a plan of action that takes advantage of the best and most appropriate corrective alternatives available. The basic steps of the plan are to:

1. Analyze the situation
2. Set a direction
3. Establish strategies and actions
4. Take action
5. Monitor progress
6. Reassess and adjust

We are currently in the “analyze the situation” phase, collecting baseline information. Since variable climactic conditions affect the lakes, this will be an ongoing task. Based on the “snapshot” taken by Michael in September 2002, it appears that the lakes are on the mesotrophic/eutrophic border, with Rippowam exhibiting the greatest signs of aging. Eutrophication is the natural aging process of a lake, whereby organic materials (leaves, soil, etc.) are gradually deposited in the lake over time, ultimately filling it in and creating a swamp. This process normally takes place over thousands of years, however, it is greatly accelerated by increased phosphorus inputs from human activities, a process known as cultural eutrophication. So what would naturally take thousands of years, can take tens of years with a little help from mankind .

A clean, clear, young lake is described as oligotrophic. Nutrient-rich lakes are referred to as eutrophic. And mesotrophic lies between these two extremes.

Based on the September data (see Exhibit 3), we know that growth in the lakes is phosphorus limited, meaning that any increase in phosphorus will result in increased weed or algae growth. Other nutrients will have a lesser impact.

“Translated, our being on the mesotrophic/eutrophic border means that the nutrient level in the Three Lakes is high, supporting abundant weed and algae growth. However, they are at a point at which corrective action will be effective, so it is well worth undertaking this plan.”

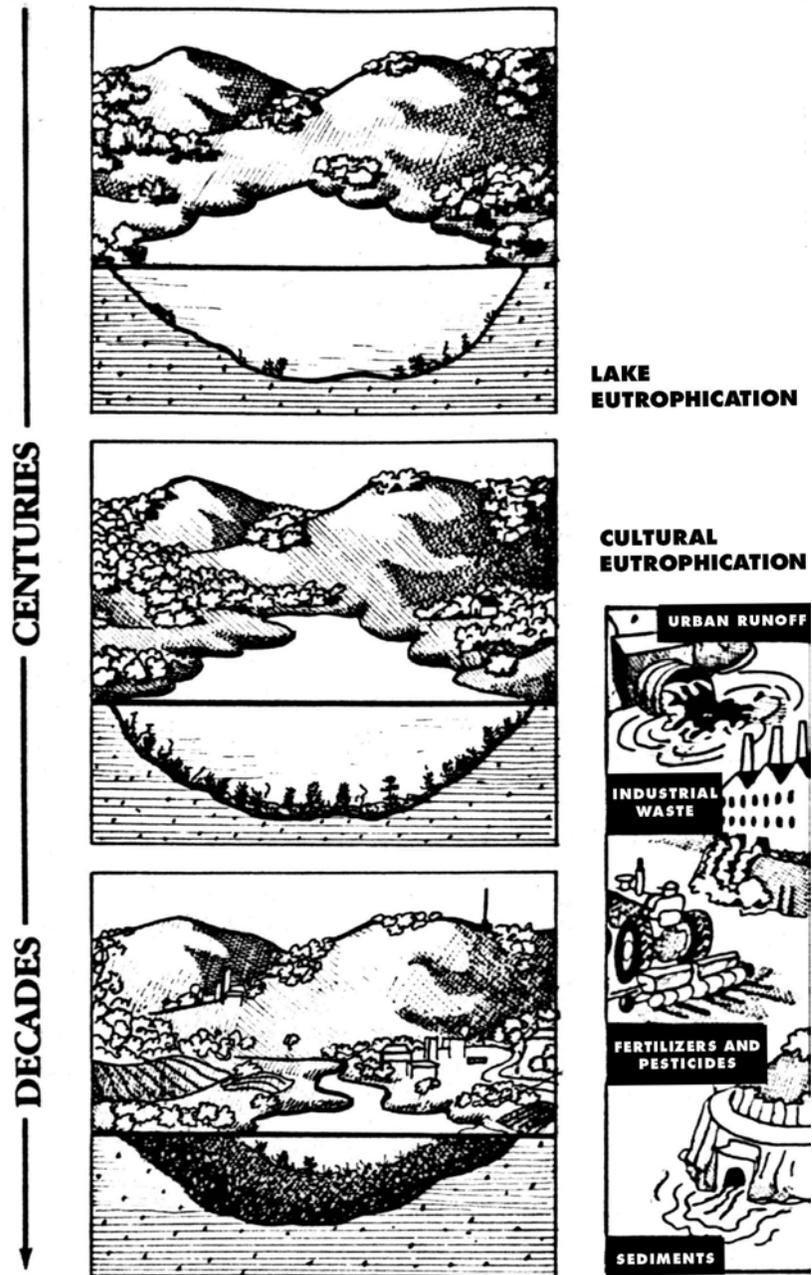


Exhibit 3: Baseline Water Quality Results

Table 1 Water Quality Results • September 9, 2002						
Parameter	Lake Osaleta		Lake Rippowam		Lake Waccabuc	
	epilimnion (1.5 m)	hypolimnion (8.0 m)	epilimnion (1.5 m)	hypolimnion (4.0 m)	epilimnion (1.5 m)	hypolimnion (11.0 m)
pH (s.u.)	7.8	---	8.0	---	7.9	---
Alkalinity (mg/L)	38	---	54	---	44	---
Conductivity (µmhos)	163	---	191	---	190	---
Total Phosphorus (mg/L)	0.016	0.094	0.034	0.029	0.019	0.28
Total Nitrogen (mg/L)	0.84	---	0.90	---	.71	---
Chlorophyll <i>a</i> (µg/L)	3.9	---	8.5	---	2.4	---
Transparency (m)	3.6	---	2.1	---	3.7	---

At this point we don't know exactly how much phosphorus is reaching the lakes and how much of that is introduced by man. A goal of this project is to construct a mathematical model that will put this factor in perspective. However, what we *do* know at this point is that we need to reduce the amount of phosphorus reaching the lakes. It is not necessary to wait until the plan is finalized to implement corrective action. We must immediately do whatever we can to decrease the amount of phosphorus reaching the lakes.

The use of volunteer data collectors will not only reduce costs; it will increase awareness among our members of the mechanics of lake management and preservation. Data collected by the volunteers will be analyzed by Cedar Eden and be used in the formation of the Three Lakes Preservation Plan.

A descriptive list of tasks follows, and volunteers are needed at this time for the tasks with a before them (Tasks 2, 7, 8 and 9). Contact Paul Lewis, at 763-3132 or dulcimerpl@aol.com, if you are interested in volunteering to work on any of these tasks.

Task 1: Water Quality Monitoring Annual Monitoring Program -- Cedar Eden Environmental (CEE) will initiate an annual monitoring program to establish a water quality baseline and to determine trends by taking and analyzing lake water samples each

month during the growing season. The following tests will be performed:

- Phosphorus (total) in upper and lower waters
- Chlorophyll *a*
- Secchi disk Transparency
- Dissolved oxygen profile
- Temperature profile
- pH
- Alkalinity
- Conductivity
- Nitrate Nitrogen
- Total Nitrogen

Timing: May through September

Phytoplankton and Zooplankton study - CEE will collect water samples from each of the three lakes and send them to a laboratory for analysis each of the following months: June, July, and August. The samples will be analyzed for phytoplankton and zooplankton densities. Organisms will be identified to genus and enumerated, and various diversity indices will be calculated.

Timing: June through August

Task 2: Historical Data

We need volunteers to collect and research historical information regarding water quality and past management activities. We are particularly interested in collecting any information generated by Union Carbide during their study with the aerators in Lake Waccabuc. Studies of the area's pollution problems have been done by the Department of Planning, DEP, DEC, NRDC, Norwalk River Watershed Initiative,

Trout Unlimited and others. Local volunteer groups such as the Conservation Advisory Council, Federated Conservationists of Westchester County, Croton Watershed Clean Water Coalition and the John Jay High School Environmental Club could prove helpful. The Nature Conservancy, Lewisboro Land Trust and Westchester Land Trust might be able to furnish information on land set aside for conservation. Finally, residents of the Three Lakes who have been here for forty-plus years... we need you!

Timing: Complete in 2003

Task 3: Macrophyte (aquatic plant) Mapping

CEE will determine the species and distribution of the aquatic plant community. Results will be mapped for future comparisons to determine vegetation trends.

Timing: June through August

Task 4: Oxygen Depletion Study

Data collection is essentially complete, now that the lakes have stratified. TLC volunteers and CEE have taken dissolved oxygen and temperature profiles each week in each of the three lakes. The data will be analyzed by CEE to assess the need for oxygen restoration techniques and to evaluate the effectiveness of the aerators.

Timing: May through September

Task 5: Bathymetric (water depth) Mapping & Lake Morphometry

TLC volunteers are in the process of recording the depth of Lake Rippowam and Lake Osaleta at a sufficient number of points to define the bottom of these lakes. We have a good map of Waccabuc and we hope only a few check points are needed. Depth measurements will be used primarily in the volume calculations used to determine flushing rates and model phosphorus budgeting. CEE will use these results to create bathymetric maps of each lake. It will also use these results to calculate important lake morphometric characteristics, including lake volume.

Timing: by end of June 2003

Task 6: Hydrologic and Nutrient Budgets

Hydrologic and nutrient budgets are key components required for the development of a long-term management plan. CEE will analyze the watersheds of the three lakes to estimate the flow of water through the area and develop a hydrological budget for the lakes.

Timing: Complete in 2003

☑Task 7: Septic System Survey

We need to determine the location of all the septic systems in the watershed or at least those near the lakes and streams or storm drains feeding the lakes. Volunteers will obtain this information using a septic system survey form developed by CEE. CEE will work with the Three Lakes Council to create a GIS data layer that contains the collected septic system information tied to system location. This task may take several seasons to complete. Therefore, CEE will use this information when it becomes available to refine the evaluation of septic system impacts on water quality. It will be incorporated in the final management plan.

Timing: Longer term - 2004

☑Task 8: Storm Drain Studies

Storm Drain Survey – We need to identify the location and important characteristics of each storm drain in the watershed. The town is in the process of locating and mapping each drain with a GPS unit. We will need volunteers to monitor specific drains and characterize their performance, so that the impact of each can be assessed as the start of a corrective action program.

Timing: 2003

Storm Drain Monitoring - CEE will assist the Three Lakes Council in identifying the worst offenders among the watershed storm drains so that we can monitor their contribution to nutrient levels, as well as coliform. It will be easier to estimate the magnitude of this task once Task 10 is underway.

CEE will also coordinate the provision of sample bottles and laboratory analyses. Volunteers will obtain samples during storm events and ship them to the laboratory for analysis

Timing: Limited testing in 2003

☑Task 9: Watershed Development

Volunteers will review Town and Country records to help determine the relative level of development of the watershed, the historical rate of development, and then correlate watershed development with water quality trends. This will help us evaluate the impact of development on water quality and develop future projections. CEE will use GIS and readily available maps and aerial photography of various years to estimate the change in the number of structures in the watershed over time. CEE will provide technical guidance to TLC volunteers and evaluate results.

Timing: 2003 – 2004

Task 10: Identification of Non-point Source Problem Areas

Non-point source pollution is typically the largest source of nutrient pollution problems in our nation's waters. CEE will travel each road and walk each stream to identify potential sources of non-point pollution entering the lakes. Watershed problem areas will be geolocated, photographed, and assessed in the field. CEE will prepare maps and an assessment of watershed problem areas.

Timing: June, July 2003

Task 11: Development of the Management Plan

CEE will evaluate all of the data provided by the above studies, evaluate all feasible alternatives for restoration and management, and prepare a report of findings and lake and watershed management recommendations. This report will be the long-term lake and watershed management plan for the Three Lakes. The report will include implementation priorities and costs.

Timing: April 2004

Water Quality Summary

“Based upon the limited data from this study, water quality in the Three Lakes is at a point where lake management can be cost-effective. Lake Oscaleta and Lake Waccabuc were both mesotrophic, with moderate levels of nutrients and productivity. Restoration activities stand a good chance of preventing these lakes from becoming eutrophic, and even improving water quality. Lake Rippowam was eutrophic, but close to the mesotrophic / eutrophic boundary. As a result, management activities might also be able to prevent further degradation and improve water quality.

Particular areas of concern regarding lake water quality include dissolved oxygen depletion in the bottom waters of each lake, elevated phosphorus concentrations in the bottom waters of Lakes Oscaleta and Waccabuc, and elevated phosphorus and chlorophyll a concentrations in Lake Rippowam.

**Cedar Eden Environmental Lake & Watershed Management Recommendations
December 2002**

Task 12: Alternatives Study

As we await the completion of the long-term management plan, we can start researching various corrective measures now. That way, we could start implementing recommendations immediately. Examples of alternatives we can investigate include:

- Alternatives to septic systems, such as composting toilets, incineration, aerobic systems, etc. (practical and legal aspects).
- The creation of a lake management district to encourage, perhaps even enforce, compliance with lake stewardship responsibilities
- Various grasses and sedges that can be used as shoreline buffers to stem flow of nutrients into the lakes.
- Possible funding methods, state grants for example.
- Other?

Focusing on Phosphorus

Fertilizers are rich in phosphorus. If you must fertilize, use a phosphorus-free fertilizer or one with a low phosphorus-to-nitrogen ratio (nitrogen is the first nutrient listed in the formulation, phosphorus the second e.g., 10-5-5). Milorganite, for example, has only 2% phosphorus content, but a high p-to-n ratio, 3:1.

Most laundry detergents these days do not contain any phosphorus, a claim that is clearly marked on the bottle or box. All the laundry detergents sold at D'Agostino's, for example, are phosphate-free.

Dishwashing detergents are another story. Stick with liquid formulations, which are generally lower in phosphorus content. A recent scan of D'Agostino's shelves revealed that Cascade powder had the highest phosphorus content (6.4%) and Palmolive Cleansing Gel the lowest (1.6%). Both Amway and Trader Joe's apparently purvey phosphate-free dishwashing detergents.

In addition, local residents recommend the following ecologically safe cleaning products: Simple Green (Sunshine Makers, Inc.) and Uniclean (Urtekram), both of which are non-toxic and biodegradable. Stock up!

Of course, the phosphorus contributed to the lake by septic systems (failing or otherwise) swamps these other culprits, literally. Refer to the section on septic systems to see what you can do about maintaining your septic system.

This is an ambitious undertaking, the most ambitious undertaking the Three Lakes Council has ever initiated. It will require hundreds of volunteer hours and thousands of dollars. A few stalwart souls cannot handle these numerous tasks alone, nor can we fund this sort of effort with normal dues. If you've ever lamented the weeds clogging your swimming area or the decreased clarity of the lake water, now marks your opportunity to make a positive difference. Please contact Paul Lewis at 763-3132 (or dulcimerpl@aol.com) or Dr. Peter Treyz at 763-8617 to contribute to this tremendously worthwhile cause. Don't sit on the sidelines... or shorelines... and watch our lakes' water quality pass you by.

-- Paul Lewis & Tara A. Owen

The Argument for Open Space

Construction site sedimentation run-off is a major pollutant in the Croton Watershed. Sedimentation increases turbidity, and also binds with nutrient pollutants like nitrogen and phosphorus, contributing to the eutrophication of the Cross River, Muscoot and Titicus Reservoirs. It is estimated that one ton of soil and mud is lost to erosion on every acre under construction in the state of Delaware. Closer to home, recent studies of the

Norwalk watershed have shown that water quality deteriorates as the amount of impervious surfaces increase.

It is not unusual for a town the size of Lewisboro to have between fifty and seventy active building permits outstanding. These sites all require regular supervision and inspection. That said, only 20% of the municipalities in Westchester County have an Erosion and Sediment Control ordinance. Inspection of construction sites is equally rare.

Currently, every subdivision approval and site plan approval in Lewisboro requires a Stormwater Pollution Prevention Plan approved by the Town Engineer. Under Stormwater Management Phase II regulations, construction sites as small as one acre will require a General Pollution Discharge Elimination System (GPDES) permit from DEC, but who will, realistically, monitor compliance?

Lewisboro is still relatively undeveloped. Approximately 20% of the town is still vacant, yet not protected, and therefore subject to development pressure. We should all strive to ensure that the town's remaining open space be either preserved or developed in an environmentally sensitive manner.

An ecosystem becomes impaired when impervious surfaces reach 10% of a

region's surface area. Impervious surfaces in the Cross River, Muscoot and Titicus watersheds now range from 5% to 7%. If impervious surfaces can be kept to a minimum, natural conditions will filter much of the stormwater pollutants before they enter the water system.



If the town chooses to adopt the proposed Wetland Ordinance (increasing the wetland buffer size from 100 feet to 150 feet), impervious surface construction (e.g., paved driveways) around the lakes will slow, and wetlands buffers will get more protection, enabling them to filter more stormwater pollution naturally.

The adoption by the Town Board of the CAC's Open Space Inventory, expected to be completed in 2003, will allow planners to pay special attention to protecting the natural resources, including wetlands and aquifers, included in the inventory. The results of the 2002 Aquifer Study and the Metropolitan Conservation Alliance's "Eastern Westchester Biotic

Corridor Report” should be incorporated in the Inventory’s GIS map, allowing planners to study the cumulative impacts of developments proposed around these aquifers, slopes and biotic corridors.

The Town should pursue intermunicipal agreements with the other towns in the Eastern Westchester Biotic Corridor -- Pound Ridge and North Salem. These agreements would attempt to preserve wildlife corridors across town lines. Many of Lewisboro’s most important wetlands and watercourses fall within the defined corridor.

The town should consider adding Conservation Overlay Zones to protect the greenways that have been identified by the CAC as worthy of protection. Conservation Overlay Zones will require that large portions of pervious surfaces be preserved to facilitate stormwater absorption.

Cluster subdivisions should be encouraged. Cluster subdivisions do not necessarily increase the density of a housing development, but rather increase the amount of natural area left undisturbed in a subdivision.

Finally, we need to explain the benefits of conservation easements to the major open space landowners in our watershed. The Lewisboro Land Trust, Westchester Land Trust, Nature Conservancy, Trust for Public Land, Open Space Institute and the Bedford Audubon Society should educate the public and local realtors on the profound benefits of easements. Subdivisions like “Beaver Pond II” and “Parker Audubon” that have resulted in the majority of land being permanently preserved with conservation easements should be used as models for future subdivisions.

The town should spend the \$2,000,000 Open Space Bond Fund judiciously where less expensive options like conservation easements are not possible.

“Open space is a finite resource. We are lucky in Lewisboro to enjoy so much of it... but there is no guarantee - in the form of easements - that much of our open land will not be developed.”

Land left in its natural state is the Three Lakes’ best defense against stormwater runoff. So, please keep informed on these issues and do what you can to help conserve undisturbed land in our watershed.

-- Jim Nordgren

Fishing Report:



The Good, The Bad & The Ugly

The Good: Fishing in Lakes Rippowam, Oscaleta and Waccabuc continues to be outstanding. Bass fishing, in particular, has proven particularly fruitful in all three lakes, with smallmouth bass fishing in Waccabuc especially productive in both quality and quantity. The pickerel stocks continue to improve in Oscaleta, and we now have a very healthy population. We’re hoping to see this pattern replicated in Waccabuc and Rippowam.

There have been reports of large crappies (14-15 inches) caught in the western end of Rippowam this spring. Another fisherman told me he caught

three smallmouth bass in Rippowam recently, which is indeed good news, since we have not stocked smallmouths in that lake. Rippowam has always been the most consistent producer of large yellow perch and big bluegills.

The Bad (Turned Good): Trout fishing has been declining as we did not have the funds to do a stocking last year. Trout are a “put and take” proposition, and maintaining a quality fishery requires annual restocking. The good news is that we did have enough money in this year’s fish fund (thanks to your generous donations) to stock about 350 brown trout in Waccabuc and 150 in Oscaleta on May 31, at a cost of \$1,050. These were 10-inch fish that should grow to be 14-16 inches by this time next year... and 3 to 6 pounds the year after.

The Ugly: A recent article in the spring NYC-DEC newsletter suggested that the zebra mussel, a highly invasive and disruptive mollusk, had made its way into Greenwood Lake in New Jersey. That sets off instant alarm bells since the source for the sawbellies in many local live bait / tackle shops is Greenwood Lake. The zebra mussel is the enemy of any freshwater ecosystem. Once introduced, it rapidly multiplies and takes over waterways, blocking intakes, valves, drains and wreaking general havoc. Already in the Hudson River and other lakes in the Northeast, the zebra mussel will exact an economic toll in North America totaling billions of dollars in the next decade.¹ For more information on zebra mussels visit www.aquaticinvaders.org.

I have checked this report out with Ron Pierce, a New York State fisheries biologist, who, in turn, consulted Bob Papson (NJ Fish and Game). Mr. Papson indicated there had been a scare a year or two ago, but visits to the lake by Region 3 Fisheries Unit staff had not uncovered the presence of zebra mussels to date. That said, there has been no concerted effort to

¹ The Zebra Mussel Information Clearinghouse, New York Sea Grant Extension Program, (800) 285-2285

SPECIES	SEASON	SIZE	DAILY LIMIT
Trout (brook, brown rainbow trout)	4/1--10/15	Any size	5
Largemouth / smallmouth bass	6/21--11/30	12 inches	5
Pickrel	5/3--3/15	15 inches	5
Crappie	All year	9 inches	25
Perch / Sunfish	All year	Any size	50
Carp / suckers	All year	Any size	none

check for them. While likely a non-issue, it's best to avoid dumping live bait into the lakes. Also – and this goes without saying – do not place a boat from another waterway in the Three Lakes without leaving it out in the sun, hull up, for several days. Adult zebra mussels in moist, shaded areas can live for days out of water.² Moreover, make sure any boat placed in Lakes Waccabuc, Oscaleta and Rippowam carries a Three Lakes Council green sticker. To secure a sticker, contact your local lake association president (see box).

Licenses/Season: Per 2003 NYS fishing regulations, fishing licenses are required for those aged 16 or older. Licenses can be obtained from the Lewisboro town clerk.

Additional information on fishing can be found on the NYS DEC web site (www.dec.state.ny.us/website/dfwmr/fish/fishregs/index.html)

Please take a kid fishing this summer. If you are interested in learning how to fish or would like more information about our stocking program, please give me a call at 763-3456.

-- Joe Tansey



The State of Our Septic Systems

Two thirds of the homes in the Croton Watershed, and most of the homes in Lewisboro, rely on septic systems (a.k.a. individual sewerage systems). A recent EPA study estimated that up to 50% of all septic nationwide are in some stage of failure, so it's reasonable to assume that we have many failing septic around the Three Lakes. The Croton, Titicus and Muscote Reservoirs, as well as Lake Truesdale, suffer from an over abundance of phosphorus. In fact, these bodies of water are under a TMDL (total maximum daily limit) of phosphorus input. As indicated in the article on our newly launched Three Lakes Preservation Plan, Lakes Waccabuc, Oscaleta and Rippowam all demonstrate elevated levels of phosphorus... and phosphorus greatly accelerates the process of lake eutrophication.

SPECIAL SEPTIC SECTION

Failing septic systems are the single biggest source of illicit discharge in Lewisboro. Septic systems are designed to last twenty to thirty years,³ and that's only if they are routinely pumped every three to five years, which most are not. Since one third of the approximately 5,000 single-family homes in Lewisboro are former summer cottages in lake communities (i.e., many of our homes), the potential for illicit discharges reaching our water system is enormous. Most of these homes are over fifty years old, with septic that were built to

accommodate limited, seasonal use. And, most, as you know, are now used year-round and support additional bedrooms. This all adds up to a serious septic discharge problem into our lakes, streams and wetlands, which ultimately make their way to our drinking water reservoirs.

Despite the large public health concern represented by these failing septic, a recent September 2002 NRDC study found that very few towns in the tri-state area require regular maintenance and/or inspections of septic systems.⁴

“Because of the hazard posed by failing septic, and the lack of a coordinated program to ensure their continued safe operation, a septic maintenance program has the potential to correct a very serious health problem at minimal cost and should be implemented.”

-- Excerpted from *Town of Lewisboro's Stormwater Pollution Prevention Plan, submitted to the DEC/EPA in March, 2003*

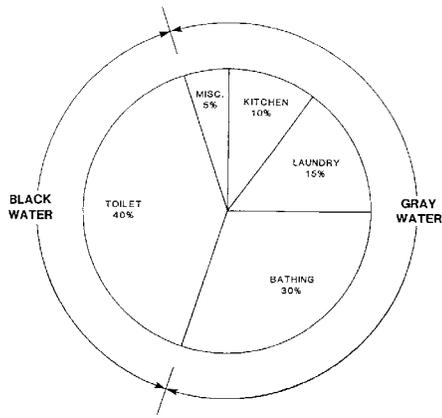
Septic System Tutorial

Typical domestic wastewater is made up of wastewater from showers, baths, toilets, washing machines, dishwashers, and sinks. Exhibit 4 illustrates how these inputs break down. Household wastewater is about 99% water. Suspended solids, which make up the remaining 1%, contain soluble and insoluble substances. Many -- including nitrates, phosphorus, salts, heavy metals, bacteria, viruses and other pathogenic microorganisms -- present public health and environmental concerns.

³ “15 or more years” per “Water Quality Management Program: A Homeowner’s Guide,” Westchester Department of Health.

⁴ Natural Resource Defense Council, “Cape May to Montauk--A Coastal Protection Report Card,” September 2002

Exhibit 4: Domestic Wastewater



Wastewater that cannot be discharged to sanitary sewers for treatment at a centralized wastewater treatment plant must be treated on the site where it originated. Systems for on-site treatment of domestic wastewater are referred to as septic systems.

An acceptable septic system in Westchester County is one consisting of a house sewer, septic tank, distribution network and an absorption area (See Exhibit 5). There are waste disposal systems in Westchester that pre-date the County's adoption of formal regulations in 1950. One of the more common types is the cess pool, a covered container or well, similar to a leaching pool, in which solid waste settles to the bottom while the liquid portion seeps out through holes in the side and bottom. This type of septic is no longer permitted.. nor is it effective in treating wastewater.

Sewage flows from the household into the septic tank where the heavier solids settle to the bottom forming a sludge deposit. Lighter solids, such as grease, float to the top and form a scum layer. The liquid flows from the septic tank into an absorption system, where it soaks into the soil. This process provides treatment of the sewage through gravity settling and skimming, biological decomposition and soil filtration.

The performance of a septic system is dependent upon the ability of the soil in the absorption fields to absorb and treat the sewage effluent. The system is in failure if either of these functions is not performed. While a hydraulic failure indicated by sewage on the

ground surface may be more evident, the failure of the soil to remove contaminants from the effluent before reaching the groundwater is just as serious. Therefore the soil type and condition must be carefully evaluated prior to the design of the system.

Soil is composed of solid particles and pores. All soils are categorized by one or more of three components: sand, silt, clay. The ability of a soil to allow liquid to pass through is known as soil permeability. Sandy, loamy soil is best for filtering wastewater. Fortunately, the densely populated northeastern coves of Lake Waccabuc have this sort of soil, says Ed Delaney.

Of course, the soil's structure can change greatly in response to changes in natural conditions, biological activities and soil management practices. Repeated wetting, drying and freezing, for example, help to cement soil particles together forming an aggregate; plants/trees with extensive root systems and soil fauna activity promote soil aggregation and channeling as well. Mechanical compaction and the addition of soluble salts (e.g., road salt used in winter) can break down the aggregate, reducing the capacity to conduct water.

The Westchester County Health Department must issue an approval prior to the construction of a septic system. Construction of a typical system can be completed in a few days.

Design Considerations:

- If your absorption fields are installed on a moderate to steep slope, you need to take extra care directing surface water runoff around them (e.g., grading).
- If the depth of soil above the groundwater table and/or bedrock is too shallow, you may have to install curtain drains, which intercept and lower groundwater on the site, or supplement the soil level with a suitable fill material.

Large trees, greater than six inches in diameter, need to be located a minimum of 10 feet from the absorption area to prevent or minimize root intrusion and potential damage to the septic system.

Signs of a Failing Septic System

Failing septic systems can contaminate sources of drinking water; expose sewage to the atmosphere and direct contact with people, pets, insects or rodents; contribute to accelerated lake eutrophication; add to stream siltation; and produce nuisances and noxious odors. Most failing septic systems can be prevented with routine, inexpensive maintenance.

Some common causes of system failure are:

- Cracked or broken system components, including septic tank, distribution or junction box, or piping.
- Hydraulic overloading of the absorption areas caused by excessive water use or groundwater infiltration (i.e., too much rain!)
- Pipe blockage resulting from root intrusion
- Clogging of the absorption fields by solids such as grease and sludge
- Failure of one or more absorption trenches or leaching pits resulting from uneven distribution of sewage to the absorption trenches or leaching pits
- Soil compaction resulting from heavy loads
- Old age... soil's treatment ability is exhausted

Signs of a failing septic include:

- Sewage backup into the home or overflow from the fresh air vent
- Sewage on the surface of the ground; often black or gray liquids with a foul odor in the area of the septic system.

- Persistent foul odors in the system area
- Gray to white growth on the banks of adjacent water bodies
- Damp or spongy soil with noticeably taller and greener grass in areas over the absorption field

-- Westchester Department of Health, "Water Quality Management Program: A Homeowner's Guide," January, 2002

Tips on Saving Your Septic

Given the sheer volume of rain dumped on the Three Lakes watershed this spring and early summer, it's reasonable to assume that many septic systems demonstrated one or more of the above signs. The good news is that we can do something about it. Most of the following measures can be taken by homeowners and do not require the services of private contractors.

OUTSIDE

1. **Pump your tank regularly.** Depending on the size of your family and your tank, and how close your septic fields are to one of the lakes, you should pump out every one to three years. Lakeside homeowners with fields on the lake side of their homes should pump annually.
2. **Don't park or pave over your septic fields.** You'll crush the tiles and/or pipes and compact the surrounding soil. Moreover, you won't be able to access the fields for maintenance/repairs.
3. **Don't place soil or other fill over your septic fields.**
4. **Direct runoff from your gutters and drains away from your septic fields.** Don't pile snow on top of the fields. Surface water will saturate your leach field's soil, lessening its ability to absorb and treat your wastewater.
5. **Plant grass, not trees, over a leach field.** Near a leach field, plant shallow-rooted herbaceous plants, which will help your fields treat wastewater by absorbing

moisture and nutrients. Trees and shrubs should be no closer than ten feet from the tank or absorption fields.

6. **Curb your dog.** Bonus septic tip.

INSIDE

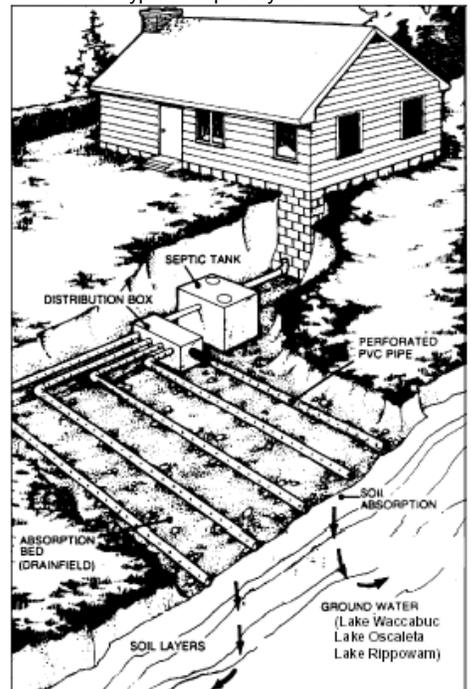
1. **Conserve water... spread out your laundry.** Septic tanks can handle only so much (especially when it rains continuously for weekend... after weekend... after weekend). Fix leaking faucets and toilets. Install a low-flow device in your showerhead and faucets. Install a 1.6 gallon toilet. Do only full loads of laundry and dishes. Spread out your laundry over the week. Set water softener load such that backwash is minimized.
2. **Limit your use of household chemicals,** especially bleach, anti-bacterial soaps, bathroom cleaners and other disinfectants. Never pour paint, paint thinners, solvents, pesticides, herbicides, automotive fluids or preservatives down a drain. In addition to the potential danger to groundwater, many of these substances destroy microorganisms in the tank, hindering biological decomposition.
3. **Disconnect your garbage disposal.** Your septic fields aren't garbage cans. Once clogged with solid waste, they fail.
4. **Don't dump cooking oils or grease down the drain.** Pour them into containers, let them harden, if possible, and dispose of them in your curbside trash. Don't use synthetic detergents that keep solids and grease in suspension in the septic tank. Lye should not be used in any plumbing fixtures as it combines with grease to form hard deposits.
5. **Don't flush anything solid down your toilet.** That includes cigarette butts, condoms, feminine hygiene products, medicines, disposable diapers or other garbage. Non-biodegradable substances fill up your tank and/or clog the pipes.
6. **Limit use of water softeners and pool filters.** While water softeners won't disrupt the functioning of

the system, excessive use can present a threat to groundwater and can inhibit biological decomposition. Pool filter backwash should also be avoided as chlorine can break down the biological process

7. **Use boiling water or a drain snake rather than caustic drain cleaners** if you have a clogged drain.

-- Westchester Department of Health, "Water Quality Management Program: A Homeowner's Guide," January, 2002

Exhibit 5: Typical Septic System



When sewage enters a septic tank, solid waste settles to the bottom to form sludge. Liquids flow out through the outlet pipe and are distributed throughout the drain field.

Septic Remediation, Repair & Replacement

If properly designed and constructed, traditional septic systems are relatively easy to maintain. There are no moving parts. No energy source is required. Still septic systems do age. Tanks leak. Pipes clog. The absorption capacity of leaching fields diminishes.

These factors in isolation need not spell disaster if you are vigilant and address signs of failure early. The most

important thing you can do is pump your tank regularly, and the Three Lakes Council encourages you to take advantage of the 20% pumping discount we have arranged through Kaiser Bathisone (see box).

What if you can't find your tank?

First, determine where and in which direction your house sewage pipe leaves the building. The tank is generally located close to the house, and you may notice uneven depressions or a mounding of the ground surface over the tank. If not, just take a metal rod and poke the ground around the pipe. Septic tanks have openings for inspection and cleanout purposes. If your septic was installed after 1950, you can ask the Westchester County Health Department where it is located (Mt. Kisco office: 864 7333).

The total depth of sludge in your tank should not exceed one third of the tank's capacity. If the tank is not pumped out periodically, solids can be carried into the absorption fields, causing clogs, a far more expensive problem to repair

Covers should fit securely. Baffles and tees in the tanks should be checked for cracks and deterioration and repaired as necessary. The house sewer, tank effluent line and distribution box should be checked in early spring for ground heave resulting from winter frost. The surface over the tank should be assessed for signs of setting, a possible sign of a problem.

If it's determined that your system requires repair, be aware that, effective April 1, 2000, septic system contractors have to be licensed by the Westchester Department of Health. A list of the 143 licensed contractors and their addresses is available at www.westchestergov.com/health under Environmental Health Services.

Of course, repair may not be an option. Many septic systems in the area have lived well past their useful lives... and the systems need to be replaced and/or relocated. For those who have the room, it's not as expensive a

proposition as you might have feared. Septics can be remediated or replaced, in some cases, for less than \$5,000. For those who live on ¼ acre lots, the options are quite limited. And that is why the Three Lakes Preservation Plan will address and evaluate the alternatives to traditional septic systems including aerobic systems (which reduce the nutrient load on the absorption system), composting, incinerating and chemical toilets, and pre-fabricated leaching chambers. Stay tuned.

-- Tara A. Owen

Septic Additives: Buyer Beware

There is a long list of things that you can do to improve the efficiency and add to the life of your septic system. Waging chemical or biological warfare against it isn't one of them.

State and county health officials, environmental groups and university researchers are unanimous in their conclusions that the chemical and biological septic treatments that are hawked relentlessly over the phone, online or in the mail -- especially the acid treatments that are designed to cut grease and oil - can do more harm than good. Many states ban them. Only the manufacturers of the products are behind them.

These *chemical* additives will dissolve greases and oils, a good thing. But they also destroy the healthy bacteria in your septic system, which is what makes it work. As a result, over time the damage done by the additives will cause your leaching fields to clog and damage the soil that surrounds the fields. Acid additives also will corrode concrete tanks and distribution boxes, causing leaks. They'll also contaminate groundwater, endangering anyone drinking from our aquifers or living downstream of our lakes.

Biological additives such as bacteria, enzymes and yeast that are sold to

counter the effects of household chemicals and accelerate the digestion of organic material "are generally not actively harmful, but they are unnecessary," according to Septic-Info.com, an Internet site devoted to subsurface water treatment systems. In some cases, the additives can push solids from your tank into your leaching fields before they have a chance to decay.

When it does, Ed Delaney, a Three Lakes resident who is the northern Westchester supervisor for the county Health Department, will be knocking at your door. Before he does, he has this advice:

"Watch what you put down your toilets and sinks. If it's organic, it's the right stuff. Do that, and you won't need any additives at all."

He adds, "A lot of the additives turn the solids back into liquids and carry them out into the disposal fields, where they clog up the fields faster than normal. The life of the fields are reduced dramatically, but homeowners don't know that yet. All they know is they don't have to pump so often. They'll save \$150 on this year's pump-out. And they'll spend \$10,000 or \$15,000 to replace their fields later on.

The savings from such a quick fix will be especially short-lived for homeowners in Lewisboro because the town has some of the toughest septic system regulations in Westchester. Homeowners applying for building permits to enlarge their homes must show proof that their septic systems are functioning properly. The law may soon be tightened so that the sale of homes with faulty systems also would be blocked.

The bottom line: Leave the chemical and biological agents to the terrorists and evildoers. There's no short cut to a healthy septic system, and nothing you pour into your toilet will fix a failing one. Good household habits and proper maintenance, not a quick-fix \$9.99 box of additives, is the only sure way to a healthy septic system.

Lake Associations – Contact Info

Association	Contact	Phone	E-Mail
Three Lakes Council	Dr. Peter Treyz	763-8617	
Lake Oscaleta Association	Art Shane	763-3871	
Lake Waccabuc Association	Ed Delaney	763-8089	edgail@optonline.net
Lakeside Association	Ron Tetelman	763-6335	ron@eberlin.com
Perch Bay Association	Paul Passidomo	763-6387	paulpassidomo@aol.com
South Shore Association	Joe Gillert	763-8104	j@bestweb.net
Two Lakes Club	Victor Ponzo	763-6244	vponzo@optonline.net
Waccabuc Landowners Council	Jack Sinnott	763-9859	jsinnott@optonline.net

We in the Three Lakes have an extra obligation because our lakes drain into New York City's Croton reservoir system. In fact, of the 99 recommendations in a recently released draft plan for protecting the watershed that surrounds the reservoirs, the first five called for improving subsurface treatment systems like the ones that each of us has in our backyards. For tips on how to improve yours, see page 10.

-- Keith Eddings

“Your septic system is its own ecosystem whose inhabitants (bacteria) are in tune with their chemical environment. Adding chemicals (everything from household cleaners to toxic substances like paint, solvents and pesticides) disrupts this ecosystem, killing off the bacteria whose life activities purify your wastewater.”

-- septic-info.com

Should We Consider a Septic Management District?

The Lewisboro Planning Board has made it a practice in recent years to include a requirement that septic systems be regularly maintained and monitored as part of the wetlands permit process.

So, as homes are renovated, we can take some comfort in the fact that these septic systems will be improved and maintained. In the fullness of time, a majority of the homes on our lakes will be under a septic program. The question is: Can we afford to wait that long?

Two towns in Connecticut -- Old Saybrook and New Fairfield -- have successfully instituted septic maintenance programs that Lewisboro should study. Both towns developed these programs with the Connecticut DEP as part of a sewer avoidance agreement. The simplest, cheapest tool used in both towns is an “official” letter from the town to homeowners reminding them every couple of years that it is time to have their septic pumped. This nudge has resulted in a remarkable 90% compliance rate in Old Saybrook, and a failure rate that has fallen below 1% in New Fairfield.

EDITORIAL

This simple program has the potential to dramatically reduce septic failure at little cost to the town or its citizens and should be implemented. Tim Simpkins of New Fairfield and Steve Lockett of Old Saybrook have offered to talk to the town about setting up such a program here.

To follow up on the notification program, Old Saybrook and New Fairfield now use a software program that tracks homeowners’ tank size, type of absorption field and time since last pumping in order to know when a specific septic should be pumped. They

also witness 80% of the pump outs, resulting in better compliance.

Ed Delaney, Lake Waccabuc Association president and Health Department supervisor for Northern Westchester, is familiar with even more rigorous programs up on Lake George, as well as one starting up on Peach Lake. Taking the concept a little further, some communities have voluntarily submitted to the oversight of a septic management district that has taxing and enforcement authority. Whether we would want to move that far that fast is unlikely.

But the notion of a collective, “official” effort that shifts the burden of responsibility for septic system maintenance from the individual to the neighborhood is well worth examining. And, indeed, we will be performing a septic system survey as part of the Three Lakes Preservation Plan to start getting our arms around this issue.

-- Tara A. Owen

Septic Tank Pumping Discount
Once again, we’ve organized a 20% discount with Kaiser Bathisone on septic tank pump-outs.
Please call Mimi Shane at 763-6564 to take advantage of this group rate.

News & Notes

Aerator Update

They're up... they're down... they're up again. As you know the Three Lakes Council upgraded the aerators in Lake Waccabuc last year, replacing the old apparatus with far more efficient "bubblers." The good news is we had them up and running for most of last summer... and our operating costs were halved. Instead of a \$9,000 electric bill, we paid \$4,500. The bad news is the aerators were vandalized in September by two local teens who broke off the top 15 feet of the west aerator (and were apprehended). In June, we sent divers down to repair the damage. No sooner did we turn them back on, but vandals struck again. The pipe coming out of the compressor shed developed a large man-made hole. The aerators, are, knock on wood, in action again, and we hope they will continue to operate for many summers to come.

For those interested in the history of the aerators and whether or not they are effective, read this excerpt from a magazine article written in December, 1973 after the first summer's results were in:

"As Union Carbide's aerating systems fed oxygen into the lake depths, marked changes began to occur. The hypolimnion (lowest strata) went up from almost zero to a fish supporting level (4 p.p.m. at Lake Waccabuc). The hypolimnion phosphorus levels, associated with eutrophication, dropped a sharp 30% at Lake Waccabuc. Cold-water fish such as trout could survive once again. The stench of hydrogen sulfide in the bottom area disappeared. And water clarity even at the surface picked up noticeably."

-- C&EN Magazine, December 10, 1973

Let's keep an eye on the aerators and report any suspicious activity.

Wetlands Ordinance

Lewisboro's Wetlands and Watercourses Law is in the process of being revised. An early draft of the proposed new language scared many of us on the lakes as it not only increased the buffer from 100 to 200 feet, but it sharply limited the ability of homeowners to make needed repairs or engage in routine activities (e.g., septic tank maintenance, landscaping, driveway repair, fence installation) without first securing a permit. Since then, Ed Delaney, president of the Lake Waccabuc Association and Dr. Peter Treyz, president of the Three Lakes Council, have had the opportunity to weigh in on our behalf and suggest revisions. As it stands, the primary wetlands buffer is being extended to 150 feet, instead of 200, which is consistent with many

Visit our website at www.threelakescouncil.org

other local towns. Routine activities such as those just listed are and will continue to be allowed (without permits). Moreover, the town has hired a new Wetlands Inspector, Jay Fain, as of last summer to expedite the permit process. He has the ability to issue permits "administratively" (i.e., without Planning Board approval) for small projects (e.g., decks, patios, small additions). Still, questions remain about what this new regulation means for us, and we encourage you to participate in public hearings as they are scheduled. Clearly, we want to do everything in our power to preserve the health of the water many of us drink, but we also want to protect our rights to use, enjoy and improve our property. Speak now, if you have an opinion.

Storm Drain Grant

Thanks to the tireless efforts of Lake Waccabuc resident, Lee Blum, the Town of Lewisboro won a very competitive grant (over 400 applications made) from the New York State Department of Environmental Conservation to remediate storm drains and catch basins around Lewisboro's lakes, specifically Lakes Truesdale, Kitchawan, Katonah and Waccabuc. The grant covers \$60,000 of eligible costs, reimbursable at 50% up to \$30,000... which means if the Town spends \$30,000 on this project, the State will match it. Now here's the catch: the Town Highway Department has to spend the money before October 30, 2003, when the grant turns into a pumpkin... and Waccabuc is scheduled last. According to grant application documents, we can expect new catch basins with deep sumps will be installed next month (August 2003) at three locations around the lake. One can only hope that at least two will be installed at the western end of Waccabuc where coliform counts in recent years have spiked after significant rainfall events. Since there is no housing near those particular storm drains, we can be fairly certain these drains are accountable for the increased counts. They need to be replaced. Calls to the Town Highway Department Superintendent, Steve Hill, were not returned by press time. The number there is 763-3166. Perhaps you will have more luck.

Catch Basin Mapping and Cleaning

Since 2000, the Highway Department has been mapping the catch basins around Lewisboro using GIS (Geographical Information System), a computer system that records, stores and analyzes information about the features that make up the earth's surface. A GIS can generate two- or three-dimensional images of an area, showing such natural features as hills and rivers with artificial features such as roads and power lines. A GIS database can include as many as 100 layers of data and is designed to accept geographic information from a variety of sources, including maps,

satellite photographs, and printed text and statistics. Tutorial over.

Joel Smith, who reports to Steve Hill, is the point person on this project and the GIS Coordinator for the Town of Lewisboro. He is presently locating the storm drains/catch basins with a GPS unit and will, it is hoped, have a map that he can share with us... and with Michael Martin... later this year. In the meanwhile, we should be cleaning those catch basins, and the Town owns a \$100,000 Vac-All truck specifically for that purpose. Steve Hill has committed to cleaning out the 90 or so catch basins in the Three Lakes area on a regular basis and to tracking that work on a schedule. As you see the truck in your neck of the woods, would you help us monitor this activity by dropping an e-mail to info@threelakescouncil.org? That sort of bulletin would be of great assistance.

Road Salt and Sand

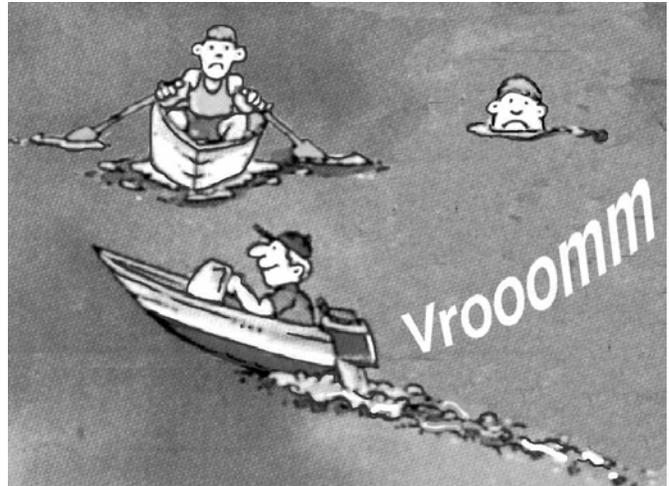
Salt and sand used in snow removal is a major polluter in northern Westchester. Drinking wells have become polluted by salt in Pound Ridge, Bedford, Somers, Putnam Valley and Patterson, not to mention South Salem. In addition to corroding cars, polluting lakes and killing shrubbery, high levels of salt can elevate residents' blood pressure if their well becomes contaminated.

On September 30, 1999, Town Supervisor Tom Herzog and Highway Department Superintendent, Steve Hill, met with Three Lakes Council representatives to discuss the use of alternative de-icers around our lake community. As a result of that dialogue, Steve Hill agreed to downsize the town's use of salt around the lakes, instead using mostly sand. Moreover, he agreed to experiment with a concept called "pre-wetting" using Ice Ban Magic (a more environmentally friendly salt) on Twin Lakes Road. It's now 2003, and we would be very interested in collecting any anecdotal evidence that the Highway Department has ever used this liquid pre-treatment option. Please e-mail info@threelakescouncil.org if you've observed the Ice Ban being applied (requires a spray truck coming through before a snowstorm), or if you have any other questions or comments.

Yorktown Heights has enjoyed excellent results for the past eight years with Ice Ban Magic. Eric DeBartolo, the superintendent of highways, mixes the product with a 22% salt brine solution and beer hops... yes, beer hops. The result? A snow removal solution that is, he claims, less corrosive than water... and that clears roads without killing bushes, eating cars and polluting lakes. Mr. DeBartolo is only too happy to share his "secret formula" with neighboring towns. Perhaps we should invite him and Mr. Hill over.

Aquatic Plant Alert

Lake Waccabuc resident, Lee Blum, has seen purple loosestrife and water hyacinth for sale in local nurseries. Both are beautiful aquatic plants and might be tempting to a lakeside homeowner, but beware – these plants are lake chokers.



Horsepower Limits

25 HP limit on Waccabuc

10 HP limit on Oscaleta and Rippowam

No motorboat can be operated before 8:30 AM or after sunset

The Three Lakes Council is aware of the sale of 35 HP motors to residents on Lake Waccabuc by a local marina... and the stratagems used to conceal them. These motors are illegal and owners assume the risk of seizure and fines if they buy and/or operate them. If you have an illegal, overpowered motor, and would like to explore options, including exchanging it for an electric motor, please contact Dr. Treyz at 763-8617.

THREE LAKES COUNCIL NEWSLETTER COMMITTEE

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West Nile Virus

With record amounts of rainfall this summer, Westchester County is girding for an outbreak of West Nile Virus. The Department of Health has been dropping briquettes of the larvicide Altosid (methoprene) into state, county and local municipal catch basins, and they are asking residents to take the following steps to eliminate potential mosquito breeding sites around their properties:

- Remove unnecessary water-holding containers, especially old tires, cans, buckets, drums, wheelbarrows and bottles.
- Cover trash containers to keep out rain.
- Turn over plastic wading pools and wheelbarrows when not in use.
- Clean roof gutters and remove standing water from flat roofs.
- Remove standing water from basements.
- Place a couple of capfuls of household bleach in a basement sump-pump pit if it has standing water.
- Keep drains, culverts and streams clean of weeds and trash so that the water will drain properly.
- Make sure stored boat covers are completely drained. Store small boats upside down.
- Drain water in birdbaths, plant pots and drip trays twice a week.
- Keep grass cut short and trim shrubs to eliminate hiding places for adult mosquitoes.
- Clean and chlorinate swimming pools, outdoor spas and hot tubs. Be sure rainwater does not collect on pool, spa or hot tub covers. Disinfect the cover with bleach to kill mosquito larvae.
- Clean vegetation and debris from the edges of ponds.
- Fill in hollow tree stumps and rot holes that hold water with sand or concrete.
- Drill holes in the bottoms of recycling containers that are kept outdoors.

Three Lakes Council Archives

As part of the Three Lakes Preservation Plan, we are collecting historical information regarding water quality and past management activities. At present, the newsletter editor and Dr. Peter Treyz have the following reports and articles:

“New Oxygen Technology Revives Dead Lakes,” C&EN, December 10, 1973. *An article on Lake Waccabuc aeration results after first summer.*

Miller, Robert et. al., “Septic System Alternatives for the Tri-Lakes Community,” United States Military Academy, West Point, NY, December 12, 2000. *A report on septic alternatives written by three cadets.*

Palmer, Liz, “Water Quality Changes in Lake Waccabuc from 1986-1996: A Preliminary Data Analysis,” May 17, 2000. *A detailed scientific report documenting*

statistically significant trends in the water quality of Lake Waccabuc.

Treyz, Henrietta, “Determining the Cause For Increased Coliform Counts on Lakes Waccabuc, Oscaleta and Rippowam,” John Jay High School, 1999. *Report establishing strong correlation between rainfall and increased coliform counts near storm drains from 1997 to 1999.*

Should you want a copy of one of these reports or have information you think might be of interest to the Three Lakes Council, please contact Dr. Peter Treyz at 763-8617.

Leaders Needed

Dr. Peter Treyz has ably looked after the affairs of the Three Lakes Council as President for years and years and years. Despite the lavish pay and generous fringe benefits, he is quite willing to turn over the reins to the next generation of lake leaders. In fact, he'll give you the horse, too.

We encourage all the associations to submit nominations for President, Vice President, Treasurer and Secretary of the Three Lakes Council. Assuming we can field a slate of candidates, we'll hold elections in the fall. You can send your nominations to P.O. Box 241, South Salem, NY 10590.

Web Site Wowza

In case you missed the footers on every page of this newsletter, the Three Lakes Council has a web site, and a fine example of American craftsmanship it is. In coming weeks, you will be able to download and print picture-perfect versions of the following:

- Cedar Eden Initial Findings & Recommendations
- Cedar Eden Scope of Work Report
- TLC Newsletter 1996
- TLC Newsletter 1997
- TLC Newsletter 1998
- TLC Newsletter 1999
- TLC Newsletter 2000
- TLC Newsletter 2001
- TLC Newsletter 2002
- TLC Newsletter 2003

*Have a
Happy and
Healthy
Summer!*

