



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 1 NO. 1

THE STATE OF THE POND

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White Pond is showing signs of eutrophication resulting from nutrient overloading (primarily phosphates). Most residents and visitors to the Pond have seen or smelled these 'signs': the green or blue scum of the algal blooms, the occasional white organic debris at the water's edge, the smell of rotten eggs (hydrogen sulfide), and the increase in the trash fish population. Other less noticeable but important changes are the increases in the phosphorus levels, changes in dissolved oxygen levels, and changes in the pH of the thermocline (the water layer between the warm upper layer and the cold lower layer).

Dr. William W. Walker, Jr. has begun the long-overdue process of studying the water quality of the Pond, investigating the factors which are affecting water quality, and outlining what must be done to stop the Pond from deteriorating further. His investigations will continue in 1988, but he has already shown that if the Pond is to be saved, we have our work cut out for us. The Town is supporting (and paying for) Dr. Walker's current work, but it may also be necessary to get funds from the State to pay for developing and implementing watershed and pond protection programs.

Copies of Dr. Walker's test results and his preliminary recommendations are available through the Friends of White Pond. Based on his work there are things we can do right now to protect the Pond from further damage, such as controlling erosion, preventing surface run-off from reaching the Pond, properly maintaining septic systems in the watershed, and using only no-phosphate house and garden products to protect the ground water. Also, we must pay attention to long-term issues such as questions of how much and what kind of further development the Pond can tolerate. There will be more information on all these subjects in future issues of this newsletter.

THE FRIENDS OF WHITE POND

The Friends of White Pond was formed by concerned residents of Concord in 1987 to help preserve and improve the quality of White Pond

Our objectives are:

to disseminate information about the water quality study now being carried out, and about changes and events which could have an impact on the Pond

to provide information about what can be done to maintain and, hopefully, even improve the Pond's water quality

to encourage and help implement any plans which would preserve and protect the Pond.

White Pond is a unique natural resource. We intend to do whatever we can to preserve and improve this resource, but we need your help. Please join us in our efforts to keep White Pond beautiful.

Herb Kottler

ABOUT THE SPERRY LAND ...

There has been a rumor that the Sperry land bordering White Pond is being considered as a possible site for a State public beach. It is a rumor no longer. At the January 4th Selectmen's meeting, Dan Monahan (Concord's Natural Resources Coordinator), confirmed the State's interest in the Sperry site. How close the State is to making a serious proposal is not clear (See up-date below.) However, Mr. Monahan said that the State has been considering the Sperry land for a year now.

During a January 11th phone conversation, when informed of the State's interest in White Pond as a public beach, State Representative John Loring expressed surprise and could well understand the concerns of Concord residents. He is interested in any further information that might be forthcoming.

I suggest that any one concerned about the possibility of a State public beach on White Pond call our Concord area State legislators:



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*11/23/06 Note: this enclosure is now completely obsolete and is not archived with this newsletter.

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Senator Carol Amick 722-1572
Senator Paul Celluci 722-1120
Representative John Loring 722-2090

Up-date: According to Senator's Celluci's office, the State will decide whether or not to buy the Sperry land by March 1, 1988.

Alan Aronie

ACTION

For a period of more than twenty-five years I have been living on White Pond. Over this period I have witnessed and observed changes in the population and the environment. We have changed from a small summer-camp population living in marginal housing with primitive sanitary systems, to a rapidly growing, population living in year-round housing. We also now have large numbers of out-of-town, week-end visitors and crowded beaches.

The Pond sometimes shows whitish foam which I see collected on my beach (southeast of the Association beach). On frequent walks around the Pond, I have noticed soil erosion has exposed

the roots of tall trees, and now those trees are toppling.

I feel that time to preserve the Pond is running out. I believe that proper professional planning is essential, and that we should organize volunteer help and seek the cooperation and/or financial support of the proper authorities to implement our plans.

I am willing to volunteer my professional services to create drawings and specifications for controlling run-off from roofs, roads and parking lots, etc. by means of properly graded trenches, catch basins and retaining walls, etc., and, for upgrading sanitary systems.

It's time for action.

Hans Abraham

. . . AND THE ASSOCIATION BEACH

The rumor that the White Pond Association might be disbanding is not true. According to Richard Hale, an Association Board member, they have already contracted to have the beach managed for the 1988 season.

He further stated that there are problems in managing their beach and the 40 acres of surrounding land, such as liability and finding people to work at the facility during the summer. When asked about the Associations' possible future disbandment, Mr. Hale simply said no one knows what will happen in the future.

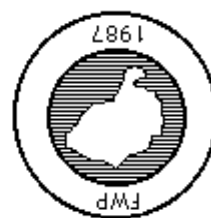
THE FRIENDS OF WHITE POND INCLUDE;

President: Herb Kottler 369-0149
Voce-President: Alan Aronie 369-5048
Secretary: Kate Blair 369-5680
Treasurer: David Ary 371-0253
Technical consultant: Hans Abraham 369-5549
Newsletter: Judith Sprott 369-4850 and Kate Blair

Please call any one of us with your comments, questions and/or information. New members are most welcome (please use the enclosed form*). Contributions to the Newsletter are invited and can be sent to Judith Sprott, 43 White Ave. Concord.

*11/23/06 Note: this form is not archived with this newsletter.

FOR THE FRIENDS OF WHITE POND





PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 1 NO. 2

THE CARE AND FEEDING OF SEPTIC SYSTEMS

The focus of this issue of Ponderings is sewage disposal systems. Every home in the White Pond area has a sewage disposal system of one kind or another, and as the following two letters from our neighbors show, septic systems can malfunction or fail. Most of us know that pollutants from improperly located or sized, malfunctioning, or crowded systems can cause major problems, contaminating the groundwater, wells and the Pond. Failing systems can discharge an excess of nutrients (for instance, phosphates and nitrates) and release pathogenic organisms which are hazardous to human health and to the water quality of the Pond. Each of us needs to know that our sewage disposal system is properly sized and located, and functioning at a level of efficiency that will protect us against system failure. An efficiently functioning system will keep a maximum percentage of the inevitable nutrients and pollutants we produce out of the groundwater and out of the Pond.

Not all sewage disposal systems are septic systems. Although *this information is oriented* towards the septic system as the one most commonly installed in the last few decades, the same cautions and concerns about care and maintenance apply to any disposal system.

The Friends of White Pond have put together the enclosed material about septic systems; what they are, how they work and what we have to do maintain them, so that we can all see to it that our systems do their job to protect us, our neighbors, and the Pond. As the following two letters show, septic systems can and do malfunction or fail.

DON'T PUT OFF UNTIL TOMORROW...ETC.

This past winter we had a rather sobering experience at our home on White Pond - 47 White Avenue, to be exact. Our water backed up on us, the toilets would not flush, and various and sundry unpalatable side effects appeared on the scene.

I should have realized that a septic system doesn't go unattended forever, although I seemed to be proceeding under that assumption.

A further complication was that this took place in the dead of winter, and the ground was covered with snow and was in a condition approaching perma-frost. This necessitated the use of back-hoe equipment, which was an added expense, and finally, even though I had a diagram of the sanitary system, I didn't have an "as-is" plan, which would show the exact location of the septic tank.

And now for the good news, the best money deal I got was from A.B.C. Cesspool Cleaning of Acton, and I even used a savings coupon from the Manning's Little Phone Book Yellow Pages.

The service was excellent. It included checking the Town records to find the location of our tank, and the use of a heavy plastic "tunnel" which precluded the necessity of digging down to the platform level. The previous access manhole was made of concrete, but it had broken down, probably due to the weight of cars parked above it.

Advice: Have your septic system checked every two or three years (when the ground is soft!) and get an "as-is" plan showing the exact location.

ANOTHER NEIGHBOR HEARD FROM...

It was February 13, the day before we had scheduled a Valentine's Day engagement celebration brunch for some friends of ours. I had cleaned the house from top to bottom, so I was surprised that the place smelled so dirty. I emptied every diaper pail and garbage bag, checked the cat litter, but something still smelled. Finally I gave up and went down to the basement to start a load of laundry. There, surrounding the washing machine, was an inch-deep puddle of water in which globs of feces and toilet paper floated. I had found the source of the odor.

My husband and I tried to assess where the problem lay by flushing both toilets: each time, a geyser of dirty water gushed over the J-trap near the washer. My husband called a plumber, who said, "Go out, dig up your septic tank and see if it has overflowed". Frankly, we didn't believe that that could be the problem, as we had had it pumped less than two years before, and were not scheduled for another pumping until April. We called a second plumber, who said he would be right out. Meanwhile, my husband found the map which he had made to facilitate locating the septic tank, measured the ground, and started to dig. He pulled the septic tank cover up and just then the second plumber arrived, looked in the tank and said, "You should have done that before you called me and saved yourself \$40.00. There's your problem: the water's up above the collar. You need to be pumped."

Back in for another five phone calls. We reached two septic system pumpers who could come out that afternoon, for an extra fee. Since one dispatcher had to locate his truck and driver, and would have to call us back, we accepted both pumpers just in case one couldn't make it. Consequently, we had two trucks arrive simultaneously, and had to pay one fellow half his fee just for showing up, bringing the bill for the day up another \$75.00.

While Bob, the driver, set up his hoses and started to pump, I filled my largest bucket with a strong ammonia-water solution, donned my longest rubber gloves, and trooped down to the basement to begin clean-up. Never in all my days as a Medical Assistant have I had such a disgusting task. Complicating the procedure was the presence of my two-year old son, who was eager to play in the beautiful puddle.

After Bob had pumped enough to see the inlet pipe, he asked that we test the flow by flushing a toilet to see if the water entered the tank or was blocked somewhere. We flushed: no water entered the tank. Bob dragged out his snake and set it up in the basement, only to find that it was broken. He called for reinforcements, reloaded his hoses, and took off, leaving a bill of \$225.00.

His partners drew up in about an hour, snaked the pipe in the basement, and broke through the blockage in about half an hour. Their bill: \$95.00. Of course, their work had added a bit more puddle, so back down I went for another hour of cleaning and mopping; luckily, my son was napping at this point, and I was able to thoroughly rinse the area so that no trace of sewage remained. The intense ammonia fumes burned my respiratory tract, giving me a runny nose and cough for two weeks afterwards.

We held our brunch the next day, and no one remarked on any odd odors. However, a week later the tank was full again, and needed to be pumped, this time to the tune of \$100.00. A friend with a back-hoe dug where we thought the leaching field or pit might be (like many owners around here, we didn't know what we had, as it had not been discussed at the sale of the house eleven years ago) and discovered an old pit that had become so gunked up after forty years of use that it could no longer filter the waste water. So, after spending \$535.00 just for an emergency situation, we are now in the process of reconditioning our septic system.

The moral of this story is, know your system. Know what kind it is, where it is, how old it is and, hopefully, what kind of maintenance and repair it has had. Know also, how to care for your system (the birth of our child had dramatically increased our water usage and he wears disposable diapers!), and check as much of the system as possible at its regular pumpings (we might have spotted the inlet blockage building up). Perhaps if we (and the previous owner(s)) had done all these things, we wouldn't be facing the problems and costs of redoing the system now.

IT IS LATE!

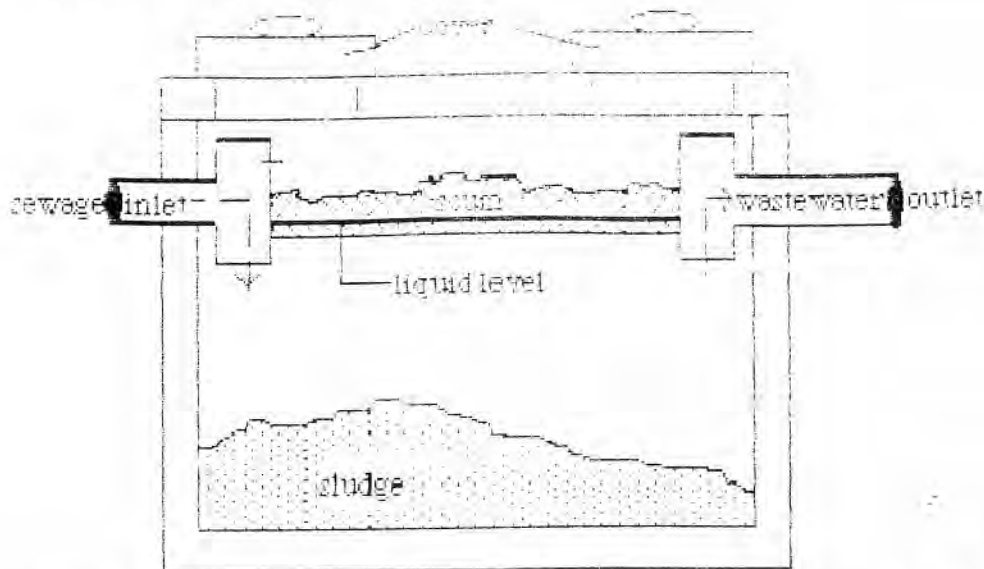
Do you know where your sewage is going? Do you know the location and the type of disposal system you are relying upon? Is the system functioning properly? If it is sick and perhaps near death; do you know what to do to revive it without harming your well? And without harming White Pond? We are prepared to assist, at no cost, with professional expertise and the accumulated knowledge of 25 years of residence on the Pond.

The land use around the Pond was originally summer camps, but in the last 25 years more and more homes have been winterized and are now occupied all year round. Unfortunately, the disposal systems were often ignored in the belief that, unseen and uncared for, they would continue to work for ever and ever and ever. It is very, very late to notice that this is not happening and that our own disposal systems may be part of the reason the water quality of the Pond is worsening.

So, if you want help in finding out where and what kind of a system you have, and what, if any, work needs to be done on it, get in touch with:

Hans Abraham Telephone: 369-5549
42 Shore Drive

A **SEPTIC SYSTEM** is a sewage treatment system consisting of two parts: the septic tank and the leaching area. The tank is usually a rectangular concrete box with a sanitary tie at each end to slow the incoming flow and prevent solids from escaping.



Household sewage (everything which goes down the drain in bathrooms, kitchen, and laundry) flows, usually by gravity, into the septic tank. Solids entering the tank settle to the bottom as "sludge". Grease and light material (scum) rise to the top and are trapped above the outlet tee. The remaining wastewater (minus the sludge and scum) passes through the outlet, through the leaching area and into the ground. Some of the sludge and scum stored in the septic tank, are reduced to liquid by bacteria which live in the tank, but the rest of that material must be pumped out at regular intervals to prevent it from overflowing the tank and entering the ground directly. In the leaching area, the wastewater moves into the soil which absorbs viruses, strains out bacteria and converts wastes into reusable nutrients (including phosphates and nitrates). Some of the nutrients are consumed by organisms in the soil itself, some are taken up by plants and some return to the groundwater (and so to the Pond). Phosphates, in particular, are a prime cause of eutrophication of the Pond.

The leaching area usually consists of one of the following:

- leaching bed: a wide area with crushed stone and distribution pipes
- leaching trenches: long, narrow trenches with perforated tile pipe
- leaching pit: a deep stone-lined pit (sometimes called a dry well)

CARE AND MAINTENANCE of our septic systems makes sense. A system which isn't maintained and working effectively is a threat to the groundwater, wells and the Pond. A failing system can cause household plumbing to back up and raw sewage to overflow on to the ground. In addition to creating an unpleasant nuisance, a failing system may allow pollutants to wash into surface waters, creating a public health hazard. A septic system costs thousands of dollars to install. If it should become clogged and fail, it can cost just as much to repair the system or build a new leaching field. On the other hand, a routine pump-out costs around one hundred dollars. That's a small price to pay every couple of years for preventive maintenance that can extend the life of a septic system and preserve the quality of water in the Pond.

The following procedures can keep our systems working at their best and help prevent premature failure:

1. Pump the tank **AT LEAST** once every three years. Public health officials and other authorities recommend annual pumping for small tanks or systems in the watershed of the Pond. Do not wait until the symptoms of failure show up.
2. Minimize water use in the home. Excess water will decrease the effectiveness of the septic tank and lead to flooding of the leaching area. Never empty basement sumps or other sources of clear water into the septic system. Use water-saving plumbing fixtures where possible (faucet aerators, low-flow flush toilets, low-flow shower heads, etc.) and run dishwashers and washing machines only with full loads. Fix all leaky faucets and toilets promptly.
3. The bacteria in the septic tank must be treated with care. Small amounts of soaps, detergents, bleaches and the like will not harm the treatment process taking place in the tank; but an overdose of any of these can be fatal to the necessary biological activity.
4. Certain materials interfere with the effective operation of a septic system.
 - Coarse organic matter such as vegetable trimmings, ground garbage, eggshells and coffee grounds fill the septic tank with sludge and require frequent septic tank pumping.
 - Cooking oil and bacon grease, etc., when combined with detergents or when emulsified, can pass through the septic tank and clog the leaching area causing the system to work less and less effectively and eventually to back up.
 - Pesticides, disinfectants, acids, medicines, paint, paint thinner, solvents, household chemicals, etc., will kill the bacteria which decompose the organic matter in the septic tank, thereby causing increased sludge accumulation and requiring more frequent pumping to keep the system operating properly.
 - Disposable diapers, sanitary napkins, cigarette filters, etc. can lead to blocked pipes, and will be indigestible to the bacteria and cause increased sludge accumulation and more frequent pumping.
4. Keep heavy vehicles off the septic tank system. Their weight can damage the access manholes to the septic tank, and can crush pipes and cause soil compaction in the leaching area which lessens its filtering efficiency.
5. Don't plant deep rooted trees or bushes in the leaching area. Their roots may clog or dislocate pipes.

PUMPING OUT septic tanks regularly is absolutely essential. However, this can be very difficult. New homeowners may not know where the tank is and there may not be any record of its location. Sometimes we think we know pretty much where it is, but our memories trick us and if you have to look for the clean-out manhole in winter when the ground is frozen, a miss is as good as a mile. There are two things that need to be done:

- Get information on where the tank, access manholes, and leaching area are. Unfortunately the access manholes are often buried somewhere under the ground. To locate the tank, go into the basement and find where and in what direction the sewer pipe goes out through the basement wall. Check the ground in that area for places where vegetation won't grow or for areas that are slightly depressed or mounded. Any likely spot can be probed with a thin metal rod. In the winter, excessive snow melt may be a good indication of tank location. In recent years a new or repaired system has to be mapped and filed with the Concord Board of Health by the contractor. For older systems, ask someone who may have seen the tank installed or pumped, a neighbor, the builder or the previous owner.

- Confirm that the access manhole IS actually where it's supposed to be and either bring it up to ground level or mark it permanently (with a stake, bird feeder, bird bath, etc. or record its location on the basement wall). Also, record its location on the back of this sheet.

Do not wait until the system shows signs of failure to have the septic tank pumped out. By that time the leaching area may be clogged and repairing damage can be very expensive. A licensed pumper should pump the tank regularly - once a year would be ideal. For a list of operators licensed to do this work, contact our Board of Health or consult the yellow pages under Cesspools-Cleaning.

When the tank is being pumped out, ask the operator to inspect the inlet and outlet tees. Normally, one of the two access covers is located directly over the inlet sanitary tee. If either tee is broken, have repairs done immediately. The inlet should also be checked to determine if leakage into the tank is occurring from other sources such as groundwater. If the leaching area consists of a pit or dry well, there should be no need to have the pit pumped. If it is full of liquids, a serious clogging problem is indicated which should be referred to a qualified professional.

It is not necessary to leave any of the sludge in the tank as "seed". Incoming sewage contains all the bacteria needed for proper operation. The use of acids or bleaches to clean the tank is not recommended as part of normal maintenance. The use of enzymes and other "miracle" septic system additives have not been shown to be of any value. While their use may not harm a system, they do not in any way take the place of regular pumping.

SEPTIC SYSTEM FAILURE can happen to anyone. Systems can die of old age or be damaged. Overloading of a septic system will contribute to an early failure. Garbage disposals and water-using appliances which contribute to the flow shorten the life expectancy of the system. Be sure your system is sized right for you. Many seasonal homes do not have systems large enough for year-round use. The capacity of septic systems in older homes can be exceeded as new appliances are introduced, families grow, and home additions are constructed. Although there is generally little warning that a system is about to fail, certain symptoms may appear:

- sewage odor near the septic tank or leaching area
- slow-running drains and toilets and/or overflow from stand-pipes
- patch of bright green vegetation above the leaching area
- area of melted snow above the leaching area in winter
- formation of water puddles above the leaching area following heavy water usage, e.g. washing machine use

If any of these symptoms appear it's time to get professional help!

[Much of the above information came from Septic Systems and Your Lake prepared by the Lake Cochituate Watershed Association and printed by the Massachusetts Division of Water Pollution Control, Westborough, MA - Publication # 14797-25-100-11-87-C.R.]

SEPTIC TANK RECORDS

DATE INSPECTED	INSPECTOR/ CONTRACTOR	SYSTEM PUMPED	COST	COMMENTS

SYSTEM LOCATION

Note: Include the size and location of your house, septic tank access manholes, limits of the drainage field, and any other major structures.



•The Commonwealth was not successful in purchasing the Sperry land, and it appears that it will be sold to a private buyer. However, if they can find out who the buyer is, the Commonwealth wants to negotiate for some way to use the Pond frontage for public swimming. The deadline for completing these negotiations is June 1, 1988, and the Commonwealth has set aside \$3 million to fund any deal they can work out. So, the question is, who is the private buyer? Any ideas?

•The Town of Concord will be holding it's SPRING CLEAN-UP DAY on Saturday, April 9, 1988. To all the dedicated people who turn out on Clean-Up Day each year to pick up the trash around the Pond - we look forward to seeing you again this year. More hands make less work, so we hope lots more of you will come help. Special (very strong) trash bags will be available free at the Community Services building on Keyes Road and you can also get them on the morning of April 9th at 10 a.m. at the foot of the "boat ramp" next to the Association beach.

After the bags are filled, they can either be left along the shore to be picked up by the Friends of White Pond on Sunday morning, or at the foot of the "boat ramp" next to the Association Beach, and also at the parking lot for the Conservation Land, where the Town will pick them up on the following Monday.

•Remember TOWN MEETING begins on April 4 at the Sentry Auditorium.

•Dan Monahan, Concord's Natural Resources Coordinator, reports he and some State representatives have walked a portion of the proposed Rail Trail down to White Pond. The State, and especially the Town Selectmen and himself, are quite aware of and concerned about the problems that would be generated in the White Pond area by a bike trail. Mr. Monahan further said that the Town Selectmen will only sanction the Rail Trail if the State adequately addresses these and other problems (such as crossing the Assabet River) in its planning. An influx of "visitors" to the Pond from the Rail Trail could cause two major problems: diminish the peace and security of homeowners, and increase the erosion of the steep banks between the Pond and the Rail Trail.

THE FRIENDS OF WHITE POND INCLUDE:

- President: Herb Kottler 369-0149
- Vice-President: Alan Aronie 369-5048
- Secretary: Kate Blair 369-5680
- Treasurer: David Ary 371-0253
- Technical consultant: Hans Abraham 369-5549
- Newsletter: Judith Sprott 369-4850
and Kate Blair

Please call any one of us with your comments or questions. Contributions to Ponderings are invited; send to Judith Sprott, 43 White Ave.

Please, if you are concerned with the problems both looming and presently affecting White Pond, we need your membership and support. Just return this tear-off with your voluntary dues of \$10.00 per adult. Checks made payable to FRIENDS OF WHITE POND are, with warm thanks, received by David Ary at 49 Seymour St., Concord 01742.

NAME _____
 ADDRESS _____
 PHONE _____



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL 1, NO. 3

UPDATE ON THE SPERRY LAND

On June 13th, at a Selectmen's meeting in the Sudbury Town Hall, a tentative plan for a cluster development on the Sperry land was presented by Ron Boucher Associates. In attendance were representatives from the White Pond Advisory Committee, the Friends of White Pond, various Concord Town departments and representatives of Sudbury Town government and citizen groups.

Proposed were 333 one and two bedroom apartments and 14 single family attached units on 140 acres. The Sperry land consists of 100 acres, zoned for research and development (R&D), in Sudbury and 40 acres, zoned for one acre residential, in Concord. Implementation of the proposed development would require re-zoning 70 of the 100 acres in Sudbury from R&D to residential. M. & J. Realty Trust, a Sudbury-based realty group, is currently negotiating the land purchase from the present owner, Unisys Corporation, and Ron Boucher Associates are the potential developers.

Many concerns were presented to the developers, such as impact on White Pond, traffic, access design, wetlands, sewage, run-off, zoning and the future of the existing facility. The developer failed to answer most questions directly and in many cases simply stated that certain problems had not yet been addressed.

In the June 30th Concord Journal it was reported that Ron Boucher Associates had scaled down the housing proposal for the 40 acres of Concord land to 40 single family homes and Judith Chanoux, Concord's Town Planner, voiced the many concerns the Town has about the project. It is apparent that the potential developers are in the early stages of planning and are "testing the waters", and it may be that this first change, scaling down the proposed development, was designed to head off opposition.

Both Concord and Sudbury have shown sincere concern about the Sperry land proposal. The developers will have a difficult time addressing the many physical and environmental problems associated with housing on this land.

Alan Anspic

NEW TOWN OFFICIALS VISIT WHITE POND...

On June 16, 1988, at the invitation of the White Pond Advisory Committee (WPAC), Alan Edmond, our new Town Manager, Carl Johnson, our new Chief of Police, and Dan Monahan, our Natural Resources Coordinator, walked around White Pond with members of the WPAC and a representative from the Friends of White Pond. The purpose of this 'walk-around' was to acquaint our new Town Manager and Chief of Police with the White Pond area and its unique problems, especially those problems which could be solved by Town action. The Conservation land was one focus of attention because of the illegal parking, alcohol consumption and swimming which go on there. They also saw and heard about the problems created by visitors who park illegally on the posted streets, trespass to reach the Pond (causing serious erosion in some areas), drink and party at all hours, and leave behind unsightly and sometimes dangerous trash.

The changing ecology and deteriorating water quality of the Pond were not the primary issue at this 'walk around', but Town action to prevent further erosion in general, and to repair existing erosion on the Conservation land in particular, would certainly help the Pond. These Town officials were also shown the area of the proposed development of the Sperry land, and of the proposed bike trail near the west shore, both of which would have serious consequences for the Pond.

The Town Manager and the Police Chief were attentive and responsive to this introduction to the Pond (despite it being a very hot and muggy day). They were given some information on the background of the White Pond area, its history and its special conditions, and were interested in learning more. There was a very positive attitude and willingness to enforce existing Conservation land rules and regulations, to enforce permit parking regulations, and to get to work on other concerns.

Judith Sprott

AND THE RESULTS SO FAR

Many residents of White Pond have noticed increased police patrols and responsiveness to problems in the area. The number of visitors to the Conservation land seems to have gone down a little and the hours of noise (blaring radios, etc.) also seem to be fewer. The appointment of a Conservation Officer to police Conservation lands (as reported in a recent Concord Journal) is certainly a step in the right direction. And, we are told, there will be a sign on the Conservation land to tell visitors the rules and regulations which they should obey so that compliance can be enforced. The "Concord Conservation Land Regulations" as published by the Concord Natural Resources Commission are reprinted in this issue of *Ponderings*.

NEWSNOTES from the Spring Peeper



Linda Stansfield, a member of the White Pond Advisory Committee, and Gail Jewell, a member of the Friends of White Pond, are assisting Dr. William Walker by doing Secchi tests of the Pond this summer. This is only one of the tests included in Dr. Walker's monitoring and testing program as he completes his water quality study of the Pond for the Town. The Secchi test measures the transparency of the water, and the tests done so far show a decrease in transparency as the summer has progressed. **Dr. Walker is eager to have reports of any unusual smells or deposits which the Pond might develop and he has asked Linda to relay any such reports to him. If you notice anything amiss about the Pond water, call Linda at 369-1871 and let her know what's happening.**

BAD NEWS...

There have been many reports of algae in the Pond. Both the increase in the amount of algae and the earlier date at which they were first seen indicate that the Pond is worse off than it was last year. Algae are visible floating just below the surface all over the Pond. Some patterns of wind and water currents force the algae to the shore where they are clearly visible as a green scum. Although the bluish-white "bloom" of dead algae has already been visible (and smellable!), only a small proportion of the algae have been effected and there has not yet been a major die-off. In view of the high algal population, we can expect very large, very rotten-smelling "blooms" during the next few months.

GOOD NEWS...

Hans Abraham reports he has received several responses to his offer (published in a previous *Ponderings*) to help residents on White Pond in finding out where and what kind of septic system they have, and what if any, work needs to be done on it. This offer still holds so, if you are interested, contact Hans at 369-5549.

COMING ATTRACTIONS

Hans Abraham, having obtained a copy of the "Concord Conservation Land Regulations" for publication here, is now looking for information on any other rules or regulations which would apply to the Pond or its environs. Since White Pond is a Great Pond under the laws of the Commonwealth of Massachusetts, and the public access road to the Pond is a county road, and the Pond lies in the Town of Concord, there are many governmental bodies involved. Whatever information comes to light will be published in upcoming issues of this newsletter.

In 1973 Carolou Marquet, then a resident of Paul Revere Road, wrote the "History and Legend of the White Pond and Nine Acre Corner Area, Concord, Mass." for Mr. Richard Walton's Environmental Study Program and for the teachers and children of Willard School. Included in her work are fascinating tidbits of information about our "quarter" of Concord and White Pond in particular. We will serialize this paper in future issues, starting with the chapter, "White Pond, Stories and Legends".

HELP!

The Friends of White Pond need your help!

Would you be willing to:

- ...deliver *Ponderings* around the Pond?
- ...be a member at large on the Board of the FWP?
- ...attend meetings of interest to those concerned about the future of the Pond?

Are you a member? If not, please join by sending your voluntary dues of \$10.00 per adult to Alan Aronie, 27 Seymour Street, Concord 01742 (Checks should be made payable to **Friends of White Pond**).

Is there something you think the FWP should be doing? Get in touch with any FWP Board member (see cover page).

CONCORD CONSERVATION LAND REGULATIONS

Town Conservation Lands are a part of Concord's heritage. The following regulations have been established to encourage passive recreational use while maintaining these areas in a natural condition now and for future generations.

1. There shall be no fires, except for camping/cooking purposes and with a written permit from Natural Resources and the Fire Department.
2. Overnight camping, activities after dark, or use by groups of 15 individuals or more at any time are expressly prohibited without written permission from Natural Resources. Such permit shall include the name and address of at least one responsible leader who will be present at all times, the total number of individuals expected and their intended activities. Permits will be issued at the discretion of Natural Resources.
3. Conservation Lands are open from one-half hour before sunrise to one-half hour after sunset.
4. Cars, trucks, or other motorized vehicles or tools are not permitted on Conservation Lands except as specifically authorized. Parking shall only be in designated areas and during times when the Lands are open.
5. No hunting, trapping, use of bow and arrow, or discharging of fire arms is permitted within Conservation Lands except where specifically posted, in season with license, and in compliance with other applicable law.
6. Swimming is not permitted within Conservation Lands.
7. Nudity is not permitted within Conservation Lands.
8. Trails shall not be marked or cut, and no structures such as dams, lean-tos, cabins, towers, or rafts shall be constructed without written permission from Natural Resources.
9. No person shall cut, break, remove, deface, defile, or ill use any building, structure, fence or sign.
10. Without written permission from Natural Resources, no trees, shrubs, flowers, grass, or other flora shall be picked, removed, cut, defaced or otherwise damaged; nor shall any bird or animal be willfully disturbed or endangered.
11. All litter, cans, refuse, bottles and trash shall be removed from the Conservation Land by the user unless placed in an official (sic) trash receptacle.

The foregoing Regulations shall be prominently posted on all Conservation Lands, published periodically in the Town's newspapers, shall be available to the public, and shall be given to all individuals seeking use permits.

Violation of the foregoing Regulations shall be punishable by a fine of not more than one hundred (\$100.00) dollars.

Adopted by the Concord Natural Resources Commission, pursuant to Massachusetts General Laws, Chapter 40, section 8 C, this first day of April, 1974.

**THE FRIENDS OF WHITE POND
Board**

President: Herb Kottler 369-0149

Vice-President/Treasurer: Alan Aronie
369-5048

Secretary: Kate Blair 369-5680

Technical consultant: Hans Abraham 369-5549

Newsletter: Judith Sprott 369-4850
and Kate Blair

Contributions to *Ponderings* are invited; send to
Judith Sprott, 43 White Ave, Concord 01742



*FOR THE FRIENDS
OF WHITE POND*



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL 1. NO. 4

OUR 1988 ANNUAL MEETING

October 16 was a fine autumn day for the Annual General Meeting of the Friends of White Pond. On that Sunday afternoon about 40 people gathered at Hank and Alice Reisner's home and heard reports from Herb Kottler on the FWP, from David Bearg on the White Pond Advisory Committee, and from Bill Walker on Pond testing results. Many questions were asked and a lot of information was exchanged. The meeting closed with a little socializing, and with refreshments provided by Jan Kottler and the Reisners.

Herb Kottler opened the meeting with a brief description of the history, goals and activities of the Friends of White Pond. The FWP was founded in 1987 in response to concerns about the degradation of the water quality of the Pond; its goal is to work for better water quality. This year the FWP has published 3 issues of *Ponderings*, worked with the White Pond Advisory Committee, kept in contact with Town officials on White Pond issues and provided volunteer and information gathering services. 1989 will be an equally busy year and there will be the added task of supporting the Advisory Committee in applying for funding under the Clean Lakes Program of the Commonwealth.

David Bearg spoke for the White Pond Advisory Committee which is appointed by the Selectmen to work on behalf of the White Pond area. The WPAC works with the Board of Health, Building Inspector, Planning Board, Natural Resources Commission and others, on issues affecting the Pond. The Committee meets every third Wednesday at Town Hall and all are welcome to attend. There are two major tasks before them currently: working with the Board of Health and Dr. Walker on the water quality testing program, and preparing an

application to the Commonwealth for White Pond to be accepted under the Clean Lakes Program. The Clean Lakes application may require Town Meeting action as applicant Towns are required to share 30% of the testing costs (about \$25,000 for Concord), so there is much groundwork to be done.

Bill Walker spoke next on the results of the tests done so far in 1988. The signs of eutrophication (increased nutrients, such as phosphorus, feeding algal and weed growth) are still there as well as some alarming changes in the acidity and alkalinity of the Pond. (See also New Pond Testing Results and Newer Pond Testing Results on the next page). He also described the 1989 testing program; besides continuing the present testing, he will be looking more closely at groundwater quality and direction of flow. He recommended that Concord apply to the Clean Lakes Program of the Commonwealth for White Pond and said that he thought White Pond had a very good chance of being accepted. He has been in touch with the Fisheries and Wildlife Division about the water quality of the Pond and they are very concerned.

There were many questions and statements during Bill Walker's presentation. Everyone was worried about the water quality, the algae, the low water level and the test results. Many people asked Dr. Walker to identify the biggest problem: was it run-off? was it septic systems? Others felt that the Town well, lawn chemicals, pressure-treated wood, or the lack of public lavatories might all be having an adverse effect on the Pond. Dr. Walker stated that it is too early to tell - all we know now is that there is a problem, that controlling and, hopefully, diminishing the amount of phosphorus reaching the Pond is very important and that continuing testing and getting more information on the groundwater hydrology should lead to more definite conclusions.

NEW POND TESTING RESULTS . . .

Dr. William W. Walker, Jr. outlined the results of this year's testing of the Pond and described plans for future tests at the Annual General Meeting of the Friends of White Pond on October 16, 1988. Since the first year of testing (1987) did not begin until late summer, 1988 will be the first complete test year. Dr. Walker hopes to accumulate three year's data to use for analysis and as a baseline.

Beginning in early spring, tests of oxygen levels, temperature, transparency, nutrient and algal levels, and of inorganic compounds have been carried out. The transparency test is one test which can be performed by "lay" people and two volunteers from the White Pond area helped Dr. Walker. A program to sample private wells around the Pond was also begun with assistance from a volunteer. The final report on the testing done in 1988 will be ready in January.

Test results for this year are very similar in some respects to those of last year; there was no dissolved oxygen at the lower levels of the Pond by early summer, there were high temperatures at the upper levels, and algae and algal blooms were observed. These are the signs of eutrophication which are already of concern. Of even greater concern are several disturbing changes since last year, the phosphorus level was lower and the water was significantly more acidic (the pH and alkalinity decreased dramatically). Less phosphorus should be good news since it is an important nutrient which causes eutrophication, but coupled with the increase in the acidity of the water, these changes may be the first signs of a new and serious problem. No positive conclusions can be made on the basis of just one year's data, but it is possible that these changes are related and show the effect of acid rain on the Pond and its watershed. While eutrophication of the Pond means an accelerated death of the Pond, increases in acidity can be just as lethal and can take place even more quickly. So it is possible that the life of the Pond is threatened on several fronts.

Dr. Walker proposes to continue testing in 1989 and to begin gathering data on the groundwater, its direction of flow and its quality. Testing the groundwater will involve putting in about a dozen "wells" (slotted pipes about 1 inch in diameter and 5 feet deep) around the perimeter of the Pond at the high

water mark. There is a great deal still to be learned about the Pond and its watershed, and Dr. Walker strongly recommended that Concord apply for assistance from the Commonwealth's Clean Lakes Program. Under this Program much more comprehensive testing is done, with the State funding 70% of the cost and Concord funding 30% (about \$25,000). When it is determined what needs to be done to restore the water quality of the Pond, the State would pay 75% and Concord 25% of the cost. Since improperly functioning septic systems may be a significant factor in the degradation of the Pond, Dr. Walker specifically mentioned that under the Clean Lakes Program, State funding would be available to help up-grade any such systems. If White Pond were accepted, the State testing program would begin about 1990-1 and any water quality improvement program would begin about 1994-5.

Another aspect of Dr. Walker's work is to recommend measures which can be taken to help stop the degradation of the Pond. Erosion control on the Conservation Land and infiltration basins at the boat ramp and near Seymour Street to stop run-off from reaching the Pond are two recommendations which could be implemented right away.

For anyone who wants to know more about what we need to know and to do to help the Pond, Dr. Walker recommended a publication which he helped write and which is available free:

"The Lake And Reservoir Restoration
and Guidance Manual"
Report No. EPA440/5-88-002,
February, 1988
Clean Lakes Program
Nonpoint Sources Branch (WH-585)
401 M Street, S.W.
Washington, D.C. 20460

There are other useful publications available as well and a list of them compiled by Hans Abraham is included in this newsletter. For those who are interested, copies of some of these publications can be requested from Hans by calling 369-5549

NEWER POND TESTING RESULTS

Tests of the acidity and alkalinity of the Pond completed after the FWP meeting on October 16, show much more normal levels. Only further testing will give Dr. Walker enough

data to determine whether or not there is an acidity/alkalinity problem. New figures on the phosphorus levels are not yet ready.

THE HISTORY OF WHITE POND

In 1973 Carolou Marquet, then a resident of Paul Revere Road, wrote the "History and Legend of the White Pond and Nine Acre Corner Area, Concord, Mass." for Mr. Richard Walton's Environmental Study Program and for the teachers and children of Willard School. Included in her work are fascinating tidbits of information about our "quarter" of Concord and White Pond in particular.

Ponderings will serialize this paper, starting with the chapter, "White Pond, Stories and Legends". Future editions will include "Farming and Recreation, "Early Inhabitants and Settlements", and other chapters.

Chapter VI--White Pond, Stories and Legends

White Pond gets its name from the whiteness of the sand, the purity of its waters, or some say, from Mr. White (one of the early developers of a subdivision on the Pond - editor's note), but the latter is unlikely. White Pond, frequently called White's Pond incorrectly, while much less famous than her sister, Walden Pond, was nonetheless immortalized in the writings of Thoreau, Emerson, and Channing.

When Emerson and Channing went to White Pond, Emerson writes that they "saw marvelous reflections of colored woods in the water; of such singular beauty it held us fast to the spot. It was a world seen through a prism and set Ellery on wonderful Lucretian theories of law and design."¹ Channing said, "White Pond is exceedingly beautiful, and especially its green ban with the pine. This is one of our finest ponds."²

Henry Thoreau visited the pond many times and knew its length, breadth, area, and depth (having sounded it) well. He tells an amusing story of a farmer who decided to pull out a tree whose end was sticking up above the surface in 40 feet of water out toward the middle of the pond. According to an old-timer the tree had been there many years. The end was large and the farmer expected to get much wood from it, judging the end in view to be the tree's top. However, after great labor, when he finally got the tree out he

discovered that instead the tree had been stuck upside down in the bottom of the pond and all he had for his labors was waterlogged rotten wood not good for much of anything.³

Mystery surrounded the source of water for White and Walden Ponds, since there were no visible inlets or outlets. Some thought that Walden was bottomless or that it had some underwater connection with White Pond. Thoreau sounded Walden and very accurately measured its depth and graphed its bottom, showing its depth to be at the most about 100 feet. There is the legend, however, which gave support to the idea of an underwater connection with White Pond. It was said that a farmer had driven his horse and carriage out onto the ice at Walden, had broken through and sunk, and sometime later had been found in White Pond!

Another mystery, this one with more basis in fact, surrounds the story of pirate treasure. Edward Rowe Snow tells the details in his book True Tales and Curious Legends. Thomas Tew, a famous pirate in Captain Kidd's day, and his pirates captured a Moorish vessel off the coast of Africa, robbed it of its treasure, killed almost everybody, and scuttled the vessel. He rescued only a beautiful Moorish lady and brought her on board his ship. His booty consisted of three treasure chests filled with gold, diamonds, and other precious jewels, valued in today's market at about a quarter of a million dollars. Tew sailed back to New England and was hit by a violent storm off the New Hampshire coast. His pirates got drunk and one by one were washed overboard. When his ship was finally wrecked on Boon Island, Maine, only he, his first mate Juan Carlos, and the Moorish lady were alive. The survivors collected all the booty they could from the wreck and hid it in a chest on the island. Soon after, the Moorish lady killed Captain Tew and then committed suicide, leaving only Juan Carlos alive on the island. Juan Carlos was finally rescued and after three years was able to go back to Boon Island to collect his treasure. He put the treasure in deerskin pouches and a week later went to White Pond in Concord where he had friends. There they buried it on the shore. Digging for the treasure went on for many years. Thoreau, many years later, tells of seeing holes at the beach made by treasure seekers. The fate of the treasure is unknown. Many are sure that those who dug up the treasure rowed out to the middle of the pond and dropped the sacks

into 60 feet of water to what may still be their final resting place!⁴

Thoreau said that "Since the woodcutters, and the railroad, and I myself have profaned Walden, perhaps the most attractive...of all our lakes, the gem of the woods, is White Pond."⁵ The waters of White Pond remain even today luckily and surprisingly, considering the building that has taken place around it in the last 40 years, clean. We cannot assume they will always remain that way, however, without sufficient protection. Thoreau, again in *Walden*, said, "White Pond and Walden are great crystals, Lakes of Light...precious stones...but being liquid, ample, and secured to us forever we disregard them."⁶ Let us hope that this precious stone is not disregarded but preserved for as many future generations as have enjoyed its beauty in the past.

Swayne, Josephine L., *The Story of Concord Told by Concord Writers* (Boston, 1919) p. 250 Swayne, p. 279.

Thoreau, Henry David, *Walden*, (New Jersey, 1971), pp. 198-199.

Snow, Edward Rowe, *True Tales and Curious*

Legends, (New York, 1971), pp. 12-21.
Thoreau, *Walden*, p. 197.
Thoreau, *Walden*, p. 199

NEW MEMBERS

The Friends of White Pond welcome new members. The annual voluntary dues are \$10.00 per adult. Checks made payable to Friends of White Pond are gratefully received by Alan Aronie, 27 Seymour St., Concord 01742.

THE FRIENDS OF WHITE POND Board

President: Herb Kottler 369-0149

Vice-President/Treasurer: Alan Aronie
369-5048

Vice-President/Technical Consultant: Han
Abraham 369-5549

Secretary: Kate Blair 369-5680

Newsletter: Judith Sprott 369-4850

Contributions to *Ponderings* are invited;
send to Judith Sprott, 43 White Ave, Concord
01742



FOR THE FRIENDS

OF WHITE POND

INFORMATION, INFORMATION AND MORE INFORMATION!

The following publications have a lot of information which is of interest and of use to everyone who wants to learn more about lake, watershed and groundwater protection in general, and protecting White Pond in particular:

1. **SEPTIC SYSTEMS AND YOUR LAKE**, prepared by the Lake Cochituate Watershed Association under contract with the Massachusetts Department of Environmental Quality Engineering.
2. **DETERGENTS AND YOUR LAKE**, prepared as above.
3. **FERTILIZERS AND YOUR LAKE**, prepared as above.
4. **CONTROLLING URBAN RUNOFF: A PRACTICAL MANUAL FOR PLANNING AND DESIGNING URBAN BEST MANAGEMENT PRACTICES (BMP)**, prepared by T.R. Schueler of the Dept. of Environmental Programs of the Metropolitan Washington Council of Governments Water Resources Planning Board.
5. **WHITE POND STUDY 1987-1988**, prepared by Dr. William W. Walker, Jr., for the White Pond Advisory Committee.
6. **THE STATE ENVIRONMENTAL CODE, Commonwealth of Massachusetts Department of Environmental Quality Engineering (1983)**.
7. **REGULATIONS FOR THE MINIMUM REQUIREMENTS OF SANITARY SEWAGE IN UNSEWERED AREAS**, Town of Concord Board of Health.
8. **ZONING BY-LAWS**, Town of Concord.

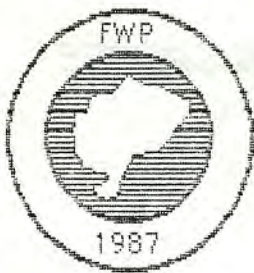
If you would like copies of any of these publications, they can be obtained as follows:

Numbers 1-4 are available from Hans Abraham, 42 Shore Drive, Concord (Tel. 369-5549).

Number 5 is available from the White Pond Advisory Committee, call Chairman Linda Stansfield at 369-1871.

Numbers 6 and 7 are available from the Concord Board of Health, 133 Keyes Rd., Concord.

Number 8 is available from the Concord Town Planner's Office, Town Hall, Monument Square, Concord.



POUNDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 2 NO. 1

EROSION CONTROL ON THE CONSERVATION LAND

An area of severe erosion on the shoreline of the Conservation Land has been a concern of the Friends of White Pond ever since we were founded. Because of limited finances and manpower, the Department of Natural Resources, which manages the Town's conservation areas, was unable to do any work to correct this long-standing problem. During the dark days of last winter, Hans Abraham, architect, resident of White Pond and member of the Friends of White Pond offered to draw up plans for erosion repair and control of the area. These plans would be presented to the Town by the Friends of White Pond in an effort to support and get underway the erosion control work which is so badly needed. What follows is the report of the success of this project, which has taken many months, meetings and manpower hours.

Several months ago, a plan for erosion control was drawn up by Hans Abraham and presented by him and the Friends of White Pond to Dan Monahan, Coordinator of Natural Resources. After some fine tuning of the plan, it appears that it will be implemented, either this year or sometime in 1990. Basically, the plan (see next page) calls for strategically placed walls of outdoor wood and special concrete checker blocks to hold the soil on the reconstructed slope.

To prepare for implementing the plan, an official survey was done this Spring by Concord's survey team with Mr. Abraham

At summer's end (or next year), when machinery and manpower from Concord's road department are available, the work will be carried out. Some of the work which does not require heavy equipment may be done by volunteers. We'll let you know!!!!

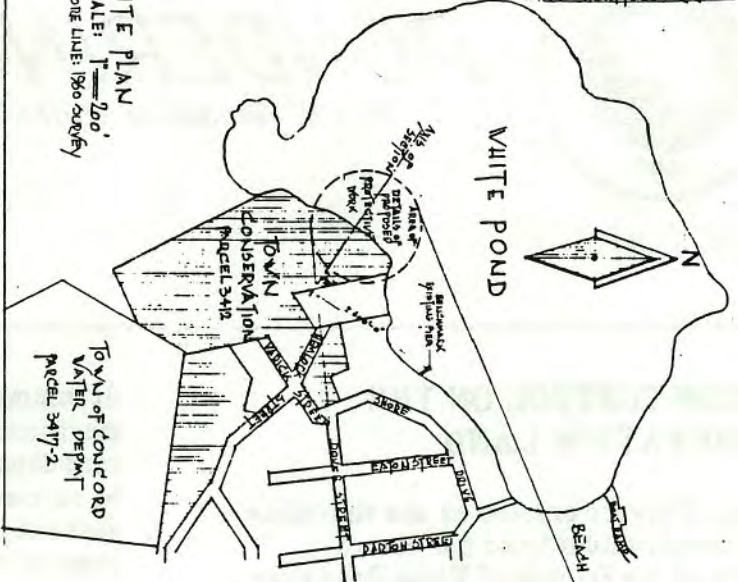
NEW SIGNS FOR THE CONSERVATION LAND

At the same time the survey for the erosion control plan was done, four new signs spelling out the important rules and regulations for the use of the Conservation Land were installed by the Town. The White Pond Advisory Committee has been working on getting these signs put up for almost a year, and it is a great relief to have them in place now that the summer season is here.

WHAT SHOULD THE WATER LEVEL OF THE POND BE?

Hans Abraham is in the midst of a study of the water level of the Pond. He hopes to show the natural relationship between precipitation, evaporation and seepage, and the water level of the Pond. Dan Monahan has provided data on precipitation in the watershed area (estimated to be about 375 acres). It is hoped that with some data going back almost one hundred years (1891), a level of accuracy on the annual water level can be achieved which would allow Mr. Abraham to correlate his figures with the pumping records of the nearby Town well to establish whether or not pumping has a significant impact on the Pond's water level.

NEW YORK - NEW HAVEN - HARTFORD D.R.

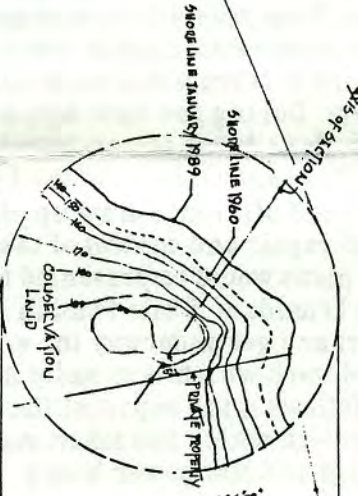


SITE PLAN
SCALE: 1" = 200'
SHORE LINE: 1960 SURVEY

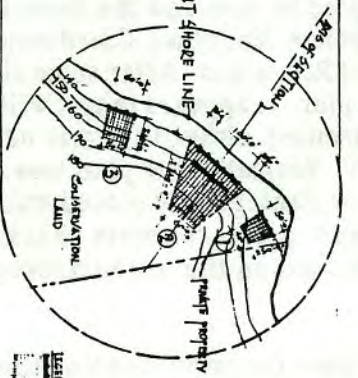
OUTLINE SPECIFICATIONS

ALL LUMBER SHALL BE PRESERVED TREATED IN ACCORDANCE WITH EPA STANDARDS AND REGULATIONS, BY 5% B-3 STRENGTHED JOINTS ALL FILL SHALL BE TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST ASTM D-1557-64 + (FLUSH) SOIL WITH 2% OPTIMUM MOISTURE, REMOVE FROM SETTLING BED ROCK OR OTHER MATERIALS WHICH WOULD CREATE UNDESIRABLE BEARINGS. PLACE TOPSOIL IN A 6" COMPACTED LAYER TO RECEIVE CHECKER BLOCK STRUCTURE. THE CHECKER BLOCK PAVEMENT SHALL BE MANUFACTURED OR DISCUSSED BY THE AGENTS. PAVEMENT SHALL BE 24" X 24" X 4" DEEP. THEY SHALL BE FABRICATED OF PORTLAND CEMENT TYPE I OR II FINE AND COARSE AGGREGATES (ASTM C-33-61) UTILIZING A STEEL MESH - 6"x6" BY 2" GAGE WITH AN AIR ENTRAINING AGENT BETA-BEAD 45-65 (ASTM C-117), ACHIEVING A CONCRETE STRENGTH OF 5000 PSI AT 28 DAYS (ASTM C-39-49) AND MAXIMUM WATER ABSORPTION OF 5% (ASTM C-97).

VOID FILLER There shall be my lime, FERTILIZER AND OTHER ADJUSTED WITH THE TOPSOIL AND SPREAD LOOSELY TO FILL VOID IN PAVEMENT, WATER WITH A MESH SCREEN TO BE PLACED ABOVE TOPSOIL TO PREVENT IT FROM BEING PUSHED UP TO TOP OF PAVEMENT AT SUBSEQUENT YEARS THAN NORMAL DATE AND MOUNTAIN.

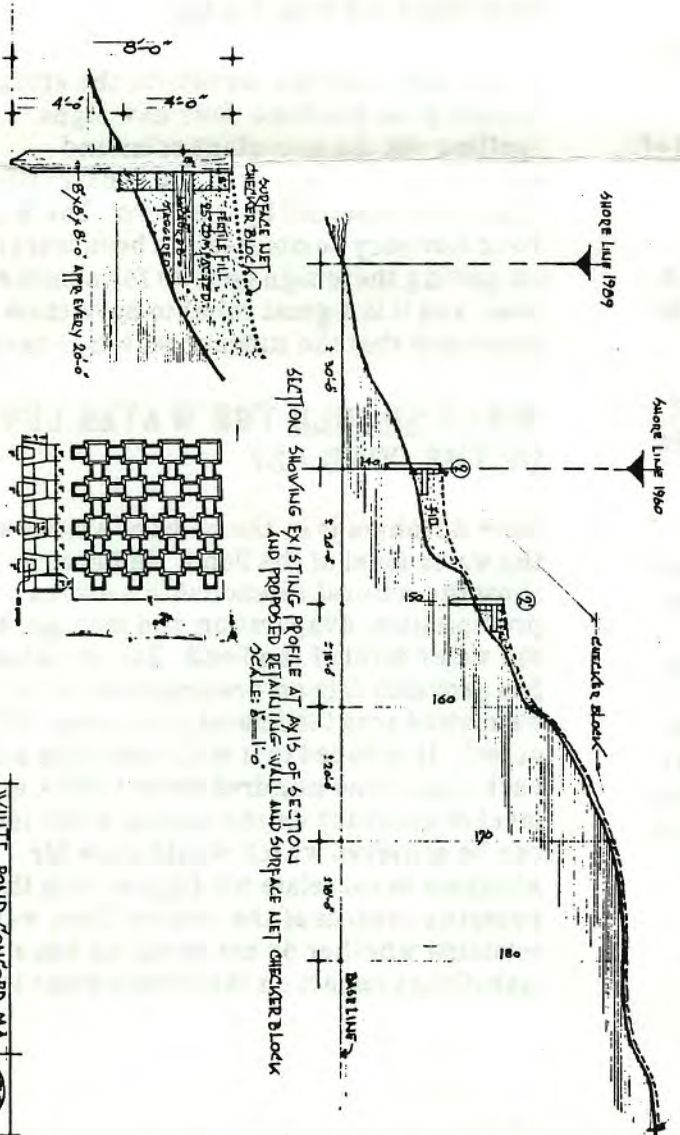


EXISTING TOPOGRAPHY
SCALE: 1" = 100'

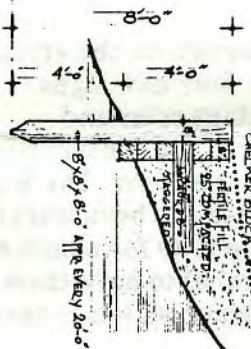


PROPOSED ALTERED TOPOGRAPHY
SCALE: 1" = 100'

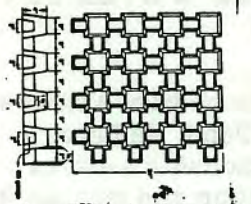
LEGEND
SHORE LINE 1960
SHORE LINE JANUARY 1969
PROPOSED SHORE LINE
CHECKER BLOCK



SECTION SHOWING EXISTING PROFILE AT 1/16" OF SECTION AND PROPOSED RETAINING WALL AND SURFACE LIFT CHECKER BLOCK
SCALE: 1" = 1'-0''



TYPICAL DETAIL
SCALE: 1" = 1'-0''



CHECKER BLOCK
N. S.

WHITE POND CONCORD MA.
PROPOSED PARTIAL SOIL
EROSION CONTROL
SCALE: 1/8" = 1'-0''



SPRING CLEANING

Clean-Up Day weekend on April 8th and 9th was raw, rainy and windy, but a few hardy souls ventured out, yellow trash bags in hand, to clean up the shores of White Pond. The White Pond Associates' beach and the Unisys (Sperry) beach were the dirtiest: fishermen and skaters had left their calling cards of styrofoam cups, cigarette and candy wrappers, and fishing line everywhere. The wind had blown much of the trash high into the bushes, making retrieval difficult. At the Unisys beach, this reporter found an old garbage bag full of empty paint thinner containers, as well as (literally) piles of broken glass and refuse, including soiled diapers and underwear. Also there were several trucks parked behind the beach area, which indicated that the Unisys security system for preventing trespassing was not working properly. These problems were reported to our Health Officer, Brad Leach, on the following Monday morning and since then the trash problem seems to have diminished, but trespassing, especially in vehicles, continues to be a problem.

Kate Blair

Editor's Note: We have just heard that recently Unisys put out trash barrels along their beach and that they have been doing some cleaning up themselves. In regards to trespassers, there are two access roads through the Unisys land. There is a gate which controls illegal access on one of the two roads, but not on the other. Unisys is in the process of moving the guard station to a location in the building where the open access road can be seen by the guard. If more control is needed, they are considering installing a gate to control the open access road.

PLANS FOR IMPROVEMENTS AT THE DOVER ST. PROPERTY OWNERS' BEACH

John Jodice, the head trustee of the Dover Street Property Owners' Beach (located a few hundred feet south of the White Pond Associates' Beach), has contracted with his

son-in-law to rebuild the retaining wall at the base of the stairs, to build some new stairs leading from that wall to the beach, and to haul in some fresh sand for the beach. However, after collecting \$1992.00, we are still short of the \$2500.00 needed for these improvements. To all the members who have already paid their dues, thank you, but we need the dues from all our members if we are to undertake these improvements.

New sand for the beach is badly needed and since we do have enough money to bring in sand, we hope to do it this year. Rebuilding the retaining wall and stairs will have to wait until we have the money.

Kate Blair

THE CLEAN LAKES PROGRAM

The White Pond Advisory Committee has taken the first step towards getting White Pond accepted by the Commonwealth under the Clean Lakes Program. A "Request for Assistance" has been submitted to the Division of Water Pollution Control. If the Commonwealth determines that the Pond is eligible, a more detailed application will have to be submitted by October 1. These initial applications are for assistance and funding for diagnostic and feasibility studies. In other words, assistance and funding for more complex and expensive water quality testing in order to diagnose the Pond's problems, followed by an assessment of the feasibility of some kind of restoration or maintenance program. Although the Clean Lakes Program is presently "on hold" because of the Commonwealth's financial problems, the Committee has been advised to get in line for the funds which will be made available eventually.

DEVELOPMENTS AT UNISYS

The Town of Concord, through its Town Manager, is currently talking with Unisys about buying the Concord portion of their property (formerly known as the Sperry land). From the Town's point of view, buying the property and designating it as Conservation Land would be ideal, as protection for the nearby Town well, and as a buffer for the existing Conservation Land against development or increased use of the Sudbury portion of the Unisys parcel. Acquisition by the Town as Conservation Land could also be ideal from the Friends of White Pond's point of view, since the impact on the Pond's water quality of properly managed Conservation Land would be close to no impact at all. However, as we all know, this is not an ideal world. The price tag for this parcel is in the millions of dollars and the Town's finances under Proposition 2 1/2 are very tight, with many important needs competing for dollars.

A change in the ownership or use of the Unisys land is inevitable. The Concord portion of the Unisys property is approximately 40 acres and it is zoned for one dwelling unit per acre (Residence A). Under the Wetlands Protection Act, the "buffer zone", which is an area 100 feet wide all along the water, is protected from building and septic systems. This is minimal protection which does not recognize how far and fast the groundwater can carry organic materials, such as phosphorus to the Pond. The Friends of White Pond are concerned about more phosphorus from the surface water run-off from buildings and roads and from the leachate from septic systems in a new development reaching the Pond directly or through the groundwater. As we know from Dr. William Walker's report to

the Town of Concord on the Pond's water quality, the Pond is already suffering from too much phosphorus. Adding more sources of phosphorus is clearly cause for concern. If the Concord parcel is to be developed, whether for residences or as part of the research and development use of the Sudbury parcel, a primary concern must be the protection of the Pond's water quality.

There are other issues at stake, however. The Town of Concord will be looking at any development proposals in terms of their potential effect on our nearby Town well and there is the matter of access to the Concord parcel for fire, safety and police equipment. There is no access except through the Sudbury section of the Unisys property at this time. The Town of Sudbury also has many concerns, not the least of which is the impact any development would have on Route 117 and area traffic. Finally, visitors to and residents of the Pond have their concerns as well. First and foremost, is the control of trespassing and abuse of the Unisys section of the shoreline. All-terrain vehicles (ATVs), motorcycles, and other assorted vehicles drive down to the beach area regularly, creating serious and unsightly erosion (especially of the "dune" on the north side of the beach). Preservation of the natural, wooded beauty of this historical area is also a concern. And finally, the impact on the Pond of visitors from the proposed bike trail which would run along the western boundary of the Unisys land is a potential issue.

According to Concord Town Planner Judith Chanoux, there are no plans, as yet, for the residential development of the Unisys property despite reports in the Concord Journal. But change is definitely in the wind and the Friends will be keeping careful track of any "developments".

ARE SEPTIC SYSTEM CLEANERS SAFE?

All of us in the White Pond area have our septic system on our property. Both for our own safety and convenience and to protect the Pond, it is important to have an efficiently functioning system. It is no surprise that besides regular pumping and maintenance, we are all interested in methods of keeping our systems working well and for many years. The marketplace has come up with more than a dozen "septic system cleaners" and now we need to know whether or not they are effective and safe.

The following information is based on an article by Richard R. Noss (March/April 1989 edition of the Journal of Environmental Health).

Septic system cleaners are usually used for one of two reasons: either regularly as preventive maintenance, or occasionally to correct some problem with the system. Concerns about the use of cleaners are based on the fact that they will be leached into the groundwater and, depending on the chemicals involved, can pollute the groundwater. Groundwater pollution in an area with private wells, public wells, or lakes and streams, is a very serious problem. Many agencies and environmental groups believe that the cleaners are not effective in any case, and should be avoided. This caution applies to drain cleaners and root killers as well, as they will all reach the groundwater eventually.

Septic system cleaners come in three types, depending on their active ingredients: biological, inorganic and organic (solvents). The biological cleaners are not likely to

contaminate the groundwater, but incomplete and inaccurate ingredient lists make purchasing any cleaners something of a guessing game. The truly dangerous cleaners use chlorinated hydrocarbons. These materials are serious pollutants, and in the sandy soil we have around the Pond, can easily reach a well, or the Pond itself, even after only one use. Also harmful are drain cleaners and root killers that contain metals, such as copper. They can reach the groundwater, or be trapped in the sludge of a septic tank so that when the tank is pumped the sludge will contain pollutants when it is disposed of.

Some states have already banned the use of septic system cleaners containing chlorinated hydrocarbons, but for now most people will have to protect themselves, either by not using these kinds of products or by avoiding those containing pollutants.

For more detailed information, copies of the article by Dr. Noss can be obtained from David Bearg, 20 Darton Street, Concord, MA 01742 Tel: 369-5680.

THE FRIENDS OF WHITE POND Board

President: Herb Kottler 369-0149
Vice-President/Treasurer:
Alan Aronie 369-5048
Vice-President/Technical Consultant:
Hans Abraham 369-5549
Secretary: Kate Blair 369-5680
Newsletter: Judith Sprott 369-4850

Contributions to *Ponderings* are invited; send to Judith Sprott, 43 White Ave, Concord 01742

FRIENDS AND NEW FRIENDS

In the last year the Friends of White Pond tackled the erosion problem on the Conservation Land, attended many meetings in Concord and Sudbury in order to be heard on issues involving White Pond, published our Newsletter, and worked in and with the Town to help the White Pond area in general and the water quality of the Pond in particular. It is time to ask you all for your support for another year. Please help us continue our work by returning the form below, with your dues payment. And, as always, we welcome new members - please join us!

ANNUAL MEMBERSHIP FORM

NAME _____

ADDRESS _____

PHONE _____

SPECIAL CONCERNS _____

DUES: \$10.00 PER ADULT
\$20.00 PER FAMILY

DUES PAID _____

PLEASE MAKE CHECKS PAYABLE TO "FRIENDS OF WHITE POND" AND SEND, WITH THIS FORM, TO OUR
TREASURER: ALAN ARONIE, 27 SEYMOUR ST., CONCORD, MA 01742



VOL. 3 NO. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

FRIENDS OF WHITE POND ANNUAL MEETING

Our Annual Meeting was held, despite a heavy snowstorm, on the afternoon of Sunday, February 4th, 1990. In attendance were: Ruth Ames, Alan Aronie, David Bearg, Kate Blair, Cris Deacon, David Greene, Norm Jacobson, Gail Jewell, Herb Kottler, Vicky and Neil Kass, Hank Reisner, Alice Rosen, Eric Schoenberg, Andrea Siani, Judith and George Sprott, and Kate Turner.

President Herb Kottler called the meeting to order and suggested that the attendees introduce themselves. He then gave a short history of the organization of the Friends of White Pond in 1987, described its focus as concern about the Pond's water quality, and mentioned the work being done to keep the Friends informed about Pond issues by means of the newsletter, *Ponderings*.

He briefly listed the different projects which the Friends have been working on or are planning: a proposal to prevent surface water run-off from the access road next to the Association beach from reaching the Pond, a low cost cooperative septic system pumping program for Pond area residents, the topological mapping of the White Pond area, and an erosion control plan for the Conservation Land.

Gail Jewell, chairperson of the White Pond Advisory Committee, reported on the Concord-Sudbury Joint Committee which was formed in November 1989 to determine what land use options would be most suitable for the Unisys property.

She said there had been a school interested in buying the building and some of the land, but they withdrew because of their concern about the lia-

bilities involved in purchasing land undergoing a hazardous waste clean-up. No other interested parties have come forward, so the plans put forward by Ralph Tyler's Cold Brook Development are the only active ones at this time. (For further details, see the article on the Unisys property in this issue.)

Because some of the attendees did not know about the two hazardous waste clean-up sites on the Unisys land, David Bearg, a member of the White Pond Advisory Committee, gave a brief history of the contamination and the resulting clean-up program. The clean-up operation has been going on since 1984, and will probably continue for at least several more years until the level of contamination is below established safe limits. In response to questions, David stated that the contamination was and is not a danger to the Pond.

David Bearg also reported on the groundwater sampling wells which are to be installed this Spring around the perimeter of the Pond to determine the direction of flow and nutrient levels of the groundwater. This is another step in the White Pond water quality testing program being directed by Dr. William Walker for the Concord Board of Health and the White Pond Advisory Committee. (For further information, see the article on the installation of these wells in this issue.)

David Bearg also described the plans Hans Abraham is working on, both for controlling surface water run-off on the public access road and for correcting the erosion on several areas of the Conservation land. And, he reported that, with the cooperation of Dan Monahan (Natural Resource Coordinator), he is trying to have boulders or logs placed at the Conservation land parking area to prevent parking except where designated.

Alan Aronie described his efforts to find a septic system pumping company which would be interested in offering a reduced rate to groups of White Pond area homeowners having their systems pumped at one time. Several companies were interested and the program should be available this spring. Alan asked for help with this project and Cris Deacon, Kate Turner and Joyce Ricker volunteered. (For further information, see the septic tank pumping program article and sign-up sheet in this issue).

Andrea Siani, the chairman of the seven member Operating Committee for the White Pond Associates, reported that the beach would be open this year. The car sticker program was helpful in controlling illegal parking last year and will be continued. There will also be an adult waterfront director on the beach, in addition to the lifeguards, to assure smooth operations and hopefully to make it possible to have the beach monitored through Labor Day.

She was very interested in using the proposed septic tank pumping program for the beach facilities, and also in the plans to control the access road run-off. When asked if copies of *Panderings* could be distributed to the members of the Association, she suggested it could be done on their annual Beach Clean-up Day.

Kate Blair reported that the work permit for the Dover Street Beach was submitted to Dan Monahan, and was waiting for approval.

After thanking everyone for coming out on such a stormy day, Herb adjourned the meeting at 4 p.m..

Kate Blair

GROUP SEPTIC SYSTEM PUMPING PROGRAM

The Friends are organizing a group septic system pumping program. We are targeting those systems that are closest to the Pond and therefore would have the greatest impact on its water quality. The area being organized includes all the Dover Street area and all the homes between the Pond and the Pond side of Plainfield Road, Powder Mill Road and Stone Root Lane. The pumping program offers a

reduced rate of \$50.00 per septic tank for any tank up to 1500 gallons. This price does not include the fee of \$34.00 per 1000 gallons which the Town of Concord bills a homeowner for accepting his septage at the Town sewage treatment plant.

Anyone within the area being organized who wishes to participate must fill out an application and we have included an application in this issue. All information will be confidential and used for the purposes of the pumping program only. If you have any questions, call Cris Deacon at 369-3517 or Alan Aronie at 369-5048.

Alan Aronie

INSTALLATION OF GROUNDWATER SAMPLING WELLS

The Town of Concord has reached an agreement with, and funding has been approved for Dr. William Walker to have 10 to 12 sampling wells installed around the perimeter of White Pond. Dr. Walker will make water elevation measurements and take samples to be analyzed for phosphorus content from these wells on at least two occasions in 1990. This information will be used to map the flow direction of shallow groundwater in relation to the Pond and, in combination with Pond and other well sampling, to diagnose nutrient (phosphorus) sources and impacts on the Pond.

The wells will be installed by a sub-contractor, Pine and Swallow Associates, Inc. of Groton. Each well will consist of a 1/2 inch diameter steel pipe driven 3 to 6 feet into the ground near the Pond's high water mark. Each will have a vented rubber stopper in the top end of the well and a steel clip cap about 3 inches long that covers the stopper and upper part of the pipe. Each well will be flush to the ground and hence should pose no hazard to beach pedestrians nor interfere with property owners' use of the waterfront. Because the wells will be essentially invisible, they will not be lockable as was previously planned. Once installed, the wells will be the property of the Town of Concord.

The exact placement of the wells will be determined on the drilling date and will reflect adjacent

land use, topography, sediment characteristics and drilling feasibility. A reasonable effort will be made to place wells in locations which will not interfere with shoreline activities.

After the 1990 sampling, the Town will decide whether to maintain the wells for future studies and sampling, or to eliminate them. If the wells are to be eliminated, the Town will oversee this process. The future of the wells will be discussed in a later issue of *Panderings*.

It is anticipated that the wells will be installed within the next few weeks. An effort will be made to notify abutters to the Pond of the exact date of installation. If you desire more information on this project, call Gail Jewell, Chair, White Pond Advisory Committee, at 369-5048.

Ruth Ames

MORE DEVELOPMENTS ABOUT THE UNISYS LAND

Many things have happened concerning the Unisys land since the last *Panderings* was published. Ralph Tyler (Cold Brook Development) submitted a subdivision plan for the "White Pond Woods" development to the Concord Planning Board and Board of Health in July 1989. This plan proposed 34 single family houses with septic systems be built on Concord's 40 acre section of the Unisys land. Concord's Planning Department report stated that the plan could not be approved by the Planning Board because "a section of the proposed street right-of-way straddles the municipal boundary line between Concord and Sudbury". Even if the street layout were changed, the report said that any proposed streets in the Sudbury section would have to be built and accepted as public ways by the Sudbury Town Meeting before the Concord Planning Board could consider them as legitimate public access. The report also stated that any plan would have to address the following: providing information on the geohydrological impact of the drainage detention areas and of anticipated septage flow on the groundwater quality, the White Pond well, and White Pond; how to bring utilities into the subdivision; all zoning issues (such as the Groundwater Conservancy District); creating a 200 foot protective buffer along the shoreline of

White Pond and near the White Pond well and many other issues. Some of these requirements were a reflection of the conditions which the Board of Health had already placed on the developer. These included having an environmental impact study done, recording each lot sold with the Registry of Deeds as a 21 E site (hazardous waste clean-up site), investigating the possibility of a sewage treatment plant rather than individual septic systems, as well as other conditions.

In mid-October 1989, Mr. Tyler filed a 2 lot subdivision plan with both the Concord and Sudbury Planning Boards. This plan divided the entire Unisys parcel along an irregular line running from White Pond to Route 117 into two very large parcels. Each parcel contained land in both Sudbury and Concord. His stated reason for doing this was to "freeze the zoning". At his request, he met with the White Pond Advisory Committee on October 26. He discussed his proposed 34 lot subdivision in some detail but offered very little new information on the environmental impact study he was supposed to be having done, or any of the other outstanding issues. Nor did he mention the 2 lot subdivision plan he had recently filed.

In November of 1989 Concord and Sudbury established and funded a joint committee (Concord-Sudbury Unisys Land Use Committee). The Committee hired a land use consultant to work out a land use proposal that would meet the concerns and needs of all three parties, namely, Unisys, Concord and Sudbury. An immediate objective of the Committee was to develop a land use proposal to be considered by the 1990 Sudbury Town Meeting.

The Committee has had its difficulties. Not long after it was organized, a lot of time and energy were diverted in trying to work out a specific development package based on a school's interest in buying the building and some of the land, and having the two Towns purchase the remaining land for conservation or municipal purposes. After a critical meeting at the beginning of the year between all the interested parties and the Commonwealth's Department of Environmental Protection concerning the hazardous waste clean-up program and the liabilities it poses for the

present owner and any future buyers, everyone backed off. The school has since bought a site in Lincoln and neither Town is interested in purchasing any of the property at this point.

Late in January 1990 a joint meeting of the Concord and Sudbury Boards of Health and representatives of Unisys and the company doing the hazardous waste clean-up for Unisys was held. The company maintains that a thorough evaluation of all the Unisys property for possible hazardous waste sites was made and that the two identified sites are all there are. They also maintain that the size and nature of the plumes (areas of contamination) have been rigorously determined and the clean-up program will eventually be successful. However, removing the last traces of contamination will be very slow work as the remaining compounds tend to be bound to soil particles and difficult to "clean up".

At this time, Ralph Tyler is the only active developer for the Unisys land. He has placed six articles having to do with the Unisys land on the Sudbury Town Warrant. The articles cover all the likely land use options. However, the only article which has the backing of their Planning Board, etc., is one that takes up four pages of the Sudbury Warrant and would re-zone the Sudbury part of the property for a modified cluster development (residential). These articles will be considered after their Town Meeting reconvenes on April 23.

The joint Committee is no longer meeting regularly and meetings have often been cancelled without notice. Concord is still interested in keeping it going, even though at least one of our representatives will have to be replaced. Concord hopes to re-establish communication and joint decision-making in the Committee so that eventually there can be a rational land use plan for the Unisys property that everyone can accept.

Stay tuned!

Judith Sprott

CONTROLLING SURFACE WATER RUN-OFF

Water which is unnaturally rich in organic matter, bacteria, and nutrients can reach White

Pond in two ways, from "point sources" such as malfunctioning septic systems, and from "non-point sources" such as surface water run-off from paved area or eroded areas. Non-point sources are believed to be the primary contributors of "enriched" waters leading to the degradation of the water quality of the Pond which results in algal blooms, unpleasant odors, scum, etc. The surface water run-off from the public access road which goes from Plainfield Road, through the White Pond Associates property, to the Pond is the major non-point source of enriched water reaching the Pond.

Hans Abraham is working on a proposal to construct slanted wales (ridges which are raised above the level of the road) across the road to reduce the flow velocity of the run-off and re-direct it to dry wells. The dry wells would be about eight feet in diameter and eight feet deep filled with pea stone and covered with gratings to keep trash and leaves out. It appears that two such wales and dry wells would prevent the run-off from reaching the Pond.

Conversations with Commonwealth officials indicate that they also are concerned about this run-off problem and would like to see it corrected. It is hoped that community support through contributions and the donation of time and materials will make it possible to go forward with this project.

Hans Abraham

THE FRIENDS OF WHITE POND Board

President: Herb Kottler 369-0149

Vice-President/Treasurer:

Alan Aronie 369-5048

Secretary: Kate Blair 369-5680

Technical Consultant: Hans Abraham 369-5549

Newsletter: Judith Sprott 369-4850

Suggestions for articles and contributions to *Ponderings* are invited; send to Judith Sprott, 43 White Ave., Concord 01742

SIGN-UP FOR GROUP RATE SEPTIC TANK PUMPING

If you wish to be included in this program (described elsewhere in the newsletter), we need to have you follow the instructions on this form.

In order to facilitate this program, we need the answers to a few questions. Please fill out this form even if you were already asked this information during our limited phone survey. All information is confidential.

- Do you know where the clean-out for your tank is? Yes_____No_____
- If "No", do you need help finding it? Yes_____No_____
- How often do you have your tank pumped?_____
- When was it last pumped?_____
- Do you have a garbage disposal? Yes_____No_____
- Are you willing to volunteer some time to help with this program now or in the future? Yes_____No_____
- We will probably arrange pumping twice per year; please indicate which time would fit your needs: Spring_____Fall_____Both_____

The pumping days this spring will be during the week of April 15. If you wish to take advantage of this opportunity this time around, you must:

- Return this form to Alan or Cris (see below) no later than April 8. If you need help in finding your clean-out, return this form by April 5.
- Make out a check for \$50.00 payable to Comeau Septic and get it to Alan or Cris by April 8.
- Have your tank lid (clean-out) exposed before your scheduled pumping date .

If you have any questions, contact:

Alan Aronie - 27 Seymour St., 369-5048

Cris Deacon - 23 Dover St., 369-3517

YOUR NAME _____

ADDRESS _____

PHONE: Daytime_____Evening_____

Thank you!



VOL.3 NO.2

PONDERINGS

BY THE FRIENDS OF WHITE POND

SUCCESS . . .

The group-rate septic pumping program got off to a great start this spring with sixteen families participating. The program helped people locate their septic tanks which were then pumped at a reduced rate of only \$50 (regardless of tank size) by Gary of the Comeau Septic Company. The cost of pumping did not include the Town septage dumping fee of \$3.40 per 100 gallons (\$34.00 for a standard 1000 gallon tank) which it bills to the homeowner.

We found that some people did not fully understand the workings of their septic system. Here are two of the most common **misconceptions**: one, a system can maintain itself indefinitely without regular maintenance (such as pumping the tank every year or two), especially if the system is only used minimally, that is, weekends and summers; two, a high level of water usage (e.g., laundry machines, dishwashers, tubs and showers, etc.) will not effect the efficiency of the system.

The 1988 White Pond Water Quality Study prepared by Dr. William W. Walker, Jr., Environmental Engineer, and George P. Ploetz, Consultant, can help correct these misconceptions and we quote:

"Conclusions and Recommendations (Page 31, Item 1)

Because of its low flushing rate, White Pond has a limited capacity to assimilate nutrient loadings from the watershed without experiencing significant deterioration in water quality, which, in turn, would have important impacts on aesthetic values, recreational uses,

and fisheries. To protect pond water quality, management efforts should be directed at minimizing total phosphorus loadings. Surface runoff and onsite waste disposal systems are two major sources to be targeted now and in the future.

Pond Protective Measures (Page 28)

. . . the following measures are suggested to minimize the impacts of onsite disposal systems:

- 1) informing shoreline residents of their potential impacts on the pond;
- 2) **minimizing water use (may increase residence time and treatment efficiency of onsite systems);**
- 3) using non-phosphate detergents
- 4) **frequent pumping of septic tanks/seepage pits (at least once per year, more often for "problem" systems)."**

With the last measure in mind we are offering our group-rate septic pumping program again this fall. We are targeting those systems that are closest to the Pond and therefore could be expected to have the greatest impact on its water quality. The area being organized includes all the Dover Street area and all the homes between the Pond and the Pond side of Plainfield Road, Powder Mill Road and Stone Root Lane. Residents in the designated areas who are interested in this group-rate program should complete the enclosed form.

Alan Aronie

MORE SUCCESS ON THE WAY . . .

The White Pond Advisory Committee has developed a Run-off Control Project for the State public access road next to the White Pond Association beach. This Project will help in the preservation and protection of the water quality of White Pond. It is based on the recommendations resulting from three years of study of the Pond by the Town's environmental consultant for White Pond, Dr. William W. Walker, Jr.. Dr. Walker was hired in 1986 by the Board of Health, and at the urging of the White Pond Advisory Committee, after algal blooms had appeared on the Pond causing great concern about deteriorating water quality. His reports identified surface run-off as a major contributor of nutrients, turbidity, and organic materials which in turn stimulate algal growth, reduce transparency, and increase the rate of oxygen depletion from the Pond's bottom waters. The primary source of run-off is the State's public access road, or "county road", as it is frequently called, and preventing that run-off from reaching the Pond will be an important improvement.

Last year, realizing that implementation of Dr. Walker's recommendations would require funding, the Advisory Committee worked with the Town Manager's office and applied to the Commonwealth for inclusion in its Clean Lakes Program. Acceptance into this program would mean partial State funding for additional study of the Pond and its watershed and also for programs such as the Run-off Control Project. However, the Commonwealth has "frozen" funding for any new applicants to the Clean Lakes Program and in view of the on-going fiscal crisis, White Pond could wait a long time to even be considered for the Program.

Rather than waiting as the Pond continues to degrade, the Advisory Committee has drawn up plans for a Run-off Control Project consisting of asphalt berms across and beside the access road at two locations which will collect the run-off and divert it to catch basins. These basins will permit heavy sediments to settle out for annual removal, while the water will flow out into drywells and then through the soil on its way down to groundwater. The drywells will consist of trenches, approximately 8 feet across and 20 feet long, filled with stone and lined with special fabrics on all sides. The action of the drywells and percolation through the soil will greatly reduce the contribution to the Pond of nutrients and fine sediments. The permits for this Project are being obtained, and commitments for the

donation of materials and for labor "at cost" are being worked on.

The Advisory Committee has gotten a tentative estimate of a total cost of \$7500 and has begun looking for funds. They see this as a community effort and hope that Pond lovers and users will help pay for this Project. There have been verbal commitments of contributions from the State and others of about \$1000. The Committee will approach the Town and other sources, but it is likely that a major source of funds will have to be private citizens. The Friends of White Pond will make a contribution and help in the fund raising (see the enclosed letter).

David Berg

DOVER STREET UPDATE

The findings by Dr. Walker on the negative impact of phosphorus run-off into the Pond have caused The Dover Street Property Owners to be concerned about the condition of the steps and retaining wall that lead down to our beach. We have seen that rainwater rushing down and around the steps and wall has run off towards the Pond and washed most of the beach sand into the water.

Any work done within 100 feet of a surface body of water must be reviewed by the NRC to determine if it is permissible under the Commonwealth's Wetlands Protection Act. Therefore, we submitted a request for a review of our plan to rebuild the retaining wall to the Natural Resources Commission in Concord for their meeting on September 13, 1989. When no action was taken, a representative of the DSPO called the NRC office, and continued to call repeatedly throughout the winter, to find out the status of our request, only to be told each time that the office needed to do more work on it. In April of 1990, the NRC recommended a site visit, which is scheduled to take place in August.

Meanwhile, the original contractor sold his business. Another contractor has bid on the job: his estimate for rebuilding the bottom retaining wall, replacing the bottom stairs, and dumping and spreading sand is \$2695.00. He also gave estimates for rebuilding the 37 steps leading down the hill to the upper wall, and erecting a hand rail: \$1961.00 and \$1000.00 respectively. He also suggested that we might cut some of that cost by removing the steps and old railroad ties ourselves.



August 1990

Dear Friends of White Pond:

We can actually DO something to help the Pond!

The surface water run-off into the Pond from the public access road next to the White Pond Association Beach has been cited by the Town's environmental consultant for White Pond, Dr. William Walker, as a major contributor to the Pond's problems. The White Pond Advisory Committee has drawn up plans for a system of berms, catch basins and drywells that will prevent the run-off from reaching the Pond until it has been filtered and can no longer harm the Pond. Approvals from the Town and the Commonwealth are in the works. The next step is to find the money to do it. The current estimate is that it will cost about \$7500 to complete the Project. The Advisory Committee has verbal commitments for about \$1000 (including \$500 from the Commonwealth's Public Access Board which is responsible for the road) but that leaves a good deal of money still to be raised.

The Friends of White Pond have agreed to work with the Advisory Committee to raise funds and to act as "banker" for the funds that are collected. We are appealing to all our members and to all those who love and are willing to help preserve the Pond for contributions to this Project.

PLEASE CONTRIBUTE -- checks should be made payable to "Runoff Control Project". All contributions may be sent to our Treasurer, Alan Aronie, at 27 Seymour Street, Concord, MA 01742.

Thank you for your help.

SIGN-UP FOR GROUP RATE SEPTIC TANK PUMPING

If you wish to be included in this program (described elsewhere in the newsletter), we need to have you follow the instructions on this form.

In order to facilitate this program, we need the answers to a few questions. Please fill out this form even if you were already asked this information during our limited phone survey. All information is confidential.

- Do you know where the clean-out for your tank is? Yes_____No_____
- If "No", do you need help finding it? Yes_____No_____
- How often do you have your tank pumped?_____
- When was it last pumped?_____
- Do you have a garbage disposal? Yes_____No_____
- Are you willing to volunteer some time to help with this program now or in the future? Yes_____No_____
- We will probably arrange pumping twice per year; please indicate which time would fit your needs: Spring_____Fall_____Both_____

The pumping days this fall will be during the week of October 15. If you wish to take advantage of this opportunity this time around, you must:

- Return this form to Alan or Cris (see below) no later than October 6. If you need help in finding your clean-out, please try to return this form at least a week earlier, by the end of September.
- Make out a check for \$50.00 payable to Comeau Septic and get it to Alan or Cris by October 6.
- Have your clean-out lid exposed before October 15.

If you have any questions, contact:

Alan Aronie - 27 Seymour St., 369-5048

Cris Deacon - 23 Dover St., 369-3517

YOUR NAME _____

ADDRESS _____

PHONE: Daytime _____ Evening _____

The DSPO have \$2384.56 in the bank now; we still need \$310.44 to rebuild the wall and replace the sand, and more if we want to fix the stairs and build a hand rail. We would like to do the construction work this fall, and spread the sand next spring, provided the NRC approves. Contributions may be sent to John Jodice, 54 Dover Street, Concord. If there are any questions, please call Kate Blair at 369-9194, or the NRC at 369-7526.

Kate Blair

UNISYS UPDATE

Ralph Tyler (Cold Brook Development) continues to be the only developer in the picture for the Unisys land. Both Sudbury and Concord are working on different aspects of his proposals. In Sudbury, at the direction of their Town Meeting, the Selectmen have spent the summer considering possible zoning changes for the Sudbury section of the parcel. It is currently zoned as a special research and development district with restrictions on the size of any building. Mr. Tyler has protested that this special district with its restrictions is not legal and has brought suit against Sudbury. There also have been proposals to change the zoning altogether, for instance, to residential. The results of the Selectmen's considerations will be presented at a Public Hearing to be held by their Planning Board on August 30. There will be at least one article having to do with the zoning of the Unisys property on the Warrant for Sudbury's Special Town Meeting on September 10.

Concord's Planning Board has been wrestling with Mr. Tyler's 2 lot subdivision plan ("Sudbury Research Center 1") which he submitted to them last year. This plan divides the land into two huge lots running from the Pond to Rte. 117. Each lot has land in both Sudbury and Concord; for that reason, as well as several others, it would be impossible for this plan to result in a "subdivision" in the usual sense of the word. Mr. Tyler has stated that his intent was simply to "freeze the zoning" in both towns. This July our Planning Board approved this plan with several conditions. However, because of a mix-up about the date Mr. Tyler submitted the plan, it turned out that the Planning Board had failed to act on the plan soon enough. As a result, our Town Clerk had to give the plan "constructive approval". This meant that the plan was accepted and approved "as is", that is, with none of the conditions attached to it which the Planning Board had intended. The Board corrected this problem by holding a public hearing

this August at which they could amend the constructive approval to include their conditions.

At that meeting, Mr. Tyler vigorously recommended that the Board not go forward with its proposed amendments, implying that the Board might be subject to litigation. He was particularly against the condition that Town water would be required for the subdivision and the condition reserving approximately 6 acres of land by the Town for various municipal purposes. By reserving land the Board gives the Town the option of purchasing the reserved land within a fixed time after the Board's "endorsing" of the subdivision plan. Mr. Tyler then stated his understanding that the only thing that could not be done on reserved land was to build buildings, but clearing could be done and roads could be built, etc.. Members of the Board interpreted his remarks as a threat and said so. The Board then proceeded to vote several amendments including: one, the subdivision is required to have Town water; and two, the Town reserves 2 parcels of land (a 200 foot buffer along 50% of the shoreline beside the Conservation land and a 200 foot buffer along 50% of the railroad right-of-way) totalling about 3 acres.

The conditions required by the Concord Board of Health are still in place and will go into effect if any real subdivision is attempted by Mr. Tyler. These conditions include an environmental impact study. The Public Works Commission is currently considering the issues involved in providing Town water to the parcel. It is not clear that there is any legal route by which utilities (including water) can be brought to the site. The Concord-Sudbury Joint Committee which was trying to work out acceptable land uses for the entire parcel is no longer functioning.

Judith Sprott

NEWSNOTES . . .

The test wells to determine the direction and water quality of the groundwater flow into the Pond have been installed along the shoreline and Dr. Walker has been observed taking samples from the wells.

Gail Jewell has been doing Secchi tests to monitor the transparency of the Pond water. The transparency has been very good. However, beginning in the first week of August, the green scum which signals an algal bloom was observed. The green scum has been covering a larger and larger area since then.

OF WHITE POND

FOR THE FRIENDS



**THE FRIENDS OF WHITE POND
Board**

President: Herb Kottler 369-0149

Vice-President/Treasurer:

Alan Aronie 369-5048

Vice-President/Technical Consultant:

Hans Abraham 369-5549

Secretary: Kate Blair 369-5680

Newsletter: Judith Sprott 369-4850

Articles for *Ponderings* are invited;
send to Judith Sprott,
43 White Ave, Concord 01742



Vol. 4 No. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

THE UNISYS SAGA CONTINUES. . .

Last January, Unisys offered to sell its property to Sudbury for \$1.8 million dollars. Compared to the \$8.5 million Unisys was asking a couple of years ago, this price is an incredible bargain. They are offering Sudbury their entire 141 acres. One hundred and one acres and the buildings are in Sudbury. Forty acres and the White Pond shorefront are in Concord. This property is a 21E site, which means, there is hazardous waste cleanup going on. There are two hazardous waste cleanup sites. All of one site and part of the second are in Sudbury. Part of one site is in Concord.

From the time that they received this offer, Sudbury has been working hard to figure out the answers to the following questions: How can they pay for this property? What are the risks of buying this 21E site (hazardous waste cleanup site)? How can they get protection from the costs and liabilities of the hazardous waste cleanup? How can they get their Town Meeting to approve the purchase? What are they going to do with the land once they've bought it? Soon after they received this offer, Sudbury invited Concord to buy our share of the property. Since then Concord has been asking the same questions.

In February, the Board of Selectmen named an ad hoc Task Force to answer at least some of these questions and make recommendations. From Concord's point of view this is a very complex and difficult land acquisition. It comes at a time when Concord is having serious difficulties coping with \$450,000 in cuts in State Aid and its first override ballot. It involves trying to coordinate a major land acquisition with another Town and that requires many people in both Towns to work together. There are problems of timing, as well. Their Town Meeting is in early April

and ours is in late April, which creates coordination problems. Unisys hired a new environmental company last year to do additional testing and to make sure that the cleanup is as complete and speedy as possible. New data from this company will not be complete until long after Town Meeting. Putting together a funding package that might include some outside help (Trust for Public Lands or private conservation groups) and some community fund-raising, in such a short time is very difficult. To

make things even more complicated, the Unisys purchase will be part of a bigger land acquisition package for Sudbury. They intend to buy an abutting property (the Melone land) which will allow the sale or use of the sand and gravel on that property to help recover the costs of both the Unisys and the Melone properties.

Upcoming Events

April 13 9 AM	Pond Bottom Cleanup
April 23 7:30 PM	Unisys Purchase Vote
April 27 9 AM	Conservation Land Bank Stabilization

Is this land worth the effort? Oh yes! The acquisition of this land has been recommended for years. Even back in 1972, consultants who were studying the water quality of the Pond advised the Town to purchase this property. Dr. Walker's more recent studies have warned us against more development around the Pond. More development means more nutrients (especially phosphorus) to leach into the Pond. The Pond is already having algal blooms, more phosphorus will just cause more problems. The beautiful shorefront of this land is in the middle of the last remaining area of undeveloped shoreline. Both for the safety and for the beauty of the Pond, this land is vital.

Where are we now? Sudbury has a draft purchase and sale agreement with Unisys and they are working on an indemnification clause to protect against cleanup costs, etc.. Several articles about the Unisys land purchase are already on their Warrant for their Town Meeting. The Concord Board of Selectmen have received the recommendation of the Task Force that

Concord purchase the Unisys land in Concord. The Selectmen have asked the Town Manager and others to work with Sudbury, and, if necessary, with Unisys, to negotiate a purchase. They have called a Special Town Meeting which will be held at 7:40 p.m. on April 23, at the Sentry Center auditorium on Rte. 2. This Special Town Meeting is taking place within our annual Town Meeting which begins at 7:30 p.m. on April 22. The Special Town Meeting Warrant will include an article authorizing the Town to purchase the 40 acres of Unisys land in Concord. It may also include one or two other related articles.

There is a lot of work to be done between now and then. We must convince the Town Meeting that this property is worth the effort the Town will have to make, both financially and in terms of time spent negotiating the purchase. We must reassure the Town Meeting that the hazardous waste cleanup risks are minimal and that the Town can be protected against the costs and liabilities of owning this property. We must convince the Town Meeting that this property is much too beautiful, too significant, too special to allow it to slip through our fingers. Concord should be willing and able to give this land the protection that is needed to preserve it and protect the Pond. And finally, **we must convince the Town Meeting that the fate of this land means so much to us that we are reaching into our own pockets and working to find other contributors to help the Town pay for this land.** The way we can accomplish this last task is for each of us to write a check payable to the "Town of Concord - Unisys Land" for the largest amount possible. All such contributions will be tax deductible. They will go into the Land Fund, earmarked for the purchase of the Unisys land only. Our contributions will be returned to us if the Town does not succeed in making the purchase. Checks for more than \$500 should be sent to the Town in care of the Board of Selectmen. Checks for less than \$500, should be sent to the Town in care of the Town Manager. **The money we raise will say more than words could ever say about how important this land is.**

The Friends of White Pond can use all the help we can get; to raise funds, to prepare for Town Meeting, and to get approval of Town Meeting for this purchase. **Everyone who wants Concord to buy this land can do at least one thing - be at the Special Town Meeting on April 23 and vote for it.**

The picture for the Unisys land purchase changes almost every day. If you want more information or just to keep tabs on what is happening, please don't

hesitate to call Judith Sprott at 369-4850 or Gail Jewell at 369-5048.

Judith Sprott

SPRING CLEANING!!!

It's Spring cleaning time for septic tanks! We will be repeating our twice-yearly discounted pumping program during the week of April 15th. To participate, your house must be in the immediate White Pond neighborhood, which includes all houses in three areas: the Dover Street area from the Pond side of Plainfield Road to the Pond; the Pond side of Stone Root Lane to the Pond; and the Pond side of Powder Mill Road to the Pond between Stone Root Lane and Plainfield Road. Please fill out the sign-up sheet included with this newsletter and return it by April 8 with a check for \$50.00 (for any tank up to 1500 gallons) made out to Comeau Septic. This price does not include the fee of \$34.00 per 1000 gallons which the Town bills a homeowner for accepting septage at the sewage treatment plant.

It is essential that your tank lid be uncovered by the scheduled pumping day. If you need assistance in locating your tank or lid, we can help, but we will need to have your form no later than April 5th. Also, homeowners needing assistance should plan to be at home for our volunteer tank-locating team on either the weekend of April 6/7 or April 13/14.

After we receive your form, we will contact you with the date(s) for your pumping day, and for your tank-locating day, if you have requested help.

Cris Deacon and Alan Aronie

Editor's Note: Our septic pumping program has earned us compliments from the Town. State and Town austerity budgets have stopped the construction of new sewer lines in Town. Neighborhoods scheduled for sewerage because of a high incidence of septic system failures will have to wait until the sewer expansion program begins again. Until then, frequent septic pumping will be the only way homeowners in these neighborhoods can keep their systems working. Our discount program has been suggested as a model program for these neighborhoods.

A VERY SPECIAL CLEANUP

On Saturday, April 13, the Friends of White Pond are hosting a cleanup of the bottom of the Pond. The participants will include groups of scuba divers from the Divers' Environmental Survey (DES) and the

Professional Association of Scuba Instructors (PADI). Twenty to thirty divers will be involved with this cleanup. There are two objectives: to remove as much trash as possible from the bottom of the Pond, and to provide non-divers with visible proof that refuse dropped in the water does not go away.

This is a project that needs and deserves community help. If you have a rowboat or a canoe, would you be willing to transport retrieved trash across the Pond to the collection site? If you don't have a boat, would you be willing to help unload the refuse from the boats at the collection site? Call Alan Aronie at 369-5048.

Please join us on Saturday, April 13, at 9:00 a.m.. Let's clean up our Pond!

Alan Aronie

Editor's Note: On a dank day in February when nothing about White Pond business was going very well, we got a telephone call from a very cheerful scuba diver, Mike Sepkowsky. He said he and some other divers had been diving in White Pond last year and there was a lot of trash on the bottom. He described a program of environmental "consciousness raising" sponsored by the New England Aquarium Dive Club. The way the program works is that they find a local contact and arrange for volunteer divers to go out do a cleanup. He proposed that they come out and cleanup the bottom of White Pond. They would do this out of the goodness of their hearts and at no cost to us, IF we were interested. We were interested! The details of the April 13 cleanup have been worked out with John Hicks-Courant (Program Director of the NE Aquarium Dive Club) and Mike. Our bottom will be cleaned thanks to the organizing efforts and hospitality of Alan Aronie and Gail Jewell, thanks to the cooperation of Dan Monahan (in getting the trash picked up and accepted at the Concord landfill) and, most of all, thanks to the generosity of these divers.

CONSERVATION LAND UPDATE

At last the bank stabilization project (formerly known as the erosion control project) on the Conservation Land at the southern end of the Pond, will begin. The method to be used was suggested by J. Walter Brain, a landscape architect and member of the Thoreau Country Conservation Alliance. As outlined by Dan Monahan, Natural Resources Coordinator for the Town, the plan is to place burlap bags filled with soil in the badly eroded bank (where the old rope swing was). Once the eroded area has been filled, using sand filled bags below and then loam filled bags at the surface, a hemp mat will hold the new work in place while plantings of indigenous plants such as

blackberry, raspberry and brier take root. Suggestions for other plants that might be useful for stabilization are welcome, as are donations of appropriate plant materials. At some point, indigenous trees such as hemlock will also be planted. Generally, the best time of year for planting is early Spring. How much planting can be done this year will depend on when the bags are all in place, and the availability of plant material.

Although this plan is elegantly simple and uses inexpensive materials, it is labor intensive. The project is scheduled to begin on Saturday, April 27th at 9:00 a.m. Volunteers are needed. Anyone who wishes to help should show up with work gloves and a spaded shovel. This is a good opportunity to get together with your neighbors on a community project. Please call Alan Aronie at 369-5048 or Dan Monahan at 369-7526 if you have any questions, concerns or thoughts.

Hope to see you on 4/27/91 at 9:00 a.m. on the bank of the Conservation Land.

Alan Aronie

RUNOFF CONTROL PROJECT UPDATE

The White Pond Advisory Committee has been working for some time on a Runoff Control Project to protect the Pond from the surface run-off down the Country Access Road next to the Association Beach. This run-off is a major source of nutrients (especially phosphorus) getting into the Pond and it was identified by Dr. Walker in his water quality studies of the Pond as a major contributor to the degradation of the Pond.

When the bids for the Project went out in early December of 1990, the design called for leaching drywells filled with gravel. However, after reviewing the site as well as the Request for Bid document, Doug Macone of Macone Brothers, made several suggestions about how this project could be improved. One major recommendation of his was that the leaching drywells be constructed from chambers made from precast concrete galleys. The sediments and debris which accumulate in leaching systems can be cleaned out of these hollow concrete galleys, thus extending their useful life. Whereas, with gravel-filled drywells, problems can typically only be solved by digging up and replacing the gravel.

Since it is more important that this project be done right than done quickly, it was decided to research this alternative design further. Fortunately, I get a subscription to the "Journal of Environmental

Health", and in the March/April 1991 issue there was an article comparing gravel-filled leachfields with chamber-type leaching systems. It concluded that "a leachfield system that does not cover the soil interface with gravel can out-perform the comparable gravel-covered interface by a factor of more than 2-to-1". Armed with this information, it was decided to go out for bids again, this time for a chamber-based system. It was recognized that this type of system would cost more to install. The design was re-engineered and the new Request for Bids went out on March 18, 1991. The current design calls for a basic system with four concrete galleys which would collect the surface runoff just before the lower parking lot for the boat launchers. The Request for Bids also asks for a price to include a second smaller system, Option A, with only two galleys, which would be located below this parking area. Another option, Option B, would be the addition of a leaching catch basin located half way up the hill. Bidders will therefore need to provide three quotes: (1) the basic system, (2) the basic system plus option A, and (3) the basic system plus option B. These quotes are due by April 5, 1991. If enough funds are available to proceed, the successful bidder will be notified by April 12, 1991, and the work will need to be completed by the middle of May.

In terms of on-going fund raising efforts, the White Pond Associates, Inc. have recently included a letter with their beach membership renewals encouraging

their members to contribute to the Runoff Control Project. Depending on the success of this and other fund raising, this important step in preserving the water quality of White Pond may be achieved later this Spring.

David Bearg

Editors Note: This Project still needs money and soon; we must try to get it done this Spring and save the Pond from more months of runoff. The Friends of White Pond will gladly accept any contribution to this Project - write a check to the Runoff Control Project and send it to Alan Aronie, 27 Seymour Street, Concord, MA 01742.

THE FRIENDS OF WHITE POND Board

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Vice-President/Treasurer:

Alan Aronie 369-5048

Vice-President/Technical Consultant:

Hans Abraham 369-5549

Secretary: Kate Blair 369-5680

Newsletter: Judith Sprott 369-4850

Articles for *Ponderings* are invited;
send to Judith Sprott,
43 White Ave, Concord 01742

SIGN-UP FOR GROUP RATE SEPTIC TANK PUMPING

If you wish to be included in this program (described elsewhere in the newsletter), we need to have you follow the instructions on this form.

In order to facilitate this program, we need the answers to a few questions. Please fill out this form even if you were already asked this information during our limited phone survey. All information is confidential.

- Do you know where the clean-out for your tank is? Yes_____No_____
- If "No", do you need help finding it? Yes_____No_____
- How often do you have your tank pumped?_____
- When was it last pumped?_____
- Do you have a garbage disposal? Yes_____No_____
- Are you willing to volunteer some time to help with this program now or in the future? Yes_____No_____
- We will probably arrange pumping twice per year; please indicate which time would fit your needs: Spring_____Fall_____Both_____

The pumping days this spring will be during the week of April 15. If you wish to take advantage of this opportunity this time around, you must:

- Return this form to Alan or Cris (see below) no later than April 8. If you need help in finding your clean-out, return this form by April 5.
- Make out a check for \$50.00 payable to Comeau Septic and get it to Alan or Cris by April 8.
- Have your tank lid (clean-out) exposed before your scheduled pumping date .

If you have any questions, contact:

Alan Aronie - 27 Seymour St., 369-5048

Cris Deacon - 23 Dover St., 369-3517

YOUR NAME _____

ADDRESS _____

PHONE: Daytime _____ Evening _____

Thank you!

UNISYS LAND OPEN HOUSE

10 A.A. SATURDAY MARCH 30

SUDBURY HAS INVITED ALL OF US WHO ARE INTERESTED IN SEEING THE UNISYS PROPERTY - THE BUILDING, THE LAND, THE HAZARDOUS WASTE CLEANUP SITES - TO COME TO AN OPEN HOUSE TO BE HELD AT THE UNISYS PROPERTY ON SATURDAY MARCH 30 AT 10 A.M.

WHEN YOU APPROACH THE BUILDING FROM RTE. 117, THERE IS A PARKING LOT ON THE RIGHT SIDE OF THE BUILDING. ACCESS TO THE BUILDING WILL BE AT THE GUARD STATION AT THE LEFT REAR CORNER OF THE BUILDING AS YOU FACE IT FROM RTE. 117 (THE NORTHWEST CORNER OF THE BUILDING)

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VOL. 4 NO. 2

PONDERINGS

BY THE FRIENDS OF WHITE POND

OCTOBER 1991

GENERAL MEETING

There will be a general meeting of the Friends of White Pond, open to all interested, on Sunday, November 10th from 2:00 to 4:00 at Alice Rosen's & Hank Reisner's house, 27 Hemlock St. (at the end of Dover St.). Some agenda items are: news about the Unisys land and a new volunteer water monitoring program.

CONSERVATION LAND WORK-PARTIES

Two work-parties have been scheduled to continue the bank stabilization project begun last spring. The sand-bag phase has been completed and we are now in the loam-bag phase. The work was picked up on Sunday, September 29th, and will continue on Friday, October 4th, and Saturday, October 19th, from 9:00am to noon. It is imperative that we complete the loam-bagging and cover it all with an erosion blanket before the winter weather undoes all of our hard work. Bring a shovel if you have one, but even if you don't, come join us!

SEPTIC TANK PUMPING

It's time, once again, to sign up for our fall group-rate septic tank pumping program. This program has been very successful so far and has garnered praise from town

officials. A form has been enclosed with this newsletter if you are in the pond-adjacent neighborhoods: any street off of Dover St., Dover St. itself, and any houses on the pond side of Plainfield Rd., Powder Mill Rd., or Stone Root Ln. If you have questions, please address them to Cris Deacon (369-3517) or Alan Aronie (369-5048).

WHITE POND "BLOCK" PARTY

Let's get together and meet our neighbors before we all hole up for the winter! A purely social occasion: pot-luck meal (barbeques will be provided), Sunday, October 27th, 12:00 to 4:00. The location has not yet been finalized, but we will let you know as soon as it is. The rain date will be Sunday, November 3rd. Bring your whole family, some outdoor games, food to share. If you have questions, a volleyball net, large folding tables, or any other communication to make, please address it to Kate Blair (369-9194).

STEERING COMMITTEE MEETING

The Steering Committee of the Friends of White Pond will be holding its next meeting on Tuesday, October 8th from 7:30pm to approximately 9:00. Anyone interested is welcome to attend. The meeting will be held at the Kottlers', 20 Tracy St.

SIGN-UP FOR GROUP RATE SEPTIC TANK PUMPING

- Make out a check for \$50.00 payable to Comeau Septic and get it to Alan or Cris with this form no later than May 8.
- Have your tank lid exposed before your scheduled pumping date . We will call you ahead of time when we know what the exact date will be.
- If you have any questions, contact:
Cris Deacon - 23 Dover St., 369-3517
Alan Aronie - 27 Seymour St., 369-5048

YOUR NAME _____

ADDRESS _____

PHONE: Daytime _____

Evening _____



Vol. 5 No. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

JANUARY 1992

LET'S GET ORGANIZED!

The Board of the Friends of White Pond has developed an Annual Calendar for consideration at our Annual Meeting to be held on February 2, 1992, at 2:00 p.m. We hope that it will make our meetings and events more predictable and accessible to Friends and the White Pond community in general. The suggested calendar is as follows:

Collection of Dues	January
Annual Meeting	February -- 1st Sunday
Picnic on the Pond	October --- 1st or 2nd Sunday
Board Meetings	Monthly -- September through May, 3rd Thursday, 7:30 p.m.

In the past, we have collected dues on an "as needed" basis; but here too, it is time to get organized and collect our dues on a regular schedule. We are enclosing a Membership and Dues form with this newsletter. Setting dates for our Annual Meeting and the Picnic will help us all plan ahead and attend these events. We hope that regularly scheduled Board meetings will encourage any and all of you to come and participate. However, we are dependent on the hospitality of our members for our meeting places, so we must ask you to contact a Board member (see the list at the end of the newsletter) to find out where we are meeting. Our agenda is open for any new business concerning the water quality of White Pond, and the Board is seeking new active members. The Annual Calendar calls for the Board to meet monthly from September through

May, but special meetings will be held, if needed, in June, July or August. If we follow the proposed calendar, the upcoming meetings would be at 7:30 p.m. on the following Thursdays: February 20, March 19, April 16, and May 21.

If there are changes or additions you wish to suggest for the calendar, we will welcome them at the Annual Meeting on February 2nd.

Ruth Ames

LOOKING AHEAD

This past year we have accomplished several major projects, and we all need to sit down, pat ourselves (and each other) on the back, take a deep breath, and appreciate what we've done. Then we need to get up and take a look at what the coming year offers for our energetic attentions. We will be focusing on three projects this year. Briefly, they are: a water-quality monitoring program, to be administered by the Board of Health; efforts to control the runoff of rainwater (with all its algae food) into the pond from the area around Seymour & Granby streets; the completion of our erosion control project on the Conservation Land (see separate article for a progress report). All of these, being in various stages of formation, require plenty of input and offer several kinds of volunteer opportunities. They will each be discussed in greater detail at the upcoming Annual Meeting.

Cris Deacon

Upcoming Event

**FEBRUARY 2 - 2 P.M.
ANNUAL MEETING
AT 20 DARTON STREET
(2ND RIGHT OFF DOVER STREET)**

IN MEMORIAM

Hans Abraham - of Blessed Memory
22 March, 1913 -
15 December, 1991

Hans came to Concord in 1962. He lived in his "paradise" on beautiful White Pond for over 30 years with his dearly loved wives, Marianne and Lois, and his daughters, Ruth and Rayah. Hans was fondly known as the "Old Man of the Pond" by his many friends and neighbors. From the early years, he was an advocate for the preservation of White Pond.

We will always remember his quick wit and humor, his brilliant mind, his extensive knowledge and information which he so willingly shared. Hans was a colorful person, full of charm and zest for life. We who have known him through the years feel blessed with the gift of his friendship.

A Tribute, As We Remember Him

At the rising of the sun and its going down,
At the blowing of the wind and in the chill of Winter,
We'll remember him.

At the opening of the buds and in the rebirth of Spring
At the blueness of the sky and in the warmth of
Summer

At the rustling of the leaves and in the beauty and
color of Autumn

We'll remember him.

When we have decisions that are difficult to make,
When we have achievements that are based on his
input,

We'll remember Hans Abraham.

For as long as we live, Hans, too, will live, for he has
become a part of us

As We Remember Him.

Ida Aronie

TOTE THAT BAG . . .

The badly eroded hillside on the Town Conservation Land has been mostly stabilized thanks to the efforts of a number of individuals from the White Pond area, the town-at-large, and the Minuteman Vocational Technical School, with special thanks to Dan Monahan, Concord's Natural Resources Coordinator, who got the materials, organized the people and worked on every work party.

Many work parties were held throughout the summer and fall, during which burlap and fiberglass bags were

filled with sand, loam, and wood chips, and placed along the hillside to fill in the eroded area. Loam and chips were then shovelled into the spaces between the bags so that, come spring, ground cover and other plantings can be rooted in the bags to further protect and stabilize the hillside.

Work parties will resume in the early spring, with tasks ranging from heavy lifting to light planting - something for everyone! The dates and times will be listed in *Ponderings* and the *Concord Journal*, and community service hours will be awarded to CCHS students who participate. Please come -- there will be coffee, treats and comraderie, plus a little healthy exercise -- who needs the gym when you can "work out" by helping preserve the health of the Pond?

Kate Blair

UNISYS-WE'RE ALMOST THERE!

Last April, after Concord Town Meeting appropriated \$300,000 for the purchase of the Unisys land in Concord on White Pond, and after the Friends of White Pond helped raise almost \$25,000 more, no one was sure if it would ever happen. Sudbury Town Meeting had just voted against buying the Unisys land and Unisys had not made a formal offer to sell any part of the land to Concord.

The Trust for Public Land stepped into this vacuum. TPL is a national organization which acquires important open space and conservation lands and then sells them to appropriate buyers, such as municipalities and conservation groups. After a summer of negotiation and rumored competition from other potential buyers, TPL and Unisys signed a Purchase and Sale agreement for the entire parcel. It is TPL's intention to sell the open space in Sudbury to Sudbury, the open space in Concord to Concord, and to hold on to the building, its parking lot and driveway, and a reasonable amount of space around it, for eventual sale to an appropriate commercial buyer.

This fall Sudbury Town Meeting approved the acquisition of its share of the Unisys land. This gave TPL a clear commitment from both towns to purchase their respective parcels. However, TPL still needed a financial commitment from Sudbury before going ahead with the purchase. In early December the citizens of Sudbury voted a Prop 2 1/2 override to fund their acquisition. Since TPL's Purchase and Sale agreement with Unisys would expire at the end of December, TPL spent a frantic few weeks putting together all the details necessary for signing Purchase

and Sale agreements with Concord and Sudbury for their respective parcels. There were many complicated issues to be resolved, such as guaranteeing the successful clean-up of the hazardous waste sites at no cost or significant liability to either town, and providing access to White Pond to Sudbury residents. In late December, TPL signed P&S agreements with both Sudbury and Concord, with the hope that "closing" will be in late January.

The question of access to the Pond for Sudbury residents has been of great concern to the Friends. The intention, apparently, is that there will be a 20 foot wide easement for pedestrian access across the Concord land to the Pond. No motorized vehicles (except emergency vehicles) will be allowed. Visitors would be able to use the area for passive recreation such as hiking, cross-country skiing, canoeing and the like, but not for swimming. It is not difficult to see that there will still be a lot to do even after Concord takes title to the land. It will be of critical importance for Concord to take active responsibility for managing and protecting this land.

Judith Sprott

THE FRIENDS OF WHITE POND Board

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Alan Aronie 369-5048

Secretary: Kate Blair 369-5680

Newsletter: Judith Sprott 369-4850

Articles for *Ponderings* are invited;
send to Judith Sprott,
43 White Ave, Concord 01742

**DON'T FORGET TO COME TO OUR
ANNUAL MEETING AT 2 P.M. ON
SUNDAY, FEBRUARY 2
AT
KATE AND DAVID'S.**

**BRING YOUR CONCERNS,
QUESTIONS, AND SUGGESTIONS.**

**REFRESHMENTS AND BABYSITTING
WILL BE AVAILABLE.**

FRIENDS AND NEW FRIENDS

For the past four years the Friends of White Pond have worked actively to identify and address the issues that most affect the water quality of White Pond. In these years the Friends of White Pond have worked with the Town of Concord and many concerned individuals and groups to insure this wonderful natural resource, White Pond, is not destroyed. You have read in our newsletters and in the Concord Journal about some of our projects, such as supporting the town's purchase of the Unisys land, helping with the repair of the eroded bank on town conservation land, fund-raising for the surface run-off control project on the public access road and our watershed community septic system pumping program. But, there is more work to be done!

Through your dues you both join and support the efforts of the Friends of White Pond. The Friends can continue to work for the benefit of the water quality of White Pond and keep the our members and the White Pond community informed about issues affecting the Pond. Please join us in this rewarding and important work.

NAME _____

ADDRESS _____

PHONE _____

SPECIAL
CONCERNS _____

DUES FOR 1992 MEMBERSHIP: \$10.00 PER ADULT
\$20.00 PER FAMILY

DUES PAID _____

PLEASE MAKE CHECKS PAYABLE TO "FRIENDS OF WHITE POND" AND SEND, WITH THIS FORM, TO OUR TREASURER: ALAN ARONIE
27 SEYMOUR ST.
CONCORD, MA 01742



Vol. 5 No. 2

PONDERINGS

BY THE FRIENDS OF WHITE POND

APRIL 1992

HOW'S THE POND DOING?

Because of Town budget cutbacks, Dr. William Walker will no longer be monitoring the water quality of White Pond for the Concord Board of Health. Since it is important to have uninterrupted water quality data, Dr. Walker suggested a volunteer water quality testing program and wrote up a brief description of what should be done. Dr. Walker continues to be an informal resource when we have questions or concerns about the Pond. On another front, the Friends of White Pond and the White Pond Advisory Committee learned about the Massachusetts Water Watch Partnership, which offers a course in volunteer water quality monitoring, as well as assisting with lab analysis and quality control. David Bearg is working with the MWWP and has attended their course on water quality monitoring. The result of all this is that David has agreed to be the volunteer Water Quality Monitoring Program liaison to the White Pond Advisory Committee and the Board of Health. If anyone is interested in working with David in monitoring the Pond, please call one of the FWP Board members, or David directly (369-5680). Duties will include weekly readings with a Secchi disk to check clarity, as well as taking water samples for analysis. The lab work on the samples will be done at UMass Amherst.

Kate Blair

Editor's Note: David is stepping down from the White Pond Advisory Committee after nine years of service. It has been a tough but productive nine years. His most recent and remarkable accomplishment is the berm and catch basin system which keeps the run-off on the public access road from reaching the Pond. The Pond and all of us who care about the Pond are in David's debt for all his hard work and the special skills he brought to the Committee.

SPRINGTIME IS PUMPING TIME

Spring is here, the flowers are blooming, the weather is warming, and naturally our thoughts turn once again to pumping our septic tanks. As we all now know, septic tank failures or overflows due to too-infrequent pumping can adversely affect our Pond, leading to increased algae blooms. Most tanks should be pumped once a year, depending on their size, the size of the household, and whether or not there is a garbage disposal in use.

For the past two years we have been offering a reduced group pumping rate to those households within the immediate neighborhood of the Pond. Thirty-five households have availed themselves of this service so far. You are eligible if you live within the following boundaries: the Dover St. neighborhood or between Powdermill Rd. and the Pond from Plainfield Rd. up to and including the Pond side of Stone Root Lane.

If your tank is due to be pumped, please get a check, with the enclosed sign-up sheet, to either Cris Deacon (23 Dover St.) or Alan Aronie (27 Seymour St.) by May 11th. The check should be for \$50.00, made out to Comeau Septic. Once we have enough sign-ups, we will call to let you know the day the pumping will occur. If you have any questions, please call Cris (369-3517) or Alan (369-5048).

Cris Deacon

ANOTHER POINT OF VIEW...

White Pond is a wonderful place to swim, skate, fish, and just stroll around looking at the beautiful scenery. It would be a shame if we could no longer swim in it because of pollution. We need to save it to do any of the fun things we love to do there!

We are starting a group for children called Young Friends of White Pond. After the Young Friends have

learned some things about the Pond and how to help it, we will teach younger kids what we know. Then, when they are our age, they will be able to enjoy it too.

Aprill Aronie and
Melissa Guy

Editor's Note: We would like to know about any kids who might be interested in being a Young Friend and we have enclosed a brief questionnaire with this newsletter.

LET'S GO FISHING!

As a fishing hole, White Pond is under-utilized by the neighborhood. This is a shame because the fish are plentiful and tasty, and catching them can be lots of fun. I have offered to take Young Friends of White Pond on fishing expeditions on Saturday mornings from 7 a.m. to 10 a.m. during the month of May (except for May 9 and during rainstorms). If interest warrants, other fishing trips may be scheduled during the summer. Young fisherpersons can meet me at the Dover Street Association beach, and no preregistration is necessary. I have spinning and spincasting equipment available for loan, and will try to make sure to bring bait as well. Introductory instruction on the basics of shore fishing will include information on the variety of fish species in the Pond and their different habitats, fishing techniques, fishing etiquette, and most important, fishing safety. Having said all that, the emphasis will be on having fun. All children are welcome, as are parents or other interested adults. Extra fishing gear and/or assistance will be greatly appreciated. If there are any questions, or you have equipment to loan, or you would like to volunteer, please call me at 369-9558 (or just show up at the Pond). One final, but important, note: "catch and release" will be my policy, so please tell your children that the fish will be let go. Fish that are too injured to be released will be kept, and available to the children who catch them, with parental permission.

Scott Anderson

NOW WHAT DO WE DO?

The 40 acres of Unisys land in Concord now belongs to Concord. It was a long and difficult task. It took the efforts of the Friends of White Pond and many others, the approval of Town Meeting, the generosity of many contributors (especially Elliott Wilbur, by far the most generous contributor), the support of the

Selectmen (especially Judy Walpole) and other Town officials, the attention of Town Manager Alan Edmond, the cooperation of the Town of Sudbury, and the hard work of the Trust for Public Land to make it happen. And now it is ours; our pleasure and our responsibility.

The Board of Selectmen, the Natural Resources Commission, and the White Pond Advisory Committee have already put together a task force to produce a management plan for the property. There are some chores that need to be done immediately; for example, cleaning up the debris from the old "guard house" and repairing serious erosion in the beach area, which is washing sand into the Pond. The management plan will also have longer range goals for the maintenance and protection of this beautiful land.

Dan Monahan, Concord's Natural Resources Coordinator, has asked to be kept informed about wildlife sightings (has anyone seen any indigo buntings?), and other "user" reports about activities or problems on this property. He can be reached during business hours at 371-6265.

Does anyone have a better name for this parcel than the "Unisys land"? A couple of historical names associated with this area are Sachem's Cove and Briardale Farm. Any ideas?

Judith Sprott

THE FRIENDS' ANNUAL MEETING

The Annual Meeting of the Friends of White Pond took place on February 2. About 25 members came to hear reports and to discuss the Unisys land acquisition, the public access road surface run-off control project, water quality issues and other Pond issues. The new calendar for the Friends' functions was presented and accepted as follows:

- Collection of Dues in January
- Annual Meetings in February on the 1st Sunday
- Picnics on the Pond in October on the 1st or 2nd Sunday
- Board Meetings held monthly from September through May, on the 3rd Thursday of the month at 7:30 p.m.
(Open to everyone, please call a Board member for location).

YOUNG FRIENDS OF WHITE POND SURVEY

On Saturday, March 28, a group met to discuss the formation of an adjunct to the Friends of White Pond specifically geared to children. The intention is to educate and involve our kids in the life of the pond so that they can continue to interact caringly with it as they grow through their teens and into adulthood. We'd like to get a sense of the potential YFWP population, so that we can gear our activities appropriately.

How many children are there in your family? _____

What are their names & ages? _____

What are their interests?

fishing boating swimming hiking
 aquatic wildlife wood trails ecology plant life
 photography art writing maps & map-making
 other _____

Please return to Terry Deacon, 23 Dover St. THANK YOU!

New Presidents for the Friends were proposed and affirmed. The current Board members are:

- Co-Presidents: Ruth Ames and Cris Deacon
- Vice President/Treasurer: Alan Aronie
- Secretary: Kate Blair
- Hospitality: Herb and Jan Kottler
- Newsletter: Judith Sprott.

Herb Kottler has stepped down from the Presidency after five years of leadership. Herb helped get us started, kept us on track, led us with intelligence, discipline, patience and humor. We cannot thank him enough. And, what's more, he and his wife, Jan, opened their house to us for our monthly meetings and provided the best refreshments of any working group in Concord! Although Herb will no longer be President, he and Jan will still host most of the monthly meetings.

And, finally, we owe a vote of thanks to Kate Blair and David Bearg for letting us use their home for the Annual Meeting.

Judith Sprott

CLEANUP DAY AT THE POND

On the very cold, wet, snowy, and sleety morning of April 11th, fifteen divers from The Divers' Environmental Survey of Billerica braved the choppy waters of White Pond to help in the Town cleanup effort. They pulled up many cans and other small debris, and raised and pulled out a life guard stand that had gone through the ice a few years back. We are grateful to all the volunteers who gave time, food, coffee and helping hands and boats. One father-daughter team came all the way from New Hampshire to ferry bags of debris in their canoe, while other folks walked the shore with bags and gathered up numerous styrofoam cups and wads of fishing line. The Friends of White Pond coordinated this effort, arranging for Town support in taking the debris to the landfill, providing food and coffee, and volunteers and boats to help the divers and the shore cleanup. Although we cannot see it, the Pond bottom is cleaner, and the shoreline of the Pond looks and is much cleaner because of this very special effort. We thank everyone who withstood the elements for their help, and the Town, especially Dan Monahan, for its support.

Kate Blair

JUST A FEW THINGS . . .

Dan Monahan will be organizing more work parties for the Conservation Land erosion control project now that spring is here. Expect to hear more from us about this soon!

There will be a part-time Concord Conservation Officer this summer. This means there will be one police officer who will patrol all the important conservation lands in Town. Last year this was a half-time officer; this year the Town can only afford a quarter-time officer. It will be more important than ever to let the police know about any problems you see around the Pond, especially on the Conservation and Unisys lands.

There are more changes coming to the public access road. You have already seen the installation of the run-off control system, and the installation of three stanchions at the foot of the road to block vehicle access to the shoreline. However, there have been problems this spring with illegally parked cars all along the access road blocking rescue vehicles from getting down to the Pond and out again. There is a Concord Bylaw which makes it illegal to park in a fire lane and gives the police ticketing/towing enforcement powers. The current plan is to create fire lanes along the road to give the police the enforcement powers to stop illegal parking. In addition, more stanchions have been installed on the side of the road by the Association Beach area to provide a second emergency vehicle access to the Pond.

THE FRIENDS OF WHITE POND Board

Co-Presidents: Ruth Ames 369-3675
Cris Deacon 369-3517
Vice-President/Treasurer:
Alan Aronie 369-5048
Secretary: Kate Blair 369-5680
Newsletter: Judith Sprott 369-4850

Articles for *Ponderings* are invited;
send to Judith Sprott,
43 White Ave, Concord 01742



Vol 5. No. 3

PONDERINGS

BY THE FRIENDS OF WHITE POND

September 1992

FROM THE DEPTHS

In looking back through the Friend's files we, as relatively new presidents, are very impressed with the accomplishments the group has made in the five years it has existed. In the recent past, the installation of a run-off control system on the county access road has stopped the washing of organic nutrients down the road into the Pond. The most serious erosion problem on the Conservation Land is now under control and the hillside has been largely rebuilt, thanks to the intensive labor of many, headed by the efforts of Dan Monahan, Coordinator of Natural Resources for the Town. (see article this issue).

Involved with any of these projects, or want to suggest one of your own, please contact us or come to the next Board meeting on October 15th. Our Board meetings are open to all. We maintain a predictable schedule; we meet on the third Thursday of every month at 7:30 p.m. Our schedule for the next few months is outlined in the Calendar box on this page.

Our community seems to have gained many new residents since last fall, and it is our hope that many of you will attend our annual Pond Party on October 18th. It's a purely social occasion and a great opportunity to meet our neighbors before we all hole up for the winter. Please join us!

Ruth Ames and Cris Deacon

CALENDAR

Board Meetings	October 15, 1992	Hosts	Ruth Ames, 6 Preston St. (off Granby)
	November 19, 1992		Call Ruth Ames (369-3675) for host information
	December 17, 1992		Herb and Jan Kottler, 20 Tracy St.
	January 21, 1993		Alan Aronie and Gail Jewell, 27 Seymour St.
Annual Pond Party	Noon - 4 p.m. Sunday, Oct. 18, 1992		White Pond Association beach
Annual Membership Meeting	2 p.m. Sunday, Feb. 7, 1993		See next <i>Ponderings</i> for place

The dates and locations of our later Board meetings will also be listed in the next *Ponderings*.

Following the schedule begun last year, the Board of the Friends of White Pond held its first meeting of the 1992/93 season on Thursday, September 17, at the home of Cris and Terry Deacon. Nearly a dozen people attended. As this issue of *Ponderings* reveals we had a full agenda, reviewing progress made during the summer and planning for the coming year. Some of the areas on which we hope to focus our efforts are: completing the work on the Conservation land and maintaining our regular programs, such as twice yearly septic tank pumping, Pond water quality monitoring, and establishing the Young Friends. We also expect to be involved with projects on the White Pond Reservation Land, which is the proposed new name for the Unisys land the Town purchased this year. If you would like to be in-

SEPTIC TANK TIME !!!

The annual Fall group rate septic tank pumping will happen mid-October. If there is a sign-up sheet in your copy of *Ponderings*, then you are within the group rate perimeter. Please get your sign-up sheet and check for \$50.00 (made out to Comeau Septic) to either Cris Deacon (23 Dover St.) or Alan Aronie (27 Seymour St.) by Sunday, Oct. 11. As soon as we have enough houses on our list, we'll schedule the Pumping Day and we will call to alert you so that you can uncover your tank lid. Questions ??? Call Cris (369-3517) or Al (369-5048).

Cris Deacon

WATER WORKS

The Friends of White Pond, in conjunction with the Massachusetts Water Watch Partnership, the Concord Board of Health, and the White Pond Advisory Committee, have begun a volunteer water monitoring program. Judith and George Sprott have been taking Secchi disk readings weekly through the summer. These tests measure the clarity of the Pond which, in turn, indicates how many algae there are. In June the Pond was exceptionally clear and the disk was visible as deep as 34 feet. Later in the season, however, visibility was as limited as 16 feet; however that is not unusual for White Pond. At the end of the season, this year's readings will be compared with those of previous years to see how the Pond is doing.

Kate Blair attended a MWWP seminar on weed mapping, and she and Judith paddled their canoe around the perimeter of the Pond in July to record where weeds and algae were growing and collect samples. Kate then sent the samples of weeds and algae to Boston for identification. She has also sent samples collected at later dates for identification. There was not a great deal of weed growth in the Pond but it was of a kind you would expect in a Pond with too many nutrients. As was true in years past, blue-green algae were identified and they, too, are indicators of nutrient problems. It is important to find and identify these weed and algae indicators. And, along with other tests, it will be possible to evaluate the health of the Pond and see when our efforts to reduce the nutrients have an effect.

David Bearg attended a MWWP seminar in water quality testing, and he and Jane Prentiss will be starting a sampling program in the spring of 1993. The program will involve many tasks, from the actual sampling, to running the analysis; anyone interested should call Jane at 369-6437 for more information.

Many people have commented on the clarity and odorlessness of the Pond this year. If we can all continue our efforts, big or small, from picking up trash to hauling sand bags to doing water quality testing, the Pond will continue to improve, and will be there to enjoy for many years to come.

Kate Blair

TRANSFORMATION . . .

The White Pond Reservation Task Force was established by the Selectmen this year to draft a land management plan for the Unisys land. The Task Force consists of members Daniel Holmes, Craig MacDonnell, Dan Monahan, Jane Prentiss, and Gordon Shaw, together with the Selectmen's liaison, Carrie Flood, and White Pond researcher Judith Sprott. As you can see, the name "Unisys land" has fallen

out of favor and the Task Force refers to the land as the "White Pond Reservation".

During the month of October, the Task Force will present a preliminary report describing their work to date and their proposals for a management plan for the property to the Board of Selectmen for their review. Following that review the Task Force will continue working on the long-range land management plan including a thorough analysis of the land and appropriate uses for it. The Task Force would appreciate receiving input from the Friends of White Pond, individually or collectively, as the land use plan is developed. Please feel free to contact any of the Task Force members with your thoughts and comments.

The Task Force has already undertaken a number of efforts that you can see when walking the land. The old guard house and an abandoned outhouse have been dismantled and partially cleared away. Some residual lumber, etc., still needs to be carted away. The access road leading to the beach area was re-graded this summer, which improved the erosion situation somewhat. Further re-grading work will need to be done this Fall or in the early Spring. The Task Force arranged for signs to be placed on the property, which should at least put users on notice that certain activities (swimming, drinking, burning fires and using motor vehicles) are prohibited.

Daniel Holmes

LIFT THOSE BALES . . .

I hope that many of you have had a chance to see the results of the erosion control work on the Conservation Land. Even to those of us who worked on it, it is amazing to see what has been done. The slope has been 99% restored and looks wonderful, but there is still work to be done covering and protecting it, as well as planting it. Some of the remaining work will be done this Fall, and some, especially the planting will probably be done next Spring. As usual, Dan Monahan was the leader of the work that got done this year with the help of his conservation crew and a work party of volunteers.

Judith Sprott

UPCOMING EVENT

On October 8, 1992, at 7:30 p.m., at the Hunt Gym, the Public Works Commission and Planning Board will hold a public hearing on "Rules and Procedures for Extension of Water Mains in Existing Private Ways". It appears that changes in State law will no longer require an easement (permission from abutters) to lay water mains or other utilities on private ways. Since this could have an impact on the water quality of White Pond, it is a matter of interest and concern for the White Pond community.

Jane Prentiss

SIGN-UP FOR GROUP RATE SEPTIC TANK PUMPING

If you wish to be included in this program (described elsewhere in the newsletter), we need to have you follow the instructions on this form.

In order to facilitate this program, we need the answers to a few questions. Please fill out this form even if you were already asked this information during our limited phone survey. All information is confidential.

- Do you know where the clean-out for your tank is? Yes_____No_____ If "No", do you need help finding it? Yes_____No_____
- How often do you have your tank pumped?_____
- When was it last pumped?_____
- Do you have a garbage disposal? Yes_____No_____
- Are you willing to volunteer some time to help with this program now or in the future? Yes_____No_____
- We will probably arrange pumping twice per year; please indicate which time would fit your needs: Spring_____Fall_____Both_____

The pumping days this spring will be during the week of May 14. If you wish to take advantage of this opportunity this time around, you must:

- Return this form to Alan or Cris (see below) no later than May 6. If you need help in finding your clean-out, please try to return this form at least a week earlier, by the end of April.
- Make out a check for \$50.00 payable to Comeau Septic and get it to Alan or Cris by May 6.
- Have your clean-out lid exposed before May 14.

If you have any questions, contact:

Alan Aronie - 27 Seymour St., 369-5048

Cris Deacon - 23 Dover St., 369-3517

YOUR NAME _____

ADDRESS _____

PHONE: Daytime_____Evening_____

Thank you!

MEET WITH NEIGHBORS -- OLD AND NEW
AT THE ASSOCIATION BEACH ON WHITE POND

FRIENDS' SECOND ANNUAL
POND PARTY

POTLUCK PICNIC

OCTOBER 18TH *

NOON - 4 P.M.

GRILLABLES, CASSEROLES, SALADS, CHIPS AND DESSERTS WILL BE MOST
WELCOME

GRILLS, CONDIMENTS AND CIDER WILL BE PROVIDED

NO ALCOHOLIC BEVERAGES PLEASE

FUN AND GAMES FOR THE CHILDREN

LET'S ENJOY ONE LAST AUTUMNAL FLING BEFORE
WINTER HIBERNATION !!!

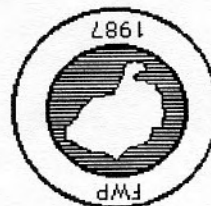
FOR FURTHER DETAILS CALL:

BEVERLY SMITH
369-7390

BRANKA STARR
369-9927

*RAIN DATE WILL BE OCTOBER 25TH - SAME TIME, SAME PLACE

*FOR THE FRIENDS
OF WHITE POND*



**THE FRIENDS OF WHITE POND
Board**

Co-Presidents: Ruth Ames 369-3675
Cris Deacon 369-3517

Vice-President/Treasurer:
Alan Aronie 369-5048

Secretary: Kate Blair 369-5680
Newsletter: Judith Sprott 369-4850

Articles for *Ponderings* are invited;
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Concord 01742



VOL. 6 NO. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

January 1993

INFORMATIONAL MEETING

On Thursday, Jan. 21, there will be a meeting held at 7:30 in the Willard School cafetorium to discuss the impact on the pond of having divers pull trash out of it, as has been done on Town Clean-up Day for the past two years. Questions to be addressed include: Can the divers provide us with data about the pond's ecosystem? Can we learn anything from the sediment at the bottom of the pond? What are the

FRIENDS' CALENDAR

The next month will be a very active time for the Friends of White Pond. On THURSDAY, JANUARY 21, we will meet at the WILLARD SCHOOL CAFETORIUM from 7:00 to 8:30 pm with representatives of both public and private state and local organizations to consider issues pertinent to learning more about the health of White Pond. On THURSDAY, JANUARY 28, at 7:30, we will meet at

CALENDAR

Jan. 21, 7:00-8:30 pm	Informational meeting	Willard School Cafetorium
Jan. 28, 7:30 pm	Summary of Jan. 21 meeting	Ames, Granby St. 369-3675
Feb. 7, 2:00-4:00 pm	Annual Membership meeting	Reisner, 27 Hemlock 369-0508
Feb. 18, 7:30 pm	Monthly board meeting	Deacon, 23 Dover St. 369-3517
Mar. 18, 7:30 pm	Monthly board meeting	Sprott, 43 White Ave. 369-4850
Apr. 15, 7:30 pm	Monthly board meeting	Blair, 20 Darton St. 369-9194

effects on the pond of removing large and small objects? What are the effects of leaving those objects there? What are the safety issues involved both in the presence of the trash in our pond and in the removal of it? Present at the meeting will be John Hicks-Courant, president of Divers Environmental Survey, representatives from the Mass. Water Watch Partnership, Dr. William Walker, Dan Monahan, Natural Resource Coordinator for Concord, Selectwoman Carrie Flood and members of the White Pond Advisory Committee. Members of the Friends of White Pond are also encouraged to attend. If you have any particular questions you would like to have addressed, please contact Ruth Ames (369-3675) or Cris Deacon (369-3517) before the 21st.

Cris Deacon

Ruth Ames' (2nd house on left on Granby St.) to discuss and summarize what we learn on the 21st, and to consider future data collection on Pond water quality. On SUNDAY, FEBRUARY 7, we will hold our ANNUAL MEETING at 3:30 pm. At this meeting the board will report on activities of the past year, and on our plans for the future. We hope to have a representative from the White Pond Reservation Task Force update us on plans for utilization of that land. We look forward to hearing YOUR questions and thoughts at this meeting. In February and March we will return to our normal schedule, meeting on the THIRD THURSDAY of the month at 7:30 pm. We hope you will join us at these meetings to raise questions or become more involved in some part of our work. If you cannot attend our meetings but want to talk with us, call me at 369-3675, or Cris Deacon at 369-3517.

Ruth Ames

POND PARTY

The Second Annual Pond Party brought about an enjoyable afternoon with a good turnout of friends and neighbors at the White Pond Association beach on October 18th. As usual the potluck format provided great food. Well organized children's activities made this a relaxing family day as well as a chance for us to socialize in a more casual setting. Our sincere thanks to all who contributed their time and equipment, which made this day such a pleasant success.

Branka Starr & Beverly Smith

THE WATERS OF CONCORD

The Friends of the Library are planning to sponsor, some time this spring, a series on The Waters of Concord. Contributions for this series are solicited, relating to White Pond or other lakes or streams in Concord.

Integral original writings or relevant works of art would be appropriate; in addition, cartographic works, history, literary references, drawings and photographs from the past, etc., would be welcome. For White Pond especially, geological, geodetic and other scientific information, including descriptions of the pond's origin, would be of interest to the Friends of the Library. Submissions may be made to any board member of the Friends of White Pond.

William B. Smith

GOOD WORKS!

The Conservation Land and the White Pond Reservation have both benefited from the efforts of several volunteer work parties organized by Dan Monahan, Concord's Natural Resources Coordinator. In November, Dan and his volunteers cut saplings to make up the protective wood lattice we see over the restored bank area on the Conservation land. They also improved paths on the Conservation Land by widening some sections of paths and edging other sections with brush, all in an effort to encourage visitors to stay on the proper paths to reach the pond.

Later in the year, Dan and another work party removed 150 feet of barbed wire and wire fencing that ran from the shoreline to the railroad right-of-way on the boundary of the White Pond Reservation (formerly Unisys land). It's a big relief that the barbed wire is finally gone!

Dan has begun collecting a "pool" of volunteers, known as the "Concord Green People", who work on conservation projects all over town, including those two projects on White Pond. Of course, there were also volunteers from the White Pond community; among them were Jane and Don Prentiss, Abraham Adhanom and Mike Loviglio. And a special thanks goes to "Green People" Bob Turkington, Peggy Brace and Nicholas Zavolas.

There is always work to be done on the various Town lands. Next spring there will be more work parties for projects here, there, and everywhere. If you would like to help, call Dan at 371-6265 to sign up!

Judith Sprott

A MODEL PROJECT

Bob Shaw, another of Dan's "volunteers" has taken on the job of building a model of the White Pond Reservation and the surrounding land on the southwestern end of the Pond. It will be about 3' by 2', somewhat three-dimensional and made of corrugated cardboard. This model will be useful as an educational and planning tool. Dan is recruiting assistance for Bob in doing the finishing work on the model, when it reaches that stage. Someone who has craft skills and could paint water areas blue, glue sand on beach areas, and, in general, create a "diorama" effect, would be most welcome. If you would like to help, get in touch with Dan Monahan at 371-6265.

Judith Sprott

LOOKING FOR A FEW GOOD MEN (AND WOMEN)

The White Pond Advisory Committee now has openings for two members. The Committee generally meets on a monthly basis. This is one of the best ways for residents of the White Pond neighborhood to become involved in Town matters affecting them. The Committee continues to advise the Selectmen and other Town boards about issues concerning White Pond and its environs. Committee membership does not require any special skills - just an affection for White Pond and a sense of community spirit. Please contact any Committee member if you would like to discuss possible membership.

Daniel Holmes 369-2939
Wendy Barnes 369-5246
Craig MacDonnell 369-7629

WHITE POND RES. TASK FORCE

The White Pond reservation Task Force continued its work through the fall of 1992. In October the Task Force presented a preliminary report to the Selectmen. The report recommended that the Reservation be treated essentially as if it were conservation land. The report further proposed that a number of short-term tasks be undertaken: removal of unsafe debris and barbed wire, stabilization of eroding pond frontage and paths and installation of signs. Finally, the report provided an outline of the long-term land use plan that the Task Force will produce.

The Selectmen approved the report and directed the Task Force to continue its work. Since then, Dan Monahan, Natural Resources Coordinator, has organized work parties to remove barbed wire. Plans are being formulated to address the most serious erosion problems, and Task Force members are preparing a draft of the long-term land use plan.

As mentioned in the September issue of Ponderings, the Task Force welcomes your participation, comments and suggestions. Please feel free to call me or any of the FWP officers with any input.

Daniel Holmes

FRIENDS AND NEW FRIENDS

For the past five years the Friends of White Pond have worked actively to identify and address the issues that most affect the water quality of White Pond. In these years the Friends of White Pond have worked with the Town of Concord and many concerned individuals and groups to insure this wonderful natural resource, White Pond, is not destroyed. You have read in our newsletters and in the Concord Journal about some of our projects, such as supporting the town's purchase of the Unisys land, helping with the repair of the eroded bank on town conservation land, fund-raising for the surface run-off control project on the public access road and our watershed community septic system pumping program. But there is more work to be done! This year the Friends plan to help start a water testing program to monitor water quality.

Through your dues you both join and support the efforts of the Friends of White Pond. The Friends can continue to work for the benefit of the water quality of White Pond and keep our members and the White Pond community informed about issues affecting the Pond. Please join us in this rewarding and important work.

NAME _____

ADDRESS _____

PHONE _____

SPECIAL CONCERNS _____

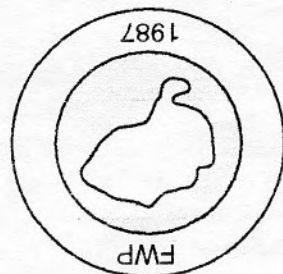
DUES FOR 1993 MEMBERSHIP: \$10.00 PER ADULT, \$20.00 PER FAMILY

DUES PAID: _____

PLEASE MAKE CHECKS PAYABLE TO "FRIENDS OF WHITE POND" AND SEND, WITH THIS FORM, TO OUR TREASURER:

ALAN ARONIE
27 SEYMOUR ST.
CONCORD, MA. 01742

FOR THE FRIENDS OF WHITE POND



THE FRIENDS OF WHITE POND

Board:

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Cris Deacon 369-3517

Vice-President/Treasurer:

Alan Aronie 369-5048

Secretary: Kate Blair 369-5680

Newsletter: Judith Sprott 369-4850

Articles for Ponderings are invited.

Send to Judith Sprott,

43 White Ave., Concord MA 01742



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 6 NO. 2

APRIL 1993

SCHEDULE

Saturday, May 1st	8 am -12 noon	DES dive team underwater clean-up
	10 am -12 noon	Shore clean-up
	late morning	DES video of the pond bottom
Tuesday, May 11th	1-3:00 pm	Green People work party at White Pond
Thursday, May 20th	7:30 pm	Friends board meeting - all welcome! at Meredith & Henry Patterson's, 117 Seymour St. (369-7402)

TESTING, TESTING...

If you have been down to the pond recently, you will have seen that it is looking very beautiful. The water has risen dramatically and continues to rise and the pond would appear to be in good health. But we know that isn't true, at least not yet. By July and August, as has happened in recent years, the pond will be noticeably full of algae. And we will probably have at least one algal bloom this summer. A "bloom" happens when the algae population gets too high and they die off. The result is a scum of dead algae that smells like a piggery. We have great hopes, however, that the pond's deterioration has been slowed and, if we continue to work on it, that the water quality will begin to improve.

After the first algal bloom in 1986, Dr. William Walker was hired by the town of Concord to study and test the water quality of the pond and determine what was happening and why. He found that the primary cause of the pond's algal blooms and deteriorating water quality was the increasing amount of phosphorus in the pond water. The phosphorus "fertilizes" the pond and causes an unhealthy increase in plant growth, especially algae. If too much phosphorus were to continue to reach the

pond, algal/plant growth would eventually rob the water of the dissolved oxygen needed to support animal life in the pond. The fish and other animals would die and the pond would become a smelly, unsightly, green "soup" garnished with floating weeds.

In his studies, Dr. Walker also identified the major sources of phosphorus reaching the pond. Since then, much has been done to eliminate or reduce these sources. For instance, the single most serious source he discovered was the surface run-off from the county access road next to the Association beach. That source has been eliminated using catch basins and filtration to stop the run-off and remove the phosphorus and other nutrients and pollutants. In addition, the Friends are running a semi-annual septic tank pumping program to encourage better maintenance and operation of septic systems in the watershed, in hopes of reducing the amount of phosphorus that leaches into the pond from septic effluent.

It will come as no surprise, however, that there is more to do. Dr. Walker's final report emphasized the importance of continuing water quality testing, and outlined tests that he

considered to be worthwhile. Testing must be done to keep adding information to the database that Dr. Walker's studies have already created. From this information we will be able to see whether or not the pond is still deteriorating, just maintaining itself, or, as we hope, beginning to slowly improve. The White Pond Advisory Committee, the Board of Health, the Friends of White Pond and other individuals have worked with a statewide volunteer water quality testing group, the Massachusetts Water Watch Partnership, with Dr. Walker and with others to design and implement an on-going volunteer water-testing program for the pond.

This program will be starting this spring and there will be many different ways that all of us can help, from gathering water samples to mapping weeds, from testing water clarity to doing lab work. There will be something useful and exciting to do for anyone who can help. (See article below.) Last summer's volunteer group can be assured that this definitely will beat carrying sandbags!

Judith Sprott

WATER TESTING SCHEDULE

This spring Jane Prentiss and Health officer Michael Moore met with Dr. Walker and created a testing schedule that would be appropriate for White Pond. This included identifying four test stations (see map). The work will begin in May and run through September.

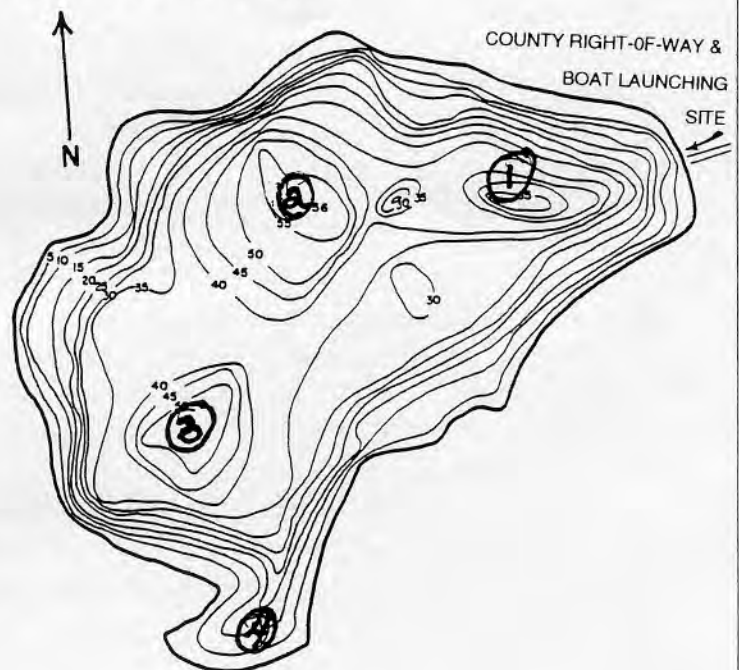
We will be taking samples for phosphorus at each of the stations at various depths on a monthly basis. The samples will then be shipped in a special carrier to a lab which is certified to test for phosphorus. An oxygen temperature profile will be done, also on a monthly basis, at each of the stations, with emphasis on station #2. This allows for more immediate field data without having to send out to a lab. Secchi testing (to check for water

clarity and turbidity) will be done on a weekly basis at each of the stations. The last but not least of our efforts will be aquatic weed mapping.

All data will be recorded in a field data book and then transferred and plotted on the computer at the Health Office in order to keep central and accurate records. Dr. Walker will be reviewing our data in the fall so we hope to keep good records of our observations.

Anyone wishing to assist in any of these efforts please contact Jane or Don Prentiss at 369-6437. It's a lovely Spring; I hope to see or hear from you on the pond!

Jane and Don Prentiss



POND CLEAN-UP DAY

On Saturday, May 1st from 8 am to 12 noon there will be much activity in and around the pond. Again this spring, members of Divers Environmental Survey, Inc. will enter the pond not only to remove debris, but to assess the current state of the biological processes in the

pond.

We need your support for two different activities. For those of you with boats, collecting debris directly from the divers and bringing it to shore is intense work and essential to a successful dive. We need as many boats as we can gather. For families, shore clean-up, as always, brings visible and rewarding results.

People with boats are asked to arrive early (8 am). Shore clean-up will start at 10 am. Refreshments will be provided on the Association beach. You will also have a chance to see a fascinating video which the divers filmed of the bottom of the pond during last spring's dive.

The Friends are delighted to have DES's support in the ongoing effort to monitor the overall quality of pond life and to note any significant changes in the deeper recesses of the pond. If you have a boat to offer please call Herb Kottler (369-0149) so that we can coordinate our efforts.

Beverly Smith

SEPTIC TANK PUMPING

As spring surely comes, so does the spring White Pond group-rate septic pumping program. This season the pumping is scheduled for the week of May 10th. There is a sign-up sheet included in this newsletter with further information. We are targeting those systems that are closest to the pond and therefore could be expected to have the greatest impact on its water quality. The area being organized includes all the Dover St. area and all the homes between the pond and the pond side of Powder Mill Rd., Plainfield Rd., and Stone Root Lane.

Alan Aronie

SPRING GREEN

Last year we accomplished wonders on the Conservation Land erosion project. The damage has been repaired and the slope is stabilized. I was glad to see that the slope survived the winter with no damage! But the frost stayed in the ground until April 13th, so we were unable to do any early spring planting. The plan is to plant shrubs and small trees on the slope restoration project, and install a barrier to guide people around the slope.

Another project we hope to finish is the effort started last fall by the "Green People" to remove the wire fencing around the White Pond Reservation and do some trail improvement work. Don Prentiss has offered to pitch in and give me a hand on special projects. We look to hiring a contractor to regrade the eroded sandy slope near Sachems Cove which will then require a lot of hard work to landscape.

I am looking forward to another productive year, and hope that you are willing, able, and available. If so, please call our office (371-6265) or drop a note (133 Keyes Rd.) to let us know. We have scheduled a town volunteer "Green People" work party on Tues. May 11th from 1-3:00. Please let me know of any ideas, interests, concerns, etc. regarding the town properties.

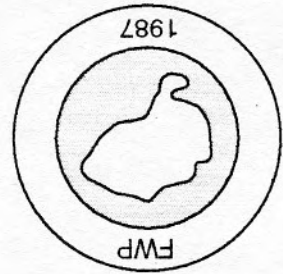
Dan Monahan

SPRING NATURAL HISTORY WALKS

Are you interested in birds, trees, wildflowers, etc.? Would you like to go on some spring natural history walks through the White Pond Reservation? We will be having walks this spring to learn more about the natural history of the area. Please let us know if you would like to join us by calling our office (371-6265).

Dan Monahan

FOR THE FRIENDS OF WHITE POND



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PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 6 NO. 3

OCTOBER 1993

POTHoles: WHOSE PROBLEM ARE THEY?

The Friends of White Pond and the White Pond Advisory Committee have both heard recently from residents around the Pond questions and concerns about the need for repairs to White Pond area streets. Many of these streets are definitely in need of repair, but it is important for residents to understand the history of these streets and whose responsibility it is to repair them.

The streets between Plainfield Road and the old railroad tracks, and between Powder Mill Road and Hemlock Street are all private ways. Most of them cannot be "accepted" by the Town because they are substandard in width or other requirements. Most of these streets cannot be brought up to standard without moving houses or taking property, and that would not be acceptable to property owners. It is hard to imagine that these streets will not remain private streets forever and, unfortunately, the Town has no responsibility for the maintenance or repair of private ways.

However, in the mid-1970's, the White Pond Advisory Committee decided to try to get the rutted, dusty roads around the Pond oiled and gravelled by the Town at the Town's expense. After a lot of work by the Committee and the Town, the 1975 annual Town Meeting accepted Chapter 40, Section H, of the Commonwealth's General Laws. This permitted the Town to grade, and oil and gravel the streets in the White Pond watershed even though they are private ways. There were two conditions in implementing this state law which are important for area residents to understand. First, in accepting this law the Town was not obligated to do any repairs or maintenance and, after completing the repair program of

1975-77, the Town was under no legal, or financial, obligation to continue to maintain or repair these streets. Second, the one-time repairs were only done on those streets where the Town received permission from 80% of the property owners (including absentee owners).

After accepting Chapter 40, Section H, in 1975, Town Meeting voted the funds, for that year and the two following years, to grade, oil and gravel specific groups of streets until they were all done. There were one or two streets that were not done because the Town did not receive the necessary releases from 80% of the property owners on that street.

The bottom line is that property owners on the private ways in the White Pond watershed area continue to be legally and financially responsible for the repair and maintenance of the streets they abut. As a result, there have been few or no repairs to these streets for the last 15 or more years and there are a lot of potholes and sections of broken pavement which continue to get worse (and therefore more expensive to fix). The White Pond Advisory Committee intends to review this situation and explore with area residents and the Town whether there is some way to regularize and fund the maintenance of these private ways. Perhaps the Town could be convinced to undertake doing the work for another round of repairs. However, considering the Town's financial constraints which have resulted in the terrible condition of some of the public ways in Town, it is hard to see how the Town will ever be able to afford to pay for any work on these private ways. If you have any comments or concerns, please contact WPAC member, Helen Hopkins, at 369-3384.

Judith Sprott

WATER TESTING UPDATE

If you recall in the Spring Ponderings, we had scheduled an ambitious water testing program for this 1993 season. This program was funded by the Board of Health and outlined after consultation with Dr. William Walker. The program included testing at four sites on White Pond. Don and I are happy to report that all has proceeded as scheduled. This schedule included Total Phosphorous samples taken and Oxygen/Temp. profiles recorded on a monthly basis at all four sites. Secchi/Transparency recordings have been done on a weekly basis. Our concentration on weed mapping was in Sachems Cove; info from other areas of the Pond may be available from other volunteer mappers. If you have info please let us know.

We are nearing the end of our seasonal program. The next step is for us to compile Sept.-Oct. data and let Dr. Walker review it and comment. We then expect to present the Friends of White Pond with a document of the data, with results and some recommendations for your consideration for the 1994 season.

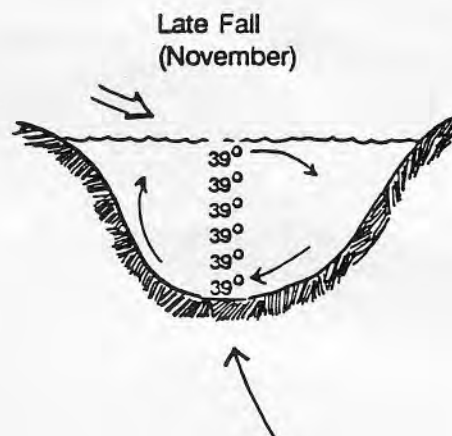
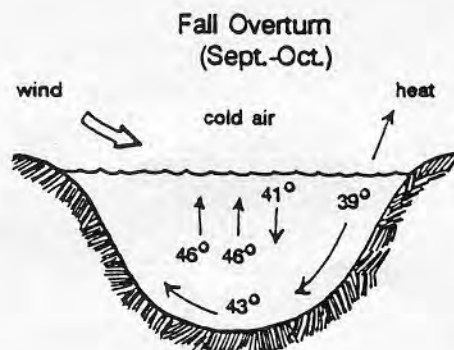
Sept.-Oct. is when the Pond will begin to turn over (a change in its annual temperature cycle); it's a fascinating and dynamic event. Please see the figures for a visual demonstration.

Anyone interested in Winter reading material might consider: "A Primer on Limnology" by Bruce Monson, Water Resources Research Center; or "Interpreting Lake Water Quality Data: A Citizens Guide" available through the Cooperative Extension Service, University of Wisconsin.

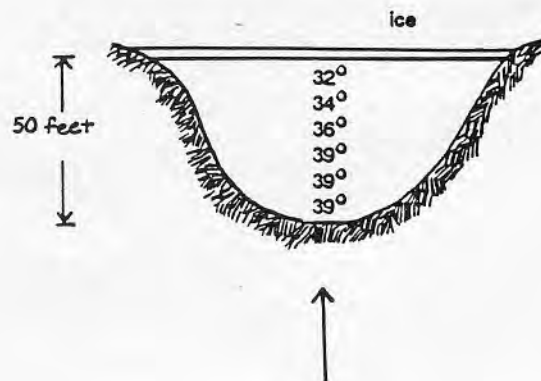
Don and Jane Prentiss

Ed. Note: Water is a very unusual substance. It's the only common substance where its solid form is less dense and therefore floats on its liquid form. If this weren't true we would have to do our ice skating under water. The Pond water turns over in the fall (and spring) because of changes in density caused by the temperature change. Water is most dense at 39°. As the Fall air cools the surface water

toward 39° it sinks. The surface water gets even colder and remains above the 39° water at the bottom. During the periods of turning there is a lot of mixing of water from different depths and the nutrient and other substances in the Pond are redistributed.



Winter Stratification



SEPTIC TANK PUMPING

Time again to pump that tank! If you have had us arrange the pumping of your tank in the past, simply write a check for \$50.00 to Comeau Septic and deliver it either to Cris Deacon (23 Dover St.) or Alan Aronie (27 Seymour St.) by Oct. 17th. If you are new to the program, please call Cris (369-3517) or Alan (369-5048). You are eligible for our special group rate if you live within the following area: the Dover St. neighborhood; the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including the pond side of Stone Root Ln. Please don't hesitate to call us if you have any questions.

Cris Deacon

GETTING RID OF PHOSPHORUS

It was our intention to re-publish a list of low and no-phosphorus household cleaning products in this issue of Ponderings. This was to be part of the Friends' on-going efforts to keep White Pond area residents aware and informed about ways to help protect and improve the water quality of the Pond. Since phosphorus is the primary nutrient which is degrading the Pond, vigilance in preventing more phosphorus from reaching the Pond is very important.

While trying to track down an up-to-date list of household product phosphorus contents, we made a wonderful, though belated, discovery. On July 30, 1993, the Commonwealth of Massachusetts passed a law, Chapter 124 of the Acts of 1993, which bans the sale of commercial or household cleaning products containing more than a trace (0.5% by weight) of phosphorus. There are some exceptions in this law: for instance, dishwasher detergents are only limited to 8.7% of phosphorus by weight. This exception was made because there is no effective substitute for phosphorus in these products. Also, agricultural, medical, dairy, food and beverage business uses of cleaning products with more than trace phosphorus (up to 8.7% by weight) will still be allowed. However, this law is an important step in limiting the amount of phosphorus

which gets into the groundwater, and our lakes and rivers. The law will go into effect on July 1, 1994. Until then, it will be important to look for and use the no-phosphorus cleaning products which are already appearing on the shelves in anticipation of this law going into effect.

Judith Sprott.

WHITE POND RESERVATION

On Tuesday, October 19, 1-3 PM, your help will be needed to work on our efforts to stabilize and restore the slope and open area at Squaw Satchems Cove on White Pond. The schedule calls for regrading and loaming the area in early October. Our "work party" will involve planting trees/shrubs, mulching, erosion control and other tasks. Bring gloves, shovel, trowel, mattock, hand clippers, hand saw.

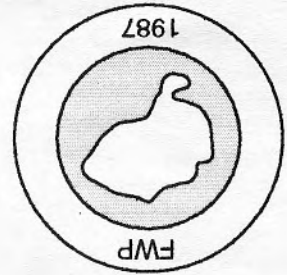
Dan Monahan

MEETING SCHEDULE

We have decided this year that meeting every other month will accomodate the business of the FWP as well as our own busy schedules. Therefore, our next meeting will be the third Thursday in November, the 18th. The rest of the year's meetings will be on the third Thursdays in January, March and May, with our regular annual membership meeting in February.

Cris Deacon

FOR THE FRIENDS OF WHITE POND



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PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 7 NO. 1

APRIL 1994

CALENDAR

	WHEN	WHERE
Annual Meeting	Sunday, April 24, 2-4pm	Rosen/Reisner's 27 Hemlock St., 369-0508
Pond Clean-up	* Saturday, May 7th , 8am-noon	White Pond Assoc. Beach
Bird Walk	Saturday, May 14th, 6-9am	meet at 15 Fern St.
FWP Board Mtg.	Thurs., May 19th	?

A LETTER TO THE FRIENDS

As the weather warms and we look forward once more to the pleasures of the pond, what better time to reflect on this wonderful resource. In the weeks and months ahead, there will be many opportunities for the Friends to tend to the health and care of the pond. Algal bloom monitoring and the recording of wildlife sightings are two activities which can be easily included in regular recreational enjoyment of the pond.

~~On Saturday, May 7th,~~
 On ^{SUNDAY, MAY 1st} ~~Saturday, May 7th~~, a shore clean-up will be coordinated with the Divers' Environmental Survey, Inc. dive team's underwater clean-up. The immediate visual results of this effort are always rewarding, and from a family perspective, provide a great opportunity to teach environmental responsibility.

These are just a few of the ongoing concerns of the Friends of White Pond. Please read on for specifics, and more importantly, join us at our annual meeting on April 24th. It will be good to see familiar faces after a long and isolating winter, and even nicer to greet some of the new faces in the neighborhood. Come share your thoughts and concerns, for not only does White Pond provide the pleasures of nature and recreation, in its unique way it

brings us together as neighbors and friends.

Branka Starr

ANNUAL MEETING

The annual meeting of the Friends of White Pond will be Sunday, April 24th, from 2-4pm. Alice Rosen and Hank Reisner have again generously offered to host this event at their 27 Hemlock St. address. For those unfamiliar with the location, it is situated at the end of Dover St., abutting the conservation land.

We will be joined by Dan Monahan and Police Chief Weatherbee, as well as by Marian and Rusty Wheeler, who will bring some early photographs of the Wheeler Homestead and the pond area. Marian Wheeler is a Concord historian, and we look forward to sharing in their rich knowledge.

Please mark this special day on your calendar. It is the one time in the year that we assemble as a larger group to discuss the many issues concerning the pond. It is also a pleasantly social occasion. A play area and babysitters will be available for your convenience.

Branka Starr

WORKING ON THE RESERVATION

Dan Monahan reports that a lot of work was done on the White Pond Reservation before the winter weather and snow cover stopped further work until spring.

- Jas Smith, a Concord resident and conservation volunteer, has helped complete a very fine base map of the Reservation with all the trails laid out on it.
- An inventory of the conditions of the various trails has been completed.
- The larger trees have been mapped and unique trees (mostly because of their size) have been identified; a stand of pitch pine near the railroad bed in the northeast corner of the Reservation was found and a lone beech tree was discovered.
- Town of Concord Park and Tree crews completed several jobs. Dead wood was cut up and used to help rebuild the main trail from the Conservation land into the center of the Reservation; they then filled the washed out trail with soil, etc. and built a bypass for run-off to help prevent future erosion. They repaired the main access road by filling the gullies, re-grading the surface and then compacting it.
- Some tree planting was done last fall at the southerly end of the cove beach area.
- There are still some troublesome public access problems. The bollard the Town installed on the access road to keep unauthorized vehicles out has been vandalized. Vehicles are driving through the woods to get around the bollard/gate barriers. Dan hopes that as Cummings Property (owners of the old Unisys facility) and Sudbury work to control public access problems on their properties, that Concord's problems will lessen as a result.
- The White Pond Reservation Task Force is making progress on the land management plan. They will provide an opportunity for public review when the plan has progressed sufficiently. Once the plan is ready and there has been a public review, it will be submitted to the Board of Selectmen for their

-they will provide an opportunity for public review when the plan has progressed sufficiently

-once the plan is ready and there has been a public review, it will be submitted to the Board of Selectmen for their acceptance, perhaps sometime in early summer.

- When work resumes, the restoration of the "sand dune" area next to the cove beach is at the top of the list.

Dan asks that anyone who has comments or observations about the Reservation (and the Conservation land) call him and pass them along. He is always interested in wildlife sightings and any data on vegetation or other natural features. He also wants to know when any of us see "use and abuse" problems. Meetings of the Reservation Task Force are open to the public; just call the Natural Resources office at 371-6265 for time and place. He expects to get a schedule set up soon for "Concord Green People" work projects, some of which will be in the White Pond area.

Judith Sprott

MAY 14th BIRD WALK ON WHITE POND RESERVATION

Let's go on a bird walk! We will gather at the Prentiss home (15 Fern St.) at 6:30am Saturday, May 14th. The route will be through the White Pond Reservation to collect data on its natural history. Some naturalist "ringers" will be invited to share their knowledge, but it will be a neighborhood event. Following the walk we will regroup at the Prentiss home at 9:00am for refreshments and to share observations. Questions? Call Dan at 371-6265.

Dan Monahan

SEPTIC TANK PUMPING

Spring thawing and tank pumping just naturally go together. If you have had us get your tank pumped in the past, simply write a check for \$50.00 to Comeau Septic and deliver it either to Cris Deacon (23 Dover St., 369-3517) or to Alan Aronie (27 Seymour St., 369-5048). If you are new to the program, we need to get some basic information from you (such as address, phone, size of tank), so please call or see us when you bring your check. You are eligible for our special group rate if you live within the following area: the Dover St. neighborhood (including all streets off Dover); the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including the pond side of Stone Root Ln. Please don't hesitate to call us if you have any questions.

Cris Deacon

FRIENDS AND NEW FRIENDS

For the past six years the Friends of White Pond have worked actively to identify and address the issues that most affect the water quality of White Pond. In these years we have worked with the Town of Concord and many concerned individuals and groups to protect this wonderful natural resource. You have read in our newsletters and in the Concord Journal about some of our projects, such as supporting land purchases in the watershed area and erosion and surface run-off control projects. But there is more work to be done! Our ongoing projects include our watershed community septic system pumping program, supporting the water testing program to monitor water quality and organizing the annual Pond clean-up. Through your dues you both join and support the efforts of the Friends of White Pond, enabling us to continue to work for the benefit of the Pond's water quality and to keep our members and the White Pond community informed about issues affecting the Pond. Please join us in this rewarding and important work.

NAME _____ PHONE _____

ADDRESS _____

SPECIAL CONCERNS: _____

DUES FOR 1994 MEMBERSHIP: \$10.00/INDIVIDUAL, \$20.00/FAMILY

AMOUNT PAID: _____

PLEASE MAKE CHECKS PAYABLE TO "FRIENDS OF WHITE POND" AND SEND, WITH THIS FORM, TO OUR TREASURER: ALAN ARONIE, 27 SEYMOUR ST., CONCORD 01742 OR BRING TO THE ANNUAL MEETING ON APRIL 24TH.

DON'T FORGET

POND CLEAN-UP DAY

~~Saturday, May 7th~~ 8 am - noon
SUNDAY, MAY 1ST

Trash bags and refreshments will be provided.

Help make the land around and under the Pond beautiful and safe.

If you have a boat we can use

or

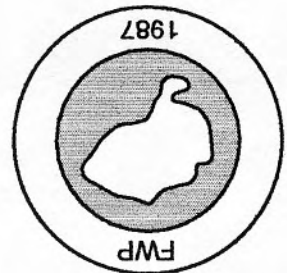
would like to volunteer refreshments

or

ask a question, call Bev Smith at 369-7390

All levels of participation are welcome!

FOR THE FRIENDS OF WHITE POND



THE FRIENDS OF WHITE POND

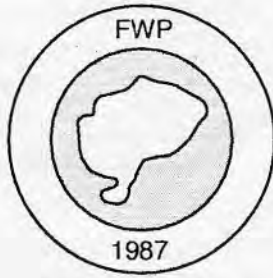
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**Articles for Ponderings are invited.
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23 Dover St., Concord MA 01742**



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 7 NO. 2

JULY 1994

SUMMER!

At last the summer is really here. You can hear it in the whoops and splashes that echo across the pond. On these hot and lazy days the water is irresistible. It pulls and tugs and then immerses everyone in the simple and bold sensations of childhood.

The ankles, the shins, the knees, then up on tiptoes, from the top to the toes each individual part gives a shout as it finally goes under and then recombines all together, surrounded by water, surrounded by the pond. Ah... Did I mention the scenery? The blue skies, the tall trees, the ride home in wet pants...

The pond has strong supporters because the pond makes friends easily. The Friends of White Pond work year round on issues of water quality and the overall environmental health of this very special place. The Friends find workable ways for people to participate in helping to keep the pond in top condition. This newsletter will keep you up to date on the upcoming opportunities for you to join in. We hope to see you soon.

Branka Starr & Joe Rogers

DEAD FISH AND BARRELS?

The Friends are researching the Divers Environmental Survey verbal report to the Concord Journal that the bottom of the pond is littered with dead fish and rusting barrels. Calls have been made to the divers requesting

more precise information and pictures for documentation. We'll let you know more when we know more.

Kate Blair

POLICE ENFORCEMENT UPDATE

Police patrols and resident calls have led to action on 78 incidents in the White Pond area from Jan. 1st to June 21st of this year. The incident locations are: the Conservation and Reservation land, the Hemlock St. parking area, and the County access road, with the remainder scattered on streets in the vicinity and on the water itself. The most violations have been parking incidents such as parking in a Fire Lane, Handicap Area, or in a No Parking or Permit Parking Only zone. To date, the remainder of the violations have been of Town Bylaws, and include some cases of alcohol and drug possession.

Your call to report suspicious activity can often give a lead to a more serious violation or may even prevent one. Don't hesitate, your call and your name are handled as confidential information. So, keep calling! In addition, if anyone has any particular concern about a specific incident or policing in general, please contact Chief Wetherbee at the Police Dept. 369-7400.

Jane Prentiss

RESULTS OF COLIFORM TESTS

Coliform is a bacterium counted in colonies, which are masses of organisms arising from a single cell. When the Board of Health samples the water at the Association Beach and sends it to the lab for analysis, the lab counts how many colonies are within the sample. If there are 1000 or more colonies in the sample the beach could be closed to swimming by the Board of Health.

The following is a table of coliform counts from samples taken from the White Pond Association beach.

6/1/93	86
6/23/93	200
7/21/93	180
8/10/93	230
5/26/94	280
6/8/94	20

As you can see, coliform bacteria counts have been at reassuringly low levels. This is good news for all the White Pond Association beach members and for the rest of the private swimmers in that vicinity of the pond!

Jane Prentiss

HOW DRY I AM

The Town of Concord has recently applied to the state Water Management Program for a permit to increase Concord's registered water withdrawals by 25% from 2.09 million gallons per day to 2.549 million gallons per day for the next 20 years. Town officials have said that the additional water is needed to cover a greater and greater peak demand during the summer months and that the primary source of this growing peak demand is lawn watering. The proposed increase would result in larger water withdrawals from Nagog Pond and the Town wells, including the White Pond well.

Many White Pond area residents have been concerned for years that pumping from the White Pond well lowers the water levels of the

pond. This concern has been reinforced by data from the Town's environmental consultants (IEP, 1979; Dr. William Walker, 1987-91) that indicate that the cone of influence of the well intersects the pond and that there is a correlation between high rates of pumping at the well and lower pond levels. Unfortunately, there is not enough information available yet to determine the short and long term impact of lower water levels on the water quality of the pond. However, although we don't know what impact lower water levels have on water quality, we do know that the pond is already in trouble and water quality has been deteriorating.

It is not surprising that there has been a reaction in the White Pond community against the Town's application for increased water withdrawals since that would increase pumping from the White Pond well. As a result, the Friends of White Pond have sent letters to the Town and the state opposing any increase in withdrawals from the White Pond well until its effect on the pond has been determined, and also recommending water conservation as a Town policy.

Judith Sprott

DOVER ST. PROPERTY OWNERS' BEACH

Because of increased public usage of the White Pond Reservation and consequently increased police patrols, it has become necessary to post No Trespassing and Private Property signs on the Dover St. Property Owners' Beach. If police find it difficult to control inappropriate use of the Pond, it may become necessary to create a permit system for usage of the Dover St. Property Owners' Beach by residents and their guests. If anyone with deeded rights to the beach has an idea of how this could be implemented, please call Kate Blair at 369-9194.

Kate Blair

ANNUAL MEETING

The Friends of White Pond Annual Meeting was held at the Rosen/Reisner house on Sunday, April 24th. More than 40 people gathered on a beautiful spring day to listen to a sterling group of guest speakers including Marian and Rusty Wheeler, Dan Monahan, and Police Chief Len Wetherbee.

The Wheelers spoke about the history of the Nine Acre Corner Area, regaling us with anecdotes about their family's experiences on the Wheeler Farm. They also passed around some wonderful old photographs of the Nine Acre Corner area when the greenhouses and the farm were still in operation. We learned for whom Anson, Raymond, and Alden Roads were named, and heard some Thoreauvian tales. Marian has written an article about the area if anyone is interested in knowing more.

Dan Monahan gave an overview of the Natural Resources Commission's concerns about White Pond. The brown trout stocking by the the State could be a problem in that these fish are nocturnal feeders and therefore encourage night fishing. More signs are needed around the pond to discourage gas augers, snowmobiles, etc. Documentation of laws governing abutters' rights is needed. And finally, the White Pond Reservation Task Force has plans to identify and name trails, plant trees and other ground cover on the beach, restore the dune, and make long-term recommendations to the Town for land management. Dan also let us know about a Bird Walk on May 14th and a Lake and Watershed Management Workshop on May 21st.

Chief Wetherbee gave an overview of Police Dept. concerns: the conservation officer will be replaced by regular patrols, some in plainclothes and some on mountain bikes, because car break-ins, over-parking, and inappropriate use of the White Pond

Reservation are a problem. He suggested that a group made up of representatives from each street in the community have a meeting with him each winter to discuss problems, and that residents keep a journal of reports to police, and inform the Chief when they feel that policing is not adequate.

The Friends also had some business to take care of at the Annual Meeting. Clean-up Day was discussed and planned: the Divers Environmental Survey would attend. A dumpster, water, and the bathrooms would be provided by the White Pond Assoc. The semi-annual Septic Pumping Program would take place May 3rd. Concerns about old and substandard systems were discussed. Charles Letovsky suggested that we use some of the Friends' funds to hire a consultant to help us address these concerns. More discussion about this issue was needed, and the next Friends meeting, scheduled for May 19th at the Mazzolini/Schoenberg residence, was designated to focus on this problem.

The Water Quality Monitoring Program was discussed: Jane Prentiss is heading the program and has data from last year which will be interpreted by Dr. William Walker. Needed this summer are weed mappers to help identify the plants in and around the pond. If anyone is interested, they should contact Kate Blair, 369-9194.

The Steering Committee thanks the wonderful guest speakers and all who attended, and looks forward to another productive year.

Kate Blair

*Ed. note: We are seeking more information about brown trout, their nutritional needs and feeding habits. If anyone knows about brown trout we'd like to hear from you. Please call Kate Blair at 369-9194.

FIRST ANNUAL BIRD WALK

Twenty-seven people gathered at the Prentiss home at 6:00 am on Saturday, May 14th. It was not only the first White Pond Bird Walk, but the first such expedition for most folks. From all reports they enjoyed the outing, which proved to be quite an expedition! We bushwhacked south of the pond - new territory for many people.

We had a real nature walk admiring the landscape and its trees, shrubs, wildflowers... and of course birds! A total of 33 bird species were seen and/or heard. Highlights included a nesting great blue heron, oven bird, rufous-sided towhee, ruffed grouse, carolina wren, and bank swallows. Contact our office if you would like a copy of the report; 371-6265.

It was 37°F in the early morning, which was unseasonably cold and slowed down the bird activity. Hopefully next year will be warmer, so we can exceed our tally.

Everyone appreciated the hospitality of Don and Jane Prentiss; the coffee, breads, etc. were most appreciated following our walk and review of bird sightings. Folks left by 10:00 am and headed off for Saturday morning chores with thoughts of returning next year on May 13th!

Dan Monahan

The Friends of White Pond would like to thank Dan Monahan and Brian Windmiller for sharing their time on a Saturday and their knowledge of bird species and plant life with the group. A wonderful time was had by all.

WATER QUALITY UPDATES

Jane and Don Prentiss will be working with Stan Sosnicki of the Concord Health Dept. on water quality testing procedures for White Pond. We anticipate that Stan will do the

monthly testing next year, with Dr. Walker continuing to do the final data analysis and modeling.

Volunteers will be needed for next year to take and record transparency readings on a weekly basis.

Volunteers continue to be needed for weed mapping (see Kate Blair for more info on this). Reference and Comparison material regarding weeds and algae can be examined at Great Meadows Wildlife Refuge Weir Hill, Sudbury.

Any local teens interested in learning more about water quality on White Pond please contact Jane Prentiss or Kate Blair.

Jane Prentiss

YARD SALE

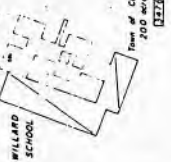
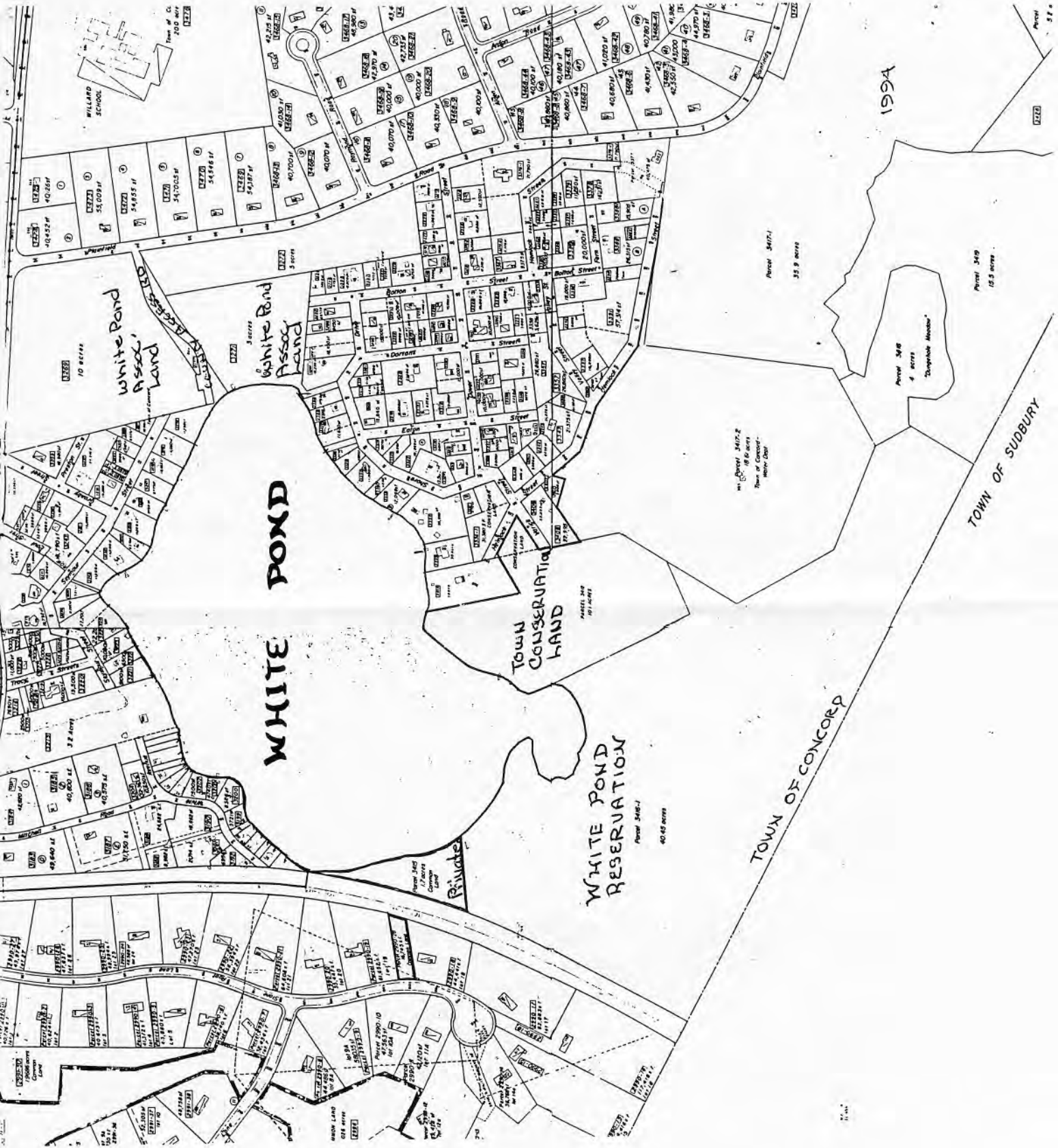
A midsummer collective neighborhood yard sale is being planned. Twenty percent of the proceeds will go to the Friends of White Pond. Participants will be responsible for their own set-up and sales as well as the removal of unsold items. Date: Saturday, July 30th, 10-3. Place: Between 16 and 30 Dover St. For further information call Ida Aronie at 369-2442. Here's your opportunity to turn your excess into another's treasure!

Ida Aronie

SUMMER READING

Just the thing for relaxing days on the Pond, a very interesting and useful book about ponds: Pond and Brook: a Guide to Nature in Freshwater Environments, by Michael J. Caduto, University Press of New England - 1990

Ed. Note: The Editor wishes to thank all contributors for their promptness as this made it possible to fit a difficult job into a busy week.



1994

White Pond
Assoc.
Land

White Pond
Assoc.
Land

WHITE POND

TOWN
CONSERVATION
LAND

WHITE POND
RESERVATION

TOWN OF SUDBURY

TOWN OF CONCORD

Parcel 348
4 acres
"Dunham Meadow"

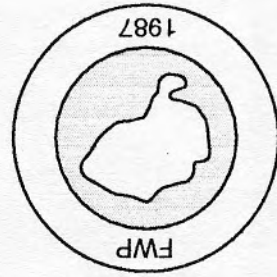
Parcel 347-E
18.6 acres
Town of Concord -
Henry Dale

Parcel 347-A
35.9 acres

Parcel 346-L
40.65 acres

Parcel 345
17 acres
"Lumpkin
Land"

Parcel 344
107.1 acre



THE FRIENDS OF WHITE POND

Board:

Co-Presidents: Ruth Ames 369-3675
Cris Deacon 369-3517

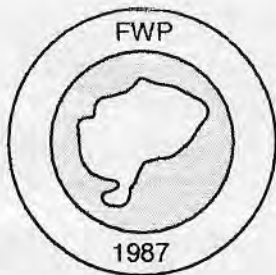
Vice-President/Treasurer:

Alan Aronie 369-5048

Secretary: Kate Blair 369-5680

Newsletter: Cris Deacon 369-35171

Articles for Ponderings are invited.
Send to Cris Deacon,
23 Dover St., Concord MA 01742



VOL. 8 NO. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

JANUARY 1995

CALENDAR

Thursday, Feb. 16th, 7:30 pm Community Meeting with Police Chief Willard School cafeteria
March 16th, 7:30 pm Board Meeting 98 Shore Dr.
end of March next Ponderings to be written (submit articles any time)
April Annual membership meeting (and rites of Spring)
April/May semi-annual septic tank pumping

MEETING WITH POLICE CHIEF

Police Chief Leonard Wetherbee will meet with residents of the White Pond area to discuss community policing on Thursday, Feb. 16th at 7:30pm. in the Willard School cafeteria. He will report the results of increased police efforts around the Pond last summer, as well as plans to strengthen policing programs in our community in the coming year. The increases last summer included extending "No Parking" zones to additional streets, use of the mountain bike patrol and the increased enforcement of conservation and reservation land regulations. He seeks our involvement, believing that community policing programs can only be truly successful if community members are involved in this planning process. Your ideas and feedback are wanted. Do come to this meeting and take advantage of the opportunity to work with Chief Wetherbee to meet our needs in the White Pond area. We hope to see you there! Refreshments will be served at 7:15. If you would like more information on this meeting call Ruth Ames (369-3675) or Cris Deacon (369-3517).

Ruth Ames

BRAVO!

The Dune at Sachem's Cove has been naturalized! Much has happened since our last newsletter. Dan Monahan arranged for a sequence of events that has transformed an eroding and misused area of White Pond. Early in a morning of mid-October a bulldozer from Macone Brothers, Inc. could be heard moving around the terrain of the slope and the area beneath it. Eighty (that's 80) truckloads of organic matter were brought in as top-dressing from the leaf compost pile of the landfill and from the dredged material at Sudbury Road Crossing. The Macones' work was particularly important as the slope was regraded to lessen its steepness and to try to divert the drainage away from the pond.

After this initial preparation a series of volunteer work parties took over under Dan's direction during October and November. Thanks goes to an enormous amount of help from the 'Green People' of Concord, the Boy Scouts, many neighbors, and members of the Friends of White Pond. The slope and adjacent area have been planted with 50 lbs. of tall fescue grass seed, 200 lbs. of rye grass seed and around 750 bushes and saplings of various varieties. There will be a major planting of white pines this spring.

Due to unusually warm temperatures and a winter with sufficient precipitation, the grass is flourishing and we hope the same for the bushes. By and large people in the area have honored the signs to keep out of the replanted area.

During a brief snowy period in early January, a few of the shrubs were flattened by skiers. New trails have been cut to the south of the replanted area and in the back. They have been marked with trail signs. We encourage everyone to please ski (if there is such a thing this winter) on the new trails that go around the area. This restoration effort represents many hours of digging up, lugging, replanting, plant watering and log hauling efforts from all ages of volunteers.

We welcome you to come around to the south-west end of White Pond and take a look.

Beverly J. Smith

BROWN TROUT

Recently, the Division of Fisheries and Wildlife has begun stocking White Pond with brown trout as well as rainbow trout. In order to better understand this new species of fish and to determine whether White Pond is an appropriate brown trout fishery, the Friends have begun to research the brown trout.

In 1994 White Pond was stocked four times: twice in March, once in May and once in June, with totals of 1500 rainbows and 2400 browns. In 1994 a new brown trout regulation was adopted for White Pond: only one brown trout may be creel per day, and it must be a minimum of 15 inches.

Brown trout, also known as German brown or European brown, are usually olive brown on back, shading to a golden brown on the sides

with an ivory-colored belly, with red and black spots on the body. They eat insects, crayfish, lake chub, shiners, and other trash fish, sometimes chasing smaller fish onto shore in a feeding frenzy, but predominantly staying at depths of 50-60 feet to feed. They are difficult to catch, and because they forage for food at night some of the best brown trout fishing occurs at night.

Because the pond is a closed ecosystem we want to understand the impact of introducing this new species. Therefore, more research should be done. Any information or observations would be greatly appreciated. Contact Kate Blair at 369-5680 (or fax her at 369-0097).

For more information on brown trout please see *The Brown Trout Fisherman's Guide*, by David Richey, available at the Concord Free Public Library.

Kate Blair

NEWS FROM THE NRC

Natural Resources Coordinator Dan Monahan tells us that the Natural Resources Commission has a new secretary, Susan Callahan. They are available to receive your calls about the White Pond area and are particularly interested in any unusual wildlife sightings. Call 371-6265 weekdays from 8:30-4:30.

AND FURTHERMORE...

We have been told that the police are writing citations to ice fishermen using gasoline-powered augers on the pond. Augers can pollute the pond to the same extent that gasoline motors on boats do.

FRIENDS AND NEW FRIENDS

For the past ~~seven~~ years the Friends of White Pond have worked actively to identify and address the issues that most affect the water quality of White Pond. In these years the Friends of White Pond have worked with the Town of Concord and many concerned individuals and groups to insure this wonderful natural resource, White Pond, is not destroyed. You have read in our newsletters and in the Concord Journal about some of our projects, such as supporting the town's purchase of the Unisys land, helping with the repair of the eroded bank on town conservation land, fund-raising for the surface run-off control project on the public access road and our watershed community septic system pumping program. But, there is more work to be done!

Through your dues you both join and support the efforts of the Friends of White Pond. The Friends can continue to work for the benefit of the water quality of White Pond and keep our members and the White Pond community informed about issues affecting the Pond. Please join us in this rewarding and important work.

NAME _____

ADDRESS _____

PHONE _____

SPECIAL
CONCERNS _____

DUES FOR 1992 MEMBERSHIP: \$10.00 PER ADULT
\$20.00 PER FAMILY

DUES PAID _____

PLEASE MAKE CHECKS PAYABLE TO "FRIENDS OF WHITE POND" AND SEND, WITH THIS FORM, TO OUR TREASURER: ALAN ARONIE
27 SEYMOUR ST.
CONCORD, MA 01742



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 8 NO. 2

APRIL 1995

CALENDAR

Town Clean-up Days	Monday, April 3 - Saturday, April 8	
White Pond Advisory Committee public meeting	Thursday, April 6, 7:30 pm	Willard School
Friends of White Pond	Thursday, May 4, 7:30 pm	the Deacons' 23 Dover St. 369-3517
Septic Pumping checks due	Friday, April 21	
Divers and Pot-luck	Saturday, May 20	Associates' Beach
NRC Hearing on Wetlands By-Law	sometime in June	

POND CLEAN-UP & SUMMER KICK OFF

Beat the crowds and traffic! Kick off the summer a week early with the Friends of White Pond.

The divers from the Divers' Environmental Survey are once again scheduled to come delve into our clean-up day with us. They will arrive at 9:00 am on Saturday, May 20th to dive for cans and bottles and who-knows-what under the surface of the pond. Everyone's participation is needed to help in the boats and on the beach as we haul another year's worth of trash out of the water. Wear old clothes -- work gloves can be helpful. Al Aronie will coordinate the boats. Call him if you have a boat we can use (369-5048).

We'll wind up our morning with a pot luck cook-out lunch. The divers can tell us a lot about what our pond's floor looks like. This should be a delicious and rewarding way to share our news and views across (and under!) the water. Bring a boat, bring a friend. Bring your favorite party dish, an interesting beach game, and, most importantly, bring yourself. Come when you can, and let's kick off another great Summer season at White Pond together!

Branka Starr & Cris Deacon

HOW'S THE POND DOING???

The water quality monitoring of the pond which began with the studies done by Dr. William Walker between 1986 and 1990 will continue this year. Dr. Walker's studies were done because there were noticeable and unpleasant problems with algae in the pond which signalled a serious deterioration in water quality. At the conclusion of his studies which identified phosphorous as the nutrient source for the algae, Dr. Walker outlined the testing he felt would be most important for long-term monitoring of the pond's water quality. Friends of White Pond members did as much testing as they had the equipment to do in 1991 and 1992, with funding from the Board of Health. In 1993, the Board funded the purchase of more professional equipment and for 1993 and 1994, Jane and Donald Prentiss used this equipment to carry out more comprehensive testing. This year the Board of Health has again authorized funds to pay for the testing, but Michael Moore, Health Agent, and Stan Sosnicki, Sanitarian, will be collecting the monthly samples. This is a major undertaking and we are very grateful for the continuing support of the Board of Health and for this generous commitment of time by the Health Department staff. Perhaps on a hot summer day they'll have a minute for an

iced tea with some kind White Pond neighbor or even a quick swim in our beautiful pond. The Friends of White Pond will be doing the weekly transparency tests.

Water quality testing usually begins in April and continues until October. Testing is done once a month for total phosphorous and dissolved oxygen/temperature at four locations on the pond and at several different depths at each location. Testing for transparency (water with algae in it is noticeably less clear) is done weekly. Since the Health Department routinely tests during the summer for coliform bacteria at the White Pond Associates beach, this public health function will be combined with the water quality testing. The water quality data for 1993 has been circulated to interested people, including the Friends; however, the data for 1994 has not yet been circulated. It is hoped that Dr. Walker will eventually review and comment on the data so that we can better understand its significance. It is very important to continue to build this database of testing results. The pond will only react very slowly to the efforts already made to limit the amount of phosphorous reaching it, but we need to know as soon as possible whether or not our efforts are having any noticeable effect.

Judith Sprott

REPORT OF MEETING WITH CHIEF WETHERBEE

A special meeting of the Friends of White Pond was held on Feb. 16th at the Willard School to discuss neighborhood policing issues with Chief Leonard Wetherbee. In attendance were: Chief Wetherbee, members of the Friends of White Pond and representatives of the White Pond Beach Associates and the White Pond Advisory Committee.

Chief Wetherbee had been invited to speak to the neighborhood about policing issues. He began by giving an overview of community policing in general and the White Pond area in particular. Police, he stated, work with other departments in town and with the public to maintain the quality of life of those in the community. In order to measure the efficiency of the department, the police need data from the community. The calls they get reflect the issues and concerns of the community, and define priorities and goals for the police; he stated that the Department considers the White Pond area a "partner", and that all calls are important.

He then displayed statistics of calls from the White Pond area logged with the department in 1994:

- 64 Parking-Related Issues
- 29 Suspicious Motor Vehicles/Persons
- 28 By-Law Violations (various)
- 10 Disturbances (general)
- 8 General Requests for Service
- 5 Auto Break-ins
- 2 Larcenies

These same calls were listed by specific area:

- 33 Associates Beach Area
- 29 Conservation Land Area
- 27 Dover St. and Adjacent Properties
- 22 Sperry
- 19 Plainfield Rd. Area
- 5 Mitchell/Powdermill Rd. Area

Then he listed the formal actions taken:

- 8 Arrests
- 17 Criminal Summonses
- 26 Citations and/or By-Law violations
- 93 Parking Tickets and/or cars towed

In 1994, June had the most calls logged (60), followed by July (38), and May (15), probably due to weather. This pattern also reflects an

attempt to respond to calls strongly early in the season in order to minimize problems later in the season. Also the "Parking by Permit Only" signs on Raymond Rd. may have helped keep numbers down.

He outlined the policing plans for the White Pond area for 1995: Mountain bike patrols will be routine. (The department will check with Dan Monahan about the foot paths to minimize erosion from the bikes.) The DPW will be purchasing a sign-making machine, which should expedite remaking signs when conservation land signs are vandalized. Dover St. will be part of a traffic study with a traffic counter. Yellow speed-advisory signs will be installed on Plainfield Rd. and Dover St. Crosswalks around the school and on Plainfield Rd. will be painted. Alden Rd. will be observed to see if permit parking signs are warranted. The legality of summer parking at Willard School will be discussed. Research will be done to find a place in Concord to tow cars to so that residents' bikes and cars will not be at risk from stranded motorists. Fisheries and Wildlife will be contacted about enforcement of fishing rules and county road access.

The following concerns were voiced by those attending: The White Pond Reservation Land (WPRL) could be a target for retaliation by vandalism because of the rehabilitation of the dune and planting of the beach. This suggests a need to have an increased police presence in the area at the start of the warm weather. How can we keep people from driving onto the WPRL and the conservation land? Could a rock or large pine logs be placed adjacent to the bollards in the roads to discourage driving off the road into the woods? Can a gate be put in between the old farm house and the beach? Can a sign be put up at the top of Hemlock St. (at the corner of Dover St. and Shore Dr.) to inform people of the rules of the conservation land (especially the prohibition of alcohol) before they go all

the way up the hill to the pond? The possible use of non-locking chains across roads to discourage, but not prevent, access was discussed for locations such as Hemlock St. and the county road. Has there been much displacement of people from the conservation land and the Reservation to the Stone Root Ln. access? What are the differences between the laws governing conservation land and those governing municipal land? The condition of private roads around the pond is now a public safety concern. Chris Whelan will be consulted. Dogs barking on Shore Dr. can be heard early and late across the pond. The Dog Officer will be informed. There is no "No Parking" sign on Powdermill Rd. near Tracy St. Could removable speed bumps be placed on Dover St. to slow down summer traffic? And lastly, Private Ways should be so signed.

Chief Wetherbee agreed to look into each of our concerns and to report his findings to Ruth Ames or Cris Deacon.

Kate Blair

SECOND ANNUAL BIRD WALK

Our first bird walk was a great experience last year when 27 people were up at the "crack of dawn". We followed a very interesting route around "Dunge Hole Meadow" south of White Pond...and we saw 33 species of birds!

Jane and Don Prentiss once again have offered to host this year's bird walk. We will meet at their home at 15 Fern St. at 6:00 a.m., Saturday, May 13th. It is a White Pond neighborhood event, but we will arrange for some "ringers" to help identify the birds by sight and sound. You are welcome to join us, but please no pets or distracting youngsters as this is a bird walk. Dress for the weather and wear good walking shoes. Bring binoculars and a bird book. We should be back to Fern St. by 9:00 for our "bird

countdown" and refreshments...in time to attend to your Saturday morning chores.

Dan Monahan

MEETING WITH SAFETY OFFICER

Officer Douglas Meagher met with neighborhood liaison Kate Blair on Feb. 27th to discuss crosswalks and signs on Plainfield and Dover Sts. Officer Meagher and Ms. Blair agreed that a crosswalk and pedestrian crossing sign would be welcome safety aids at the intersection of Dover St. and Plainfield Rd. and that Plainfield would benefit from yellow speed-advisory signs near the intersection with Powdermill and near Verrill Farm. Some of the signs are already up, and the crosswalk is slated to be painted as soon as the warm weather comes and the painting machine is up and running -- we are very grateful to Officer Meagher for his prompt actions in this matter. If there are any other safety concerns, please call Kate at 369-9194.

Kate Blair

WHITE POND RESERVATION RESTORATION PROJECTS

Boy Scout Troop 142 deserves a great deal of credit for their all day work-a-thon on Sunday, March 26th. Thirty-four people participated in planting 140 pine trees at the old Sperry beach and finally former sand dune. The event was organized by Chris Healey (her husband, Chip Poutasse, and their family were key to the success of the effort). The Boy Scouts made a fine showing as well as did the CCHS Environmental Club...it was a joy seeing so many able youngsters accomplishing so much work to improve our environment.

The Concord Greenpeople planted 18 red cedar trees that were 4-6 feet tall at their work

party on March 21st. These trees had been collected and grown in the Greenpeople nursery for two years.

Planting will continue with additional spring, late summer and fall projects. Undoubtedly there will be mortality of some trees and shrubs; we collected wild stock and are unable to water the plants which is a problem in this exposed, sandy area. The "Greenpeople" will return on April 18th at 1:00 pm to do some more work. Drop by if you're around...or any time...and bring some water buckets!

Dan Monahan

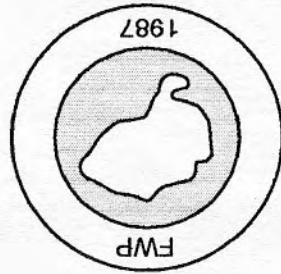
SEPTIC PUMPING TIME

The birds are yelling, "Pump those tanks!" Have you heard them? If you have taken part in our group-rate septic pumping program in the past, you know the routine. Simply write a check for \$50.00 to Comeau Septic, and deliver it, by April 21st, either to Alan Aronie (27 Seymour St., 369-5048) or to Cris Deacon (23 Dover St., 369-3517). If you are new to the program, we need to get some basic information from you so please call or see us when you bring your check. We will call you with a pumping date soon afterwards. You are eligible for our special group rate if you live within the following area: the Dover St. neighborhood (including all streets off Dover); the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including the pond side of Stone Root Ln. Please don't hesitate to call us if you have any questions.

Cris Deacon

Editor's Note:

We understand that the Natural Resources Commission is working on a town wetlands protection by-law which will be more stringent than the state's Wetlands Protection Act. This will affect all shorefront property.



THE FRIENDS OF WHITE POND

Board:

**Co-Presidents: Ruth Ames 369-3675
Cris Deacon 369-3517**

**Vice-President/Treasurer:
Alan Aronie 369-5048**

**Secretary: Kate Blair 369-5680
Newsletter: Cris Deacon 369-3517**

**Articles for Ponderings are invited.
Send to Cris Deacon,
23 Dover St., Concord MA 01742**



VOL. 8 NO. 3

PONDERINGS

BY THE FRIENDS OF WHITE POND

OCTOBER 1995

WE'RE BAAACK

We haven't quite disappeared. But due to very busy lives, it's taken us a while to get ourselves going this fall. My apologies to all who have been waiting and wondering about the septic pumping program.

Our plan of action for this year is limited to putting out three issues of this newsletter and putting the rest of our FWP energies into one project, as yet to be selected. Any burning (or even tepid) issues will be willingly entertained.

Our next meeting will be early in January, to organize the next newsletter. Anyone with a request or suggestion as to topics of interest should call any member of the board any time between now and January.

Cris Deacon

STATE EXTENDS LICENSING DEADLINE

Last year Ponderings had an article on M.G.L. Chapter 91, which requires the licensing by the Commonwealth of all new and existing structures such as piers, docks, floats, retaining walls, pilings, etc. on or near water bodies, including White Pond. At that time there was an amnesty period which was to expire in October 1995 for obtaining these licenses. This amnesty period has been extended to October 1996 and allows owners of unlicensed waterfront structures to apply for a license under Chapter 91 without facing

penalties and under the regulations in effect before Chapter 91 was up-dated.

All owners of unlicensed structures can get an application for a license by calling the Chapter 91 Amnesty Hotline at (617) 292-5777 or writing: Waterways Regulation Program, Division of Wetlands and Waterways, Department of Environmental Protection, One Winter St., 8th floor, Boston MA 02108.

Judith Sprott

AN UPDATE ON THE COVE

One year later Sachem's cove looks totally different. This is all due to the energetic efforts of many volunteers from a number of organizations. The former dune and the land along the shore are now covered with a wide variety of trees and bushes as well as rye grass.

Considering how dry it was this summer, the total amount of plantings lost to drought conditions is quite small. On October 24, the Green People added a lovely border of shrubs along the beach. These newest plantings may need an occasional bucket of water depending on future rainfall. Thank you for whatever support you can offer with watering.

We welcome your participation in planting acorns in this area. According to Dan Monahan, "You can do this simply by putting them on the ground in places where the soil is

soft and then step on them. Otherwise, poke a hole in the ground and place the acorn in the hole. Obviously most of the trees and shrubs we have planted were to stabilize the area and provide a 'nurse crop' for the former dune area. Oak trees would make a good long-term tree in a mixture with white and pitch pine, black birch, red maple and other native trees."

If you have yet to see the transformation, we welcome you to take a look. The fall is a beautiful season to enjoy a walk along the cove.

Beverly Smith

PROPOSED SEPTIC INSPECTION PROGRAM

Dependent upon the level of interest, it may be possible to obtain a special rate for *inspection* of septic systems along with pumping.

Under the terms of the revised Title V, a passing grade from an inspection holds for two years. This means that if title to a property is passed within two years, no additional inspection is required. Of course, if a component of the system were discovered to be in non-compliance with the code, the homeowner would have much more flexibility in addressing the situation, without the considerable pressure of an impending sale. The options would include the variance process, or repair--or no action.

When the new Title V was promulgated earlier this year, the undersigned homeowner was concerned with the possibly of a widespread ripoff pattern by inspectors with ties to firms that perform repairs and installations. A key factor in such a pattern would be the disadvantageous position of the homeowner vis-a-vis the septic system professionals, in

the high-pressure situation of a sale of the home. Indeed, the subsequent reports of rather high failure rates, and very high replacement costs, seemed to have confirmed our fears. We have all read about the drastic impact on home sales. Concord, fortunately, has had a comparatively low failure rate, about 7%, compared with about 25% state-wide. To avoid such a conflict of interest, at least one local septic contractor is reported to have the admirable policy of refusing repair/replacement jobs on systems that they have just inspected.

We will continue to research the possibility of putting together a group rate program. It would be helpful to know how many residents of the White Pond community would be interested in participating in this inspection add-on to the septic pumping program. Anyone who may be interested should pass the information along to an officer of the FWP.

W.B. Smith

SEPTIC PUMPING

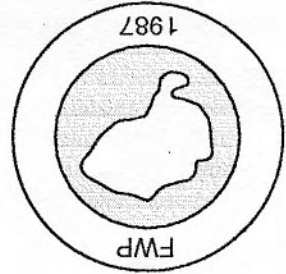
Yes, it's past time, but better late... So, if you know the routine, just make sure you get a check to one of us by Nov. 12th and we'll let you know when to uncover.

If you're new to the neighborhood, you have a unique opportunity to have your septic tank pumped at a discounted group rate. Most tanks cost \$50.00, plus the town's disposal fee, which is billed to you separately. If you live within the bounds of the immediate White Pond neighborhood (the Dover St. neighborhood, including all streets off Dover; the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including the pond side of Stone Root Ln.) you are eligible for the group rate. All you need to do is call Cris Deacon at 369-3517 or Alan Aronie at 369-9168. We'll ask you a few questions

about your septic situation and take down your address and phone number. Then you will write a check for \$50.00 to Comeau Septic and get it to Cris at 23 Dover St. or Al at 17 Seymour St. by Nov. 12. As soon as we have enough households signed up we will schedule the pumping. We will accept checks right up to the pumping date, but it helps us to schedule if we have them ahead of time. Once we have a scheduled date, we will call you and let you know. That's all there is to it. Regular pumping of your septic system helps to keep it in good working order, and that helps to keep our pond healthy!

Cris Deacon

FOR THE FRIENDS OF WHITE POND



THE FRIENDS OF WHITE POND

Board:

Co-Presidents: Ruth Ames 369-3675
Cris Deacon 369-3517

Vice-President/Treasurer:
Alan Aronie 369-5048

Secretary: Kate Blair 369-5680
Newsletter: Cris Deacon 369-35171

Articles for Ponderings are invited.
Send to Cris Deacon,
23 Dover St., Concord MA 01742



VOL. 9 NO. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

APRIL 1996

CALENDAR

Town Clean-up Days Monday, April 1 - Sunday, April 7 all around the pond
Septic Pumping checks due Friday, April 12 Cris Deacon 23 Dover St. 369-3517
White Pond Reservation work party Thursday, April 25, 1:00-3:00 meet at Conservation land
Bird Walk Saturday, May 11 6:00am 15 Fern St.

AN UPDATE ON SACHEM'S COVE

Most of the plantings that were put in during 1995 have survived the ravages of the past winter. It is very encouraging to see that the work of so many people has taken root in the Cove. Many of you, plus the Concord Green People, Dan Monahan from Natural Resources and a Boy Scout troop have helped to make this project a real success story.

But one situation developed this winter that is not at all encouraging for the Cove. Some vehicle or vehicles have turned a little path formerly used by horses and walkers into a vehicle-wide swath of ruined plantings. These vehicles have literally mowed down the rose bushes, azaleas, and pine trees that were in their way. Tracks were also found in various parts of the White Pond Reservation, particularly in the area near the water pumping station off Hemlock. This area is particularly at risk because many lady slippers bloom right along the path that leads from the road to the pumping station up into the woods. We strongly urge all drivers of motorized vehicles to please stay out of White Pond Reservation. We welcome you there on foot or hoof. Thank you for your help with this concern.

The police have been notified by a number of the Friends of White Pond but it seems to us that, in large part, we can police ourselves in protecting the natural treasure (White Pond Reservation) that we are fortunate to have in our midst.

Steering Committee of FOWP

PS: Whether you are walking or on horseback please help out with spring/summer trash pick up. An area with little or no litter usually gets littered less.

JUST A REMINDER

Chapter 91 of the Massachusetts General Laws requires the licensing by the Commonwealth of all new and existing structures such as piers, docks, floats, retaining walls, pilings, etc. on or near water bodies, including White Pond. Owners of unlicensed waterfront structures should obtain a license from the state by October 1996 to avoid possible penalties.

All owners of unlicensed structures can get an application for a license by calling the Chapter 91 Amnesty Hotline at (617) 292-5777 or writing:

Waterways Regulation Program, Division of

Wetlands and Waterways, Department of Environmental Protection, One Winter St., 8th floor, Boston, MA 02108.

Judith Sprott

SEPTIC PUMPING TIME

With the coming of spring comes the sound of the 'Honey-suckers' - our friends the septic tank pumpers. Fred Fish, president of Comeau Septic, commends our ground-breaking (no pun intended) group-rate pumping program, and has given us a list of dos and don'ts for septic system maintenance:

DO:

- pump annually
- know where your tank and leaching field are
- look for brighter green over your leaching field

- check for odors from leaching field
- use liquid detergent, non-abrasive cleaning products, environmentally safe products, small amounts of bleach

- install water-saving devices

DON'T:

- have downspouts drain onto leaching field
- dispose anything non-biodegradable into toilets (e.g. cigarettes, sanitary napkins, diapers)

- rinse paint, thinners, or any other toxic or caustic liquids down your drains

- pour grease or fat down the drain
- use drain cleaners, enzymes or grease dissolvers

- plant trees or shrubs within 10' of the leaching field

- use sprinklers or other watering devices over the leaching field

- drive any vehicles or place heavy objects on the leaching field

- connect a basement sump pump to a household drain

- DO NOT add any additives to your system for any reason. If you have a clog, call your local plumber, roofer or pumper.

If you have taken part in our group-rate septic pumping program in the past, you know that you should write a check for \$50.00 to Comeau Septic, and deliver it, by April 12th, to Cris Deacon (23 Dover St., 369-3517). If you are new to the program, we need to get some basic information from you so please call or see me when you bring your check. I will call you with a pumping date soon afterwards. You are eligible for our special group rate if you live within the following area: the Dover St. neighborhood (including all streets off Dover); the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including the pond side of Stone Root Ln. Please don't hesitate to call if you have any questions.

Cris Deacon

JUST SAY NO!

It's spring and thoughts of summer gardens and plant chores come to mind. There is one chore White Ponders can and should avoid, fertilizing our gardens and plantings. All fertilizers, whether organic or not, are designed to feed plants nitrogen, phosphorous and potassium compounds. Our garden plants and the pond's weeds and algae both use the same food. When we use fertilizers around the pond, whatever our plants don't use can either leach into the groundwater and into the pond, or leach into the pond directly. This is true even for natural fertilizers such as fish emulsions, seaweed preparations or manures. The ultimate beneficiaries are the pond weeds and algae.

Perhaps you've heard the little green voices coming from the pond saying "FEED ME". Just say "No", save your money, save your time, save the pond.

Judith Sprott

NOTES FROM DAN MONAHAN

Dan requests that his office be called with any observations of damage of any kind on the Conservation and Reservation lands. Please report signs of vehicle trespassing and trash disposal as well as any other concerns you have. Dan is also interested in flora and fauna observations.

White Pond Reservation Work Party

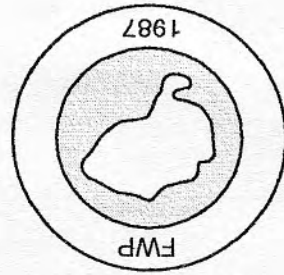
with Dan Monahan and the "Green People"
THURSDAY (NOT early dismissal day!) April 25, 1996 1 p.m. - 3 p.m. Park on the Conservation land - there will be signs to direct you to the work area. We will be planting trees and shrubs and clearing away winter damage and debris. Bring shovels, gloves, hand clippers, brush loppers and hand saws, if you have them.

White Pond Bird Walk

Saturday, May 11, 1996 - Meet at 6 a.m. at Donald and Jane Prentiss' home at 15 Fern Street. This is our third annual bird walk with Dan Monahan; we hope to check out the heron's nest and see lots of interesting birds in our neighborhood.

Town/White Pond Clean-Up

April 1 - 7, 1996 - As we won't be hosting the divers for a pond clean-up this spring, please focus some clean-up energy around the pond during the town clean-up week. It's been a hard winter and there is a lot of trash waiting for us. There will be bags available at Dan Monahan's office at 141 Keyes Road. Filled bags can be left at the public access road, along Powder Mill and Plainfield roads, places where the Town trucks can see them and pick them up.



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VOL. 9 NO. 2

PONDERINGS

BY THE FRIENDS OF WHITE POND

October 1996

TESTING - TESTING - ONE, TWO, THREE

There has been a lot of water quality testing of our pond this summer. The key areas of testing which are important in monitoring the pond each year are: testing the transparency (how clear the water is gives us information about algae levels), testing for the phosphorus that feeds the algae and pond weeds, testing the levels of dissolved oxygen which tells us how much organic activity, such as plants decaying, is going on, and, for remote sensing (more about this later), testing the chlorophyll levels, which is another (and better) indicator of algae populations. There were three major areas of testing this year: working with the Health Department to get the on-going water quality monitoring done; working with the Town's former consultant, Dr. Walker, on dissolved oxygen testing; and working with the United States Geological Survey (USGS), the Massachusetts Department of Environmental Protection (MassDEP) and the Massachusetts Water Watch Partnership (MWWP) on a remote sensing project using the Landsat satellite and on-site testing of the transparency and chlorophyll levels of the pond.

- Unfortunately, the arrangements that the Friends had thought were made with the Health Department to take over the phosphorus and other important water quality tests have not worked out. Even more unfortunately, this did not become clear until the end of July when the pond already had had several algal blooms and much of the

testing season had already passed. However, once the Friends realized what was NOT happening, we made arrangements with the Health Department for the Friends to take over the phosphorus testing and they, in turn, paid the laboratory costs for analyzing the samples and loaned us the equipment we needed. As a result, we did take two full sets of phosphorus testing samples, one in July and one in August.

- The Friends have taken responsibility for doing the bi-weekly transparency (Secchi disk) tests for most of the last ten years, and will continue to do so.

- Dr. Bill Walker, the consultant who did all the professional analysis of the water quality of the pond in the late 1980's, contacted the Friends this summer and proposed to do dissolved oxygen testing of the pond if the Friends could assist. We were happy to provide all the assistance he needed; as a result, we will have dissolved oxygen testing data for this year to compare with the data of past years. Dissolved oxygen testing should have been part of the standard monitoring done by the Health Department. We are lucky that Dr. Walker did it this year, but we will have to work with the Health Department to see what can be done next year.

- The final area of water quality testing was done in cooperation with the USGS, MassDEP, and the MWWP. The Commonwealth is hoping that it will be possible to monitor the water quality of its

lakes using the data gathered twice each month by the LandSat satellite as it flies over Massachusetts. However, they need to have on-site testing of the lakes done at the same time the satellite flies over so they can verify the accuracy and usability of the LandSat data. The MWWP provided training and equipment and the USGS paid laboratory costs to test the transparency, temperature and chlorophyll levels of ponds where volunteers were willing to do the testing. The Friends did the testing for White Pond. The chlorophyll test that the MWWP uses is a much more accurate test of algae levels than the transparency test, especially for White Pond because of the type of algae it grows.

The species of algae common to White Pond has some interesting habits and abilities. Although each separate organism is invisibly tiny, it "clumps" together with others of its kind and eventually the clumps become big enough to be seen. Most of us have had the experience of looking into the pond on a sunny day and seeing those little specks of green sparkling in the water. That's our algae. However, this clumping ability means the billions of algae in the water do not usually affect its transparency. Their little "bodies" are not distributed throughout the water which would make it look green and cloudy. Instead, the clumps leave lots of clear water between them and the water looks quite transparent. *That's why White Pond can have an algae problem but still look so clear.* This species has another unusual capability. Each organism has gas vesicles (pockets) that can expand or contract to change its buoyancy. This allows it to rise or sink in order to get the sunlight, nutrients, and temperatures it needs. However, it takes time for the vesicles to expand or contract; as a result, the algae can get caught in the wrong place at the wrong time and that can be fatal. For instance, if we have a sudden, very hot day the algae that have risen to the light and warmth can die of the heat before their vesicles can contract and

allow them to sink to cooler water. When this happens, we see (and sometimes smell) an algae scum on the pond - millions of little dead algae that have floated to the surface and are decomposing. Unfortunately, this doesn't mean the pond will have fewer algae; the dead feed the living and the living continue to reproduce. The results of these different testing programs are not all available or analyzed yet; but a quick look at the results of this year's first dissolved oxygen, phosphorus and transparency tests look very similar to past years. If a thorough analysis confirms this preliminary impression, it would mean that the water quality of the pond has not improved, at the same time, it has not gotten significantly worse. More on this in the next issue of Ponderings.

Judith Sprott

UPCOMING WORK PARTY AT WHITE POND RESERVATION

There will be a work party on Thursday, November 21st from 1 to 3 PM under the direction of Dan Monahan of the Department of Natural Resources. Work to be accomplished includes trail maintenance as well as shrub pruning. Vines that have twined around some of the perennials need to be cut back. Your participation will be most welcome. Meet in the clearing on conservation land above Sachem's Cove. Go to the end of Hemlock Street and continue on the wide path through the woods and you will arrive at the clearing.

Beverly Smith

BUT IT'S SO PRETTY . . .

Purple loosestrife, the pretty purple flowers that we see blanketing wetlands from ditches to river banks from Maine to Minnesota, has

come to White Pond. Loosestrife is not just pretty, it has incredible survival and reproduction mechanisms with which it overwhelms native plants and can drastically change the land it dominates. It can do so much damage to the ecological systems it invades that it has been declared illegal to sell or distribute in several states already.

There have been small local outbreaks of loosestrife around the pond in the last few years which residents have controlled by destroying the plants. More serious was the discovery that the restored dune/beach area on Town land at the south end of the pond was sprouting loosestrife all over the place. Armed with pitch forks and strong backs, a few of us spent many hot hours this summer digging up every loosestrife plant we could and piling them well away from the pond where they could die in peace. We will probably have to make a similar effort next year and then, hopefully, a small maintenance effort each year will keep it at bay.

Judith Sprott

The Sachem's Cove area continues to grow as a natural shore environment. Most of the shrubs planted within the last two years are flourishing. The flowers of the Golden Glow were especially beautiful at the end of the summer season. Plantings in the lower left corner of the cove suffered some damage due to foot traffic and beach use.

Bravos to Judith and George Sprott for pulling up many invading loosestrife plants. If you have tried to pull out any of these invaders, you know they do not yield easily to human muscle or shovel. Without a diligent effort to curb this plant, the species will spread like wild fire and crowd out many other types of plants.

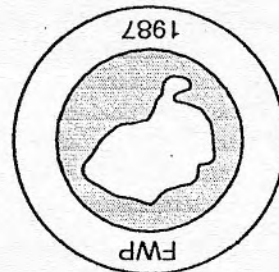
Beverly Smith

SEPTIC TANK TIME

Here we go again, folks. Our pumping date this time around is Nov. 15th. If you know the routine, just make sure you get a check to Cris Deacon at 23 Dover St. by Nov. 12th. Do it now! Before you forget!

If you're new to the neighborhood, you have a unique opportunity to have your septic tank pumped at a discounted group rate. Most tanks cost \$50.00, plus the town's disposal fee, which is billed to you separately. If you live within the bounds of the immediate White Pond neighborhood (the Dover St. neighborhood, including all streets off Dover; the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including Stone Root Ln.) you are eligible for the group rate. All you need to do is call Cris Deacon at 369-3517. Call now! Before you forget!

Cris Deacon



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VOL. 10 NO. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

April 1997

ROADS UPDATE

Ruth Ames has attended many of the DPW Commissioner's meetings to initiate their work under the bylaw on the White Pond area roads. She has been assured that materials will be available for petitioners by April 15th. She invited the Commission to write an article for Ponderings reporting their progress in planning this project. Mr. Paul Cote, assistant to the Director of the Public Works Dept. responded as follows:

"When the 1996 Annual Town Meeting adopted Article 18 authorizing the Department of Public Works to make temporary repairs to most private ways in the White Pond neighborhood, there were a number of issues which remained unresolved, including the following:

- Whether funding for these repairs would be requested each year as a separate warrant article, whether a revolving fund would be created to pay for these repairs, or whether funding would be requested as part of the borrowing authorization for the annual program of repairs to Town roads;
- Whether each betterment assessment would be specifically approved by vote of Town Meeting or whether a vote of the Public Works Commission would authorize any betterments provided for under the bylaw;
- The procedure and time table for undertaking repairs; and
- The definition of temporary repairs.

The Public Works Commission has received two petitions for repairs under the new bylaw, one for Granby and Seymour Streets (August, 1996) and one for Bolton and Fern Streets (September, 1996). At the 1997 Annual Town Meeting, the Public Works Commission is requesting authority to borrow \$590,000 for road repairs, \$30,000 of which would be available for repairs in the White Pond neighborhood. It is anticipated that this will be enough money to perform repairs on the four streets which have already contacted the Public Works Commission.

These repairs are expected to take place during the summer of 1997. If petitions are received by the Public Works Commission from property owners on other streets in the White Pond neighborhood during May, they could also be repaired during 1997, depending on the type of repair work to be done, the cost of those repairs, and the outcome of the public hearing process."

Editor's Note: As water quality is the primary focus of the Friends of White Pond, we are most concerned that any road repairs be done with appropriate drainage so as to reduce runoff into the pond rather than to continue, or worse yet, create it.

IS IT SPRING YET?

It's time to get out the Secchi disk and set up water testing and other pond projects for this season.

This will be the second year of the remote sensing project being carried out by the United States Geological Survey, the Massachusetts Department of Environmental Protection, the Massachusetts Water Watch Partnership, and volunteer monitoring groups all around the state. As part of this project, the Friends of White Pond will take Secchi disk depth readings, and chlorophyll and color samples for laboratory analysis. We will also map the aquatic vegetation in the pond, since increased amounts of floating and rooted water vegetation are also the result of high levels of nutrients. Many ponds around the state have serious problems with "exotic" species of weeds, some of which can blanket an entire pond in just a few years and are almost impossible to eradicate. We are very fortunate that none of these species have been seen here yet.

However, we do have our own problem, purple loosestrife, the striking purple spire plant that can be seen throughout the state and country when it blooms in late summer. This is an "alien invader" that eventually takes over shorelines of ponds and rivers and other marshy areas. There are isolated plants all around the margins of our pond, and a major outbreak in the newly planted area at Sachem's Cove. The Friends will work again this year to remove every loosestrife plant we see, but anyone who sees it anywhere around the pond is encouraged to pull it up by the roots (try not to break off any root sections) and dispose of the entire plant in the trash where neither seeds nor roots can survive to grow again.

The Friends are putting together this season's water quality monitoring program. The remote sensing testing will definitely be carried out as well as the standard weekly Secchi disk testing. We have also begun taking water depth measurements and that will be continued. In addition, the Health Department has again agreed to provide equipment and

The Friends are putting together this season's water quality monitoring program. The remote sensing testing will definitely be carried out as well as the standard weekly Secchi disk testing. We have also begun taking water depth measurements and that will be continued. In addition, the Health Department has again agreed to provide equipment and funding for phosphorus testing. Last year, Dr. William Walker, our former water quality consultant, came back to do some dissolved oxygen and temperature testing and he has shared his results with us. It is unclear, at this time, whether the full complement of phosphorus, dissolved oxygen and temperature testing will be necessary this year. Anyone with opinions on the matter is welcome to contact me at 369-4850.

We have begun building a computer database of water quality testing results from 1988 until the present. And, with some of the data available, we are looking at what the data can tell us. For example, we are graphing phosphorus test results for the last eight years so that we can see a direct comparison and, hopefully, be able to see whether or not the levels of phosphorus show any trends.

One last note: we are all watching as the pond continues to rise. One consequence of higher water levels is the loss of the open sandy "beach" around the pond that helped absorb any surface run-off (from paths, steps, etc.) before it reached the pond. If anybody notices any spot where run-off can now directly reach the pond, diverting the run-off so it can be absorbed before reaching the water will help control the amount of phosphorus reaching the algae.

Judith Sprott

LOOKING FOR SEPTIC SYSTEM INFO?

Try the Internet!

If you are wondering how the recent revisions to Title 5 of the State Sanitary Code affect you, one good place to get informed is DEP (Department of Environmental Protection) Bureau of Resource Protection.

<http://w.w.w.magnet.state.ma.us/dep/brp.dep.home.htm>

This internet address gives you access to some excellent information. Whether your septic system is near the Pond, in the Groundwater Conservancy District and/or in the Interim Wellhead Protection Area or none of the above and you simply like to surf the net, check it out!

The Bureau of Resource Protection provides answers to septic system questions that our neighborhood commonly has, such as:

1. Sources of Financing for Septic System Improvements.
2. Title 5 Questions & Answers regarding Property Transfers.
3. Title 5 Consumer Protection Tips for Septic System Inspection & Repairs.
4. Title 5 Questions and Answers regarding Alternative Systems.

Happy Surfing!

Jane Prentiss

And speaking of septic systems... PUMP 'EM!

We recommend annual pumping of septic systems in the watershed, and especially near the shoreline of the Pond.

Spring pumping will occur on May 1st. If you have done this with us before, bring a \$50 check (made out to Comeau Septic) to Cris Deacon at 23 Dover St. by April 25th. You must expose the clean-out lid prior to the

pumping day. If you can't, you must mark its location and let me know so that I can warn the pumpers of the need to dig. They will charge an extra digging fee.

If you're new to the program, you have a unique opportunity to have your septic tank pumped at a discounted group rate. Most tanks cost \$50.00, plus the town's disposal fee, which is billed to you separately. If you live within the bounds of the immediate White Pond neighborhood (the Dover St. neighborhood, including all streets off Dover; the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including Stone Root Ln.) you are eligible for the group rate. All you need to do is call Cris Deacon at 369-3517.

Cris Deacon

LOTS TO BE GAINED OR LOST

As flowers and leaves begin to clothe the barren branches, take a moment to look around at the natural beauty of our little Eden. Though we live in one of the highest-density neighborhoods in Concord, there are still many scattered stands of trees and undeveloped wooded lots peppered among the houses to make it seem more spacious and private. Most of us have taken this for granted. But the White Pond neighborhood is seeing the pressures that result from having less and less developable land in Concord. Lots that seemed unlikely for development are becoming prime targets. With this has come an increase in the rate of new house construction in the White Pond area. We all can understand the attraction of our neighborhood, and with each new house wonderful new families have become a part of the community. Yet, a too rapid build-up should also be a cause for concern. Our proximity to the town well, wetlands, and a fragile pond ecosystem make it important that

we consider the larger impact of this potential future growth. Not only would a rapid build-up decrease some of the natural beauty of our surroundings, and put added cars on some already inadequate roadways, but it would also increase the burden on the pond and groundwater, both due to increasing use and from increased runoff and leaching from land cleared of trees. A handful of neighbors have begun talking with conservation groups around the area in an effort to discover means for purchasing or otherwise protecting some of these remaining undeveloped parcels, and to encourage interest and solicit input about long range planning for future development in this area. If you are interested in finding out how you might help or have ideas to contribute please drop a note to Terry Deacon (23 Dover), Jane Prentiss (15 Fern), or David Bearg (20 Darton).

Terry Deacon

WHITE POND ANNUAL BIRD WALK

On Saturday, May 10th, we will meet at 6:00 a.m. at the Prentiss residence (15 Fern St.) and will return to that location at the end of the walk to review our bird lists, discuss our finds and enjoy some refreshments.

The invitation is open to the White Pond neighborhood and other Concord birders who would like to see or hear the birds of the surrounding woods, fields and wetlands.

Consider the following:

You will need comfortable shoes or boots (the trail is sometimes rather muddy), a pencil, binoculars if you have them. We usually share birding books and will provide birding lists. Dan Monahan will be joining us and he usually invites some advanced birders who graciously help us in our quest to find and identify.

The hike is easy to moderate and winds up

somewhere between 8:00 and 9:00 a.m. This is a die hard group so if it is overcast we are optimistic it will burn off, and we go out anyway.

If you are trying to decide whether to bring your child consider the following: length of time, hiking ability of your child, and the child's ability to listen for the sounds of our small feathered friends. Kathleen Adhanom (at age five) joined us one year and used her keen listening and observing skills to make some very interesting finds.

Should you take your pet along? We all love our pets but due to the nature of this hike they are best left at home this time.

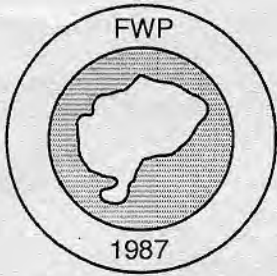


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Even if you are not a birder come out with us and observe the sights and sounds of Spring. We look forward to seeing you!

Jane Prentiss

THE FRIENDS OF WHITE POND Board
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Alan Aronie 266-1590 Secretary: Kate Blair
369-5680 Newsletter: Cris Deacon 369-3517
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VOL. 11 NO. 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

May 1999

POND AND SHORE CLEAN-UP SCHEDULED

On Sunday, May 23rd, the Friends of White Pond will sponsor an environmental clean-up day at White Pond. Divers from the New England Aquarium Divers Club will arrive at the Pond by 9 AM. They will gather on land by the White Pond Associates beach. Their goal is to work the shoreline, removing debris and litter.

Five to 20 divers will be in the water by about 9:30. They expect to work in the Pond for 3 hours. By 10 AM they will need support help both on shore and on the water, to gather the debris that they "harvest" and bring it to a pick-up location. If you have a boat, please call Kelly Roberts at 287-4249 and let her know that you (or your boat) will be available to help on the water. If you do not have a boat, please come to help on shore, either by accepting and bagging debris from the divers, or by picking up litter along the shoreline and banking around the Pond. Wear old clothes and gloves to protect your hands.

We need hot beverages and refreshments for the divers, who will use a lot of energy in the still cold waters of White Pond. Coffee, decaf, broth, tea, etc. will help to warm us all. Toward the end of the workday we want to celebrate our work by sharing sandwiches, chips, cookies, etc. with the divers. Please bring hot drinks and food to share to the area by the White Pond Associates beach, and join us for an early season picnic.

We want to emphasize that no gasoline engines will power boats used for this clean-up day. The dive will be supervised by a Dive Master from the New England Aquarium Club. We have worked with this diver's group, and with the Concord Natural Resource Department, and the Fire and Police Departments to plan a safe clean-up day. Please join us for a fun and productive day with your neighbors, as we work to keep the waters of White Pond well and safe.

Ruth Ames

TITLE V

Living in a neighborhood with older septic systems, small lot sizes, and a number of private wells, many of us have reason to be concerned about whether our systems could pass a Title V inspection. Title V mandates that septic systems pass a rigorous inspection when homes are sold, inherited (other than by a spouse), or otherwise transfer title. In addition, the effectiveness of septic systems in our neighborhood can have a major impact on the quality of water in the pond.

The White Pond Advisory Committee has been talking to the Board of Health, which administers Title V, and has begun to explore avenues for helping the White Pond area to upgrade its septic systems.

Community Septic Management Program

Concord recently was awarded \$200,000 from the state Department of Environmental Protection to provide low interest loans for a 5, 10, 15 or 20 year period to homeowners who need to upgrade their septic systems. The town has given the White Pond neighborhood priority for these loans. If a White Pond resident applies for a loan, there are funds remaining in the fund, and the applicant's system has failed, the White Pond resident would be given priority over residents of any other eligible neighborhoods. Since the funds are limited, White Pond residents interested in applying for a loan should call Mike Moore at the Concord Board of Health about this program sooner rather than later.

Alternative Technologies

Hooking up to the town sewer is an attractive idea, but our distance from the existing sewer system makes this an unrealistic strategy for White Pond. However, we are learning about alternative waste water treatment systems including shared and community septic systems. Shared systems involve the use of common leaching fields for several homes, while community systems may involve up to 200 homes. Larger systems could be governed by setting up a sewer district for the neighborhood and funded through betterments. Participation in a community system would be

voluntary, with homes able to buy in when they needed to replace their existing system, as long as there was remaining capacity in the system. This is an opportune time to be investigating such alternatives because the town is mandated to develop a comprehensive wastewater treatment plan.

Many questions need to be answered before we can determine whether shared or community systems are viable for some or all of our neighborhood. We must learn more about the new technologies, the amount of land they require, the maximum distance between the homes and the common leaching field, system costs, available methods to finance costs, and optimum number of homes for a particular technology. Given these parameters, we will have to determine whether there is a suitable site, and whether it can be purchased or otherwise acquired for this purpose. Before beginning this task, the White Pond Advisory Committee wishes to assess the interest of White Pond residents in considering such alternatives.

Meetings to Learn About Title V and Alternative Wastewater Treatment Technologies

We are sponsoring two meetings with Mike Moore of the Board of Health:

* Tuesday May 25, 7:30 at the home of Alice Rosen and Hank Reisner. Small group meeting. Please RSVP to Wendy Holt at 369-9558.

* June date to be set, Willard School.

Mike Moore, Administrator of the Board of Health, will be present at both meetings. He will provide an overview of Title V requirements, present information about the available technologies, and discuss methods for the financing and governance arrangements for such shared systems. At the larger meeting, we will also present information about the impact of wastewater treatment on White Pond and will ask participants to indicate their degree of interest in considering use of such technologies. This will not be binding in any way. However, it will provide the White Pond Advisory Committee with a better understanding of White Pond residents' concerns about their septic systems and their preferences for methods to upgrade them, if needed. If there is sufficient interest on the part of neighborhood residents, the White Pond Advisory Committee will actively seek further information and will evaluate the viability of such systems for our neighborhood. In addition, this information will help us to better represent the community as the town proceeds in developing a community-wide wastewater treatment plan. Please call Wendy Holt (369-9558) or Judith Sprott (369-4850) if you have any questions.

Wendy Holt, WPAC

TESTING, TESTING, 1, 2, 3

Most of the water quality monitoring for the last few years has been done as a part of the United States Geological Survey/Massachusetts Water Watch Partnership (MWWP) satellite project. The project included the following measurements.

- Secchi disk - this measures the transparency of the water, and for our pond it indicates the amount of algae floating in the water.
- Chlorophyll and color - these are more precise measurements of the algae present in the pond.
- Aquatic vegetation mapping - this evaluates and maps the vegetation growing in/under the pond. An increase in the vegetation is a signal that there are too many nutrients in the water.

This project is now completed and we are working with the Concord Health Department and the MWWP to work out an on-going monitoring program.

The general conclusion from this testing is that although the amount of algae in the pond fluctuates during the testing season and from year to year, it is neither improving nor getting significantly worse. This is not surprising. We know that the change in the pond which is the cause of this problem is an overabundance of the plant nutrient, phosphorus. Phosphorus reaches the pond from many sources including our homes and yards, our roads and our sewage disposal systems. The pond has no inlets or outlets, so its ability to clean itself is very limited. Even if we contributed 0% phosphorus to the pond, the level of phosphorus and the problems it causes would only slowly decrease.

The aquatic vegetation mapping has not been done before so we have no data to compare it with; however, it is our baseline for the future. My opinion is that there is much more 'greenery' growing under the water than I remember seeing for the last 25 years. None of the types of vegetation, so far, are alien invasive weeds that are damaging many other ponds in Massachusetts.

We must continue to do whatever we can to limit the amount of phosphorus reaching the pond by:

- keeping our on-site sewage disposal systems doing the best job possible through careful use and frequent pumping/maintenance
- preventing erosion and surface run-off from reaching the pond
- using no fertilizers (organic or not) near the pond and very limited use within the watershed.

Judith Sprott

SUDBURY PROPOSING to BUILD ELDERLY HOUSING

The town of Sudbury has developed plans for 40 units of moderate price elderly housing on the land it owns on the former Unisys property. On May 12, Sudbury officials met with Concord town officials and a number of representatives of the White Pond neighborhood, including the White Pond Advisory Committee, the former White Pond Reservation Management Committee, and abutters of this property, to describe their plans and hear our concerns.

This presents a brief description of the proposed project, and the concerns raised in the meeting. This project should not be confused with the Northwoods assisted living facility already under construction. That 66 unit facility is located on the opposite side of the office building. This project will be located near the boundary between Sudbury and Concord, and appears to be located primarily on the fields on either side of the gravel road that goes down to the Cove. The buildings will be one story duplexes that will be owner occupied and will be managed by an association that will include both residents and representatives of the town of Sudbury. Sudbury's Planner stated that it recognizes that the development will fall within Zone 2 of the White Pond Well, and as such, the septic system will have to meet a higher standard for treatment. A number of acres on the remaining Sudbury owned Unisys land will be permanently conservation restricted.

Concord residents raised a number of concerns. Abutters who had, along with the town of Sudbury, experienced contamination of their ground water from the Unisys pollutants, questioned how well the movements of groundwater from that area are understood. This information is needed in order to determine the true impact of this development on ground water, and where the impact would be felt. Some of these abutters have experienced no improvement from the efforts to treat the pollutants and were concerned about a lack of communication about tests done on their land and analysis of groundwater data. (An extensive report of data on ground water quality collected over the past three years will be issued shortly.)

Concord residents were also concerned about septic disposal, questioning the impact of additional nitrogen on well water and the impact of additional phosphorus on the Pond. In addition the importation of water from Sudbury wells ultimately discharged through the development's septic system will have unknown impact on groundwater levels and flows. Residents also raised concerns about having continued access from one part of the White Pond reservation to trails on other Concord

lands. Concerns about overall use and potential misuse of trails in this area were also expressed.

The Sudbury Planner will ensure that all notifications of hearings or other public meetings concerning this plan will be sent to Concord's Planning Department, and the septic plan will be provided for Concord's review. Friends of White Pond with concerns or questions about this proposal should be in touch with one of the members of the White Pond Advisory Committee, and may wish to attend relevant Sudbury meetings.

Wendy Holt

WHITE POND ADVISORY COMMITTEE

The White Pond Advisory Committee is an official town Committee appointed by the Selectmen and serving under the general supervision of the Board of Selectmen with staff guidance from the Town Manager. This five-person Committee was established in 1973 as an "advisory and liaison Committee to review and analyze the concerns of the White Pond area and play a leadership role in programming the solutions to the recognized and accepted problems."

Most recently, for example, the effort to get the town's cooperation in repairing and repaving our private roads was due to the leadership of the White Pond Advisory Committee. Ongoing projects of WPAC include: reviewing applications for building renovations that might have an adverse effect on the water quality of the pond, following Sudbury's plans to build a senior affordable housing development on their part of the former Unisys land, and tracking the agendas of other town boards for issues that could overlap with concerns in the White Pond area. Current membership of White Pond Advisory Committee: Joan Turner, chair; Wendy Holt, Kelly Roberts, Herb Kottler and Paul Rogers. We are all available by phone and welcome your calls. WPAC meets regularly on the first Tuesday of each month in the second floor meeting room, 141 Keyes Rd. White Pond residents are encouraged to attend these meetings.

Joan Turner

WHO ARE THE FRIENDS OF WHITE POND?

The Friends of White Pond have been working to identify and address issues affecting the water quality of White Pond for over ten years. We have been able to work toward our goals because of the active participation and financial support of our members. We invite you to become a member of the Friends of White

Pond.

The modest dues are vital to our work. Over the past ten years we have worked with our neighbors, with the White Pond Advisory Committee of the Town of Concord, and with other concerned individuals and groups to address potential threats to the water quality of the Pond. Among the projects we have supported, through funding or active participation, are the following:

- * Surface run-off control on the public access road to the Pond.
- * The semiannual neighborhood septic system pumping program for our watershed.
- * The purchase of the Unisys land by the Town of Concord.
- * The repair and replanting of the eroded bank on Town Conservation Land.
- * The initiation of a water quality monitoring and testing program (see "Testing, Testing, 1, 2, 3")
- * Clean-up days for White Pond, working with our neighbors to clear litter from the shore and slopes around the Pond, while members of environmentally responsible diving clubs remove debris from the bottom of the Pond.
- * Writing and publishing Ponderings, to share information about our work with families and individuals

who care about the water quality of White Pond.

If White Pond is to survive as a healthy environment for fish and other aquatic creatures, and as safe water for our recreational use, our work as friends of the Pond must continue. You have read of our current concerns and activities in this issue of Ponderings, and we ask you to join us in our future work. Please complete the form below and return it with your dues.

Ruth Ames

BULLETIN BOARD

- Any interest in FWP organizing a community trash/recycle pickup for large, hard-to-dispose-of objects such as discarded boats, docks, land other waterfront stuff no longer in use?
- Two White Ponders have asked about the existence of a reference list of plants indigenous to the banks of the pond. Does anyone have any information about such a list?
- FWP call for new recruits to help with next newsletter

NAME _____

ADDRESS _____

PHONE/E-MAIL ADDRESS _____

WOULD YOU LIKE TO MEET WITH, OR BE PART OF, THE STEERING COMMITTEE OF THE FRIENDS OF WHITE POND? YES _____ NO _____

IF YOU HAVE QUESTIONS OR CONCERNS, FEEL FREE TO SHARE THEM _____

DUES FOR 1999 MEMBERSHIP: \$10.00 PER ADULT
\$20.00 PER FAMILY DUES PAID _____

PLEASE MAKE YOUR CHECK PAYABLE TO "FRIENDS OF WHITE POND", AND SEND, WITH THIS FORM, TO OUR TREASURER: JUDITH SPROTT
43 WHITE AVENUE
CONCORD, MA 01742



PONDERINGS

BY THE FRIENDS OF WHITE POND

IT'S A NO-NEWS NEWSLETTER!

***EXCEPT* for SEPTIC PUMPING TIME!**

The most popular feature of our regular newsletter...

Here's the usual drill: If you have taken part in our group-rate septic pumping program in the past, you know that you should write a check for \$50.00 to Comeau Septic and deliver it, by **November 1st**, to Cris Deacon (23 Dover St., 369-3517). If you are new to the program, we need to get some basic information from you so please call or see me when you bring your check. I will call you with a pumping date soon afterwards. You are eligible for our special group rate if you live within the following area: the Dover St. neighborhood (including all streets off Dover); the area between Powdermill Rd. and the pond from Plainfield Rd. up to and including the pond side of Stone Root Ln. Please don't hesitate to call if you have any questions.

Cris Deacon

We'll have water-quality testing results to report to you in a spring newsletter. Have a great winter!



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL.12 NO 1

JUNE, 2000

HOW IS THE POND DOING?

Our water quality monitoring program this year has been developed with advice and assistance from the Massachusetts Water Watch Partnership (UMass) and Dr. William Walker, our long-suffering water quality consultant. The program calls for measuring the phosphorus and dissolved oxygen four times a season, measuring the transparency each week (if possible), recording the elevation (depth) of the pond. We test for phosphorus because it is the "fertilizer" that feeds the algae and the aquatic plants. We test for dissolved oxygen because it tells us about what biological activity is going on, for instance, the amount of decay of organic materials in the sediments on the bottom of the pond. We test the transparency of the water because it tells us about the numbers of algae there are in the water. A perfectly healthy pond like ours should have very low phosphorus levels, lots of dissolved oxygen from top to bottom and the water should be clear for many, many feet down. The pond has not been that healthy for quite a few years now.

The first round of testing this year was done by Dr. Walker in April and the results are both good news and not-so-good news. The phosphorus levels and the dissolved oxygen levels are very similar to those measured 10 years ago when Dr. Walker was first doing the same testing. That's good news; the pond doesn't seem to be getting significantly worse. The not-so-good news is that despite what we have done (catch-basins, erosion control, and the septic pumping program), the pond isn't getting significantly better either.

Phosphorus reaching the pond from surface run-off and on-site sewage disposal systems is still a problem. We need to continue to be vigilant about not using fertilizers near the pond, especially those with high phosphorus content. Thanks to state law, almost all household products can no longer have phosphorus in them. Dishwasher detergent is an important exception to this law. However, there are dishwasher detergents available that have no

phosphorus at all; both Shaklee distributors and The Natural Gourmet in West Concord carry them. We also need to continue to do whatever we can to prevent surface run-off, with its consequent phosphorus load, from reaching the pond. Some of these very heavy rains we've been getting can send cascades of water and soils down slopes and stairs directly into the pond.

It is wonderful to watch our winter world gradually "green up", but that's not what we want to see happening in the pond.

Judith Sprott

SEPTIC PUMPING PROGRAM

You may have missed the Friends of White Pond group septic pumping this spring. This has been purposeful. We have learned more about septic system maintenance from our contact with the consultants assisting the town to develop the waste water treatment plan. Modern septic systems that are functioning well actually perform better when they are pumped less frequently. Frequent pumpings disrupt the bacterial colonies that process the waste and temporarily reduce the system's effectiveness. However, systems with problems and those that use cess pools instead of leaching fields may need the more frequent pumping.

We are currently working with the Board of Health to develop guidelines to help homeowners determine how frequently their system should be pumped for optimal functioning. The guidelines will be based on the characteristics of the system and an assessment of its functioning performed by the pumper at the time of pumping. We hope to have these guidelines available in time to sponsor a fall group pumping program.

Wendy Holt

WHAT IS GIARDIA?

Giardia is a protozoal parasite with a complex life cycle. It inhabits the small intestines of humans and other mammals and is spread by fecal to oral contact. In its contagious cyst phase, it is present in most surface water sources and may exist from approximately one to three months in this dormant stage. It is resistant to chlorination, but is destroyed by soap and water and drying (the cysts cannot survive desiccation).

Surface water can become contaminated with giardia from many sources. Rainwater can wash horse, dog, cat, or wild animal feces into the surface water. Human waste can enter from children defecating in or near the pond, from wearing soiled diapers in the pond, from rinsing in the water after toileting, or from dysfunctional septic systems.

We can protect the pond from contamination by:

- ◆ keeping our dogs and cats from defecating in or near the pond at all and cleaning up after them if they do,
- ◆ keeping horses at least 100 feet from the edge of the pond,
- ◆ checking and maintaining our septic systems,
- ◆ not allowing children to swim in soiled diapers, and
- ◆ washing with soap and water and drying our hands after toileting or changing diapers.

We can protect ourselves by:

- ◆ not drinking the pond water and
- ◆ washing with soap and water and drying off after a swim.

Giardia is easily treatable, so if you or your children experience the abdominal pain and diarrhea associated with giardia, check with your doctor.

Kate Blair

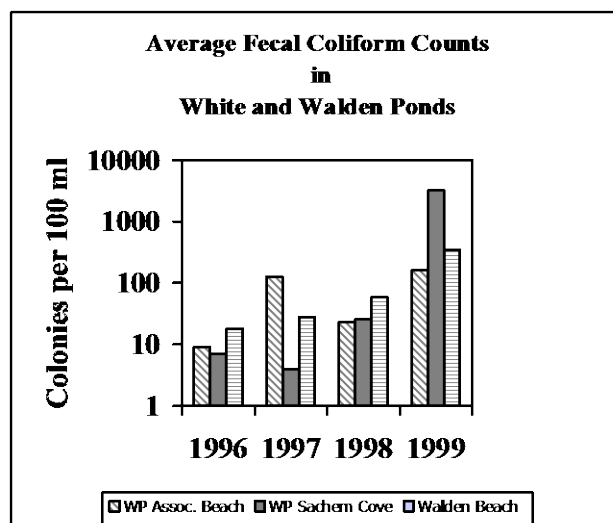
FECAL COLIFORM IN CONCORD WATERS

Measurements of fecal coliform counts in White Pond and other town recreational waters have been increasing in the last four years. Between five and ten measurements have been taken by the town during each summer swim season (1996 thru 1999) at the White Pond Association Beach and the Cove Beach areas and at Walden Pond Main Beach as well as other town locations.

Currently, health requirements state that no more than 200 fecal coliform colonies per 100 milliliter of water is safe for swimming. In 1997 30% of the measurements at the Association Beach exceeded 200 colonies/100 ml, and in 1999 30% of the measurements again at the Association Beach and 43% of the measurements at the Cove Beach exceeded the 200 level.

The following bar chart shows the arithmetic average of measurements taken at the two White Pond areas as well as the average of measurements taken at Walden Pond. The high rate of increase over the four year period is very notable. Also very significant is the fact that Walden's counts are comparable (sometimes higher, sometimes lower) to those at White Pond. *Since there are no septic facilities at Walden, the increasing contamination level would seem attributable to beach activity or other sources at both Walden and White Pond.*

Please note that the same actions that protect the pond from giardia contamination will also reduce the likelihood of fecal contamination.



Joan Turner

WHITE POND ADVISORY COMMITTEE

WPAC is a five member Standing Committee of the Town of Concord appointed by the Board of Selectmen to "review and analyze problems of concern to the White Pond Neighborhood." Meetings are scheduled regularly on the first Tuesday of each month at 7:30 p.m. in the upstairs conference room at 141 Keyes Rd. White Pond area residents are welcome and encouraged to attend all meetings.

There are two current issues of major concern to the Committee, both featured in this issue of Ponderings. First are the many questions from White Pond residents concerning the possibility that our area may be the first neighborhood in town targeted to participate in an alternative waste water treatment program. At this time there are more questions than answers. We have been asked to be patient for a little while longer while specific options are being defined by the Waste Water Management Committee.

Second is the issue on everyone's mind this summer - the Giardia scare and the safety of our pond for swimming. WPAC is in regular contact with the Board of Health. WPAC members will be updated each week about the results of the Monday tests for water quality and Board of Health recommendations for swimming safety. We expect to have some system in place for disseminating this information to White Pond residents.

Changes in White Pond summer meeting schedule

Due to the fact that the Town House will be closed for Board and Committee meetings this summer, meeting space at 141 Keyes Road is limited this year. WPAC has been asked to adjust our meeting schedule. Three meetings are scheduled for the summer:

June 6.....7:30 p.m.....upstairs conference room
July 18..... 7:30 p.m.....downstairs conference room
Sept 12.....7:30 p.m.....downstairs conference room

A block of time will be set aside at each of these meetings for discussion of questions and concerns expressed by White Pond neighbors.

Joan Turner

WASTE WATER TREATMENT PLAN

The White Pond neighborhood served as the pilot for the first phase of the town-wide waste water treatment planning process. Consultants retained by the town mined town databases to perform a wide ranging analysis on the different aspects of the neighborhood that potentially affect its long term ability to meet Title V requirements for waste water treatment. These data included soil drainage characteristics, age and likely characteristics of current septic systems, and lot sizes. The analysis was presented in a public meeting held at Willard School on March 16. The primary challenge identified in our neighborhood is the number of homes that will face difficult siting issues when their systems fail due to small lots and – in some cases, steep slopes, pond proximity, and nearby wells. However, our soils are well suited for waste water treatment and are sufficiently deep to provide for buried systems. The enclosed copy of the town's summary of the questions and answers from that meeting provides a good overview of the information provided at that meeting.

Other targeted neighborhoods will receive similar information to identify the nature of their challenges, beginning with a June 15, meeting at Alcott School focused on the Elm Brook neighborhood. The second phase of the process will begin in the fall and will involve the development and evaluation of waste water treatment options for each neighborhood. The process is intended to move to completion by the end of the year, an ambitious time frame.

We believe that group septic treatment options will be recommended for our neighborhood, with the specific sites, sizes, and financing methods to be determined during the planning steps planned for the fall. It behooves us all to consider the implications for our own property, for the Pond, and for our neighborhood as a whole. In addition, should an off-site septic treatment option be created, it may have implications for the development of currently undevelopable lots. The Friends of White Pond will attempt to provide objective information relevant to this process. If you have thoughts or concerns, both the Friends and the White Pond Advisory Committee are actively participating in this process and welcome your input.

Wendy Holt



PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 13 No. 1

JUNE 2002

Wastewater Planning and White Pond

There will be a public meeting of the Wastewater Planning Committee on Monday, June 17 at 7:30 p.m. at the Willard School. I am a member of the Wastewater Planning Committee; however, I am writing here as a White Pond resident. I hope that the following background information will be useful to you and that you will come to this meeting and share your concerns, questions and comments with the committee and with your neighbors.

In late 1999, Concord hired a team of consultants and appointed a Wastewater Planning Committee (WPC) to develop a 20-year Comprehensive Wastewater Management Plan (CWMP) for the town. In Phase I of this process, the consultants evaluated the wastewater needs of all parcels in town and identified those parcels that would be unable to meet the Massachusetts Title V Code requirements for wastewater treatment and disposal systems on the property (on-site). Of the 115 developed parcels in the White Pond area, they identified 75 parcels (most of them close to the pond) that need an off-site solution, that is, that need to have their wastewater collected, treated and disposed of at a site other than their own property. The two primary reasons for this were either because there was not enough space for an on-site septic system or because the system would be too close to the pond or wetlands. This leads to a serious dilemma when it comes time to sell the property or to replace the existing system.

Next, the consultants did a preliminary analysis of each area to determine what kind of off-site solution would be the best option. At the end of Phase I, however, the White Pond area was one of several areas in town for which there was no clear-cut conclusion on what the best off-site solution would be. Several public meetings were held in the White Pond neighborhood during Phase I to keep the residents informed about the

results of the evaluation of wastewater needs and the preliminary analysis of off-site solutions.

Phase II in the development of the CWMP began in 2001, with a new team of consultants to work with the WPC and a broader scope in general. Included in this phase of the development process are two parallel plans: first, the Board of Health is working with their consultant to develop an "On-site Management Plan" to assist the 3000+ homeowners in Concord who will be able to continue to use an on-site septic system. The goal is to provide a menu of services that will help homeowners maintain a safe, effective and economical on-site system. Second, the Planning Board is working with their consultant to develop a "Growth Management Plan" with the goal of preventing a wastewater management plan from creating uncontrolled development of parcels that are currently difficult or impossible to develop because of their unsuitability for an on-site system and the current lack of any off-site solution.

One of the most important tasks as Phase II began was to resolve the question of the best off-site solutions for the White Pond and other areas designated as "Further Analysis Needed" at the end of Phase I. That has been done, and now a series of public meetings is being held with these areas to present the results.

The on-site cesspools and aging septic systems in the White Pond watershed have an important impact on the water quality of our pond. Human wastewater and surface run-off are the primary sources of the phosphorus that is supporting the plant growth and algae in the pond. A lot has been done to control surface run-off around the pond in recent years. But our on-site systems remain. Many people were concerned that our on-site systems might be the source of the giardia and cryptosporidia outbreak that was traced to White Pond several years ago. These

environmental and public health concerns are a problem that most of us recognize and would like to solve. Getting our wastewater away from the pond for treatment and disposal is the obvious solution.

Since connection to the municipal sewer system is next to impossible, the off-site solution for the White Pond area would be one or more cluster treatment systems. Cluster treatment systems are small, localized systems for collecting, treating and disposing of wastewater. The wastewater from our area could be handled by one neighborhood cluster system or several mini cluster systems in different areas of the neighborhood. This solution would also follow a new mandate from the Commonwealth regarding water balance. The state now wants communities to do as much as possible to put wastewater back into the same watershed or basin that it came from. For instance, if the White Pond area could send its wastewater to the town's Wastewater Treatment Plant for treatment, it would then need to bring an equivalent amount of treated water back to the White Pond area for disposal in a local leaching field to replenish the local groundwater.

Most of us have no idea what a cluster treatment system could look like or what kind of an impact it would have on the area in which it is sited. The first thing we need to realize is that cluster systems are nothing like a municipal wastewater treatment plant. They are much more like our own on-site septic systems, except that they are more closely monitored, do a better job of treating the wastewater and put a safer and more environmentally sound effluent into the soils and groundwater. Depending on the terrain and the engineering specifications, it is possible to have a cluster system with its pumping station(s) underground, with the treatment tanks only a few feet above ground with a utility cabinet for the electrical controls (it would be somewhat larger than the cabinets the telephone and utility companies use for their underground systems), and the leaching field is always below ground.

There actually are cluster systems of various sizes and designs already working around town. I have included pictures of the Thoreau Club cluster treatment system as an example of what they can look like.

These systems do not have open-air treatment the way municipal wastewater treatment systems do, so odors are not an issue. The same activities are appropriate in conjunction with a cluster system as would be with your own on-site system – open space, recreation, landscaping, gardening, etc. In addition, commercial farming of ornamental plants and Christmas trees is allowed in Massachusetts. In California and Florida various edible crops are grown around and over these systems



Camp Thoreau – the round treatment tanks (center area) are located amongst the camp buildings and next to the recreation fields. The buildings are for camp activities.



A closer view of the treatment tanks. The "tall" tanks are about 2 feet high. The wide tanks are between 5 and 6 feet in diameter. The fenced area is a swimming pool. The leaching field is under the nearby recreation fields.

The WPC wants to hear the opinions of the White Pond area residents. If the residents don't show an interest, a wastewater solution for White Pond could be shelved indefinitely. For all the 'friends' of White Pond, this is an opportunity, at long last, to act to solve the area's wastewater problems, to provide an affordable means of meeting Title V requirements and to protect White Pond.

Judith Sprott

Monitoring Water Quality

If you look out on the pond around mid-day on a weekend day, you may see two people in a canoe staring intently into the water. That will probably be my wife Judith and me. We will be anchored over the deepest part of the pond, and most likely straining to see an eight-inch disk deep in the water. We will be measuring the transparency of the pond. Judith has been doing this on and off for the last 10 years and if I'm around I lend a helping hand. Some of the others who have done this at one time or another are Jane and Don Prentiss, Linda Stansfield, and Joan Turner.

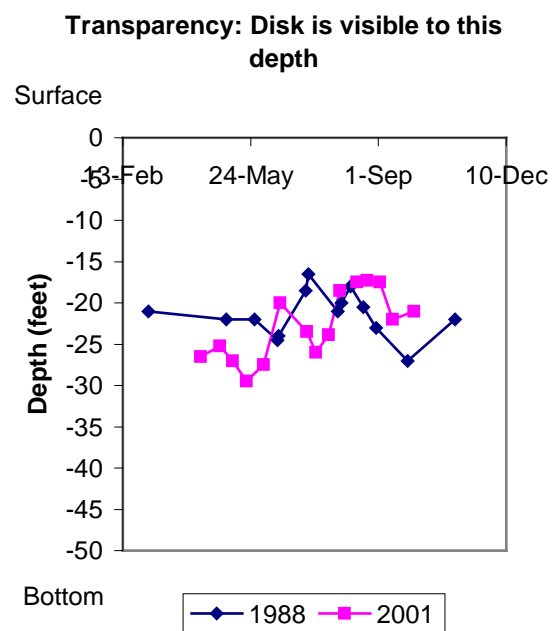
Although there had been a few sporadic water quality measurements previously, the first really thorough study on the pond was commissioned by the Town and carried out in 1987 through 1990 by Dr. William Walker, an environmental engineer, and a resident of Concord. His study included a series of measurements of the pond over that period and a full analysis of what their results indicated. As part of his report, he concluded that White Pond is a "mesotrophic" pond. "Mesotrophic" is midway between "oligotrophic" which can be interpreted as "pristine" and "eutrophic" which usually means "full of pond weeds". Typically a pond moves naturally from mesotrophic to eutrophic over the eons. With human impact, however, this can happen in a matter of years. If you want to see "eutrophic" in all its splendor, check out the Assabet River across from Maynard Supply in the summer time; it's a large green mat of vegetation .

Needless to say, no one wants White Pond to become eutrophic. Shortly before Walker's study,

the "Friends of White Pond" was formed with the goal of protecting the water quality of the pond. As a result of his study, and with his help, a volunteer water quality monitoring program was established, and water quality has been measured almost continuously since. In 1996, Bill Walker came back to the pond, and since that time we have had the benefit of his knowledge, help, and supervision, all pro bono.

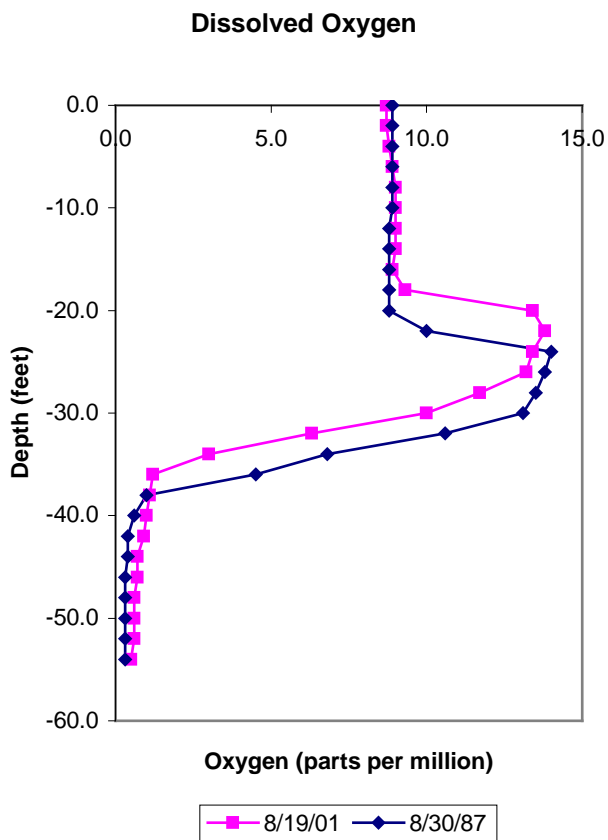
The major factor that makes a water body eutrophic is that it contains a hefty supply of the nutrients that plant life needs to feed on. For White Pond, like most ponds, the critical, and in White Pond the "plant life" is mostly algae. The more phosphates, the more algae.

Pond phosphate is food for the algae and each summer the algae consume it and their population grows. Every few weeks Judith and I measure the transparency of the pond. We do this by lowering a (SECCHI) disk in the water and recording how deep it goes before we can no longer see it. In early spring we can typically see to around 30 feet. By mid summer, the visibility is usually less than 20 feet. When you can't see as deep, it's because the algae are in the way. The transparency results for years 1987 (Walker's study) and 2001 (Sprotts' measurements) are shown in the accompanying diagram.



Another sign of algal growth is oxygen. Because algae photosynthesize, they produce oxygen,

and where the algae are most abundant, there will be lots of oxygen. Several times a year, Bill Walker and Judith measure the amount of oxygen dissolved in the water at a series of depths. An accompanying chart shows the results of these measurements in late summer for 1987 (Walker) and 2001 (Walker and Sprott). You can see a bump on the chart showing a higher level of oxygen in the region roughly between 20 and 30 feet deep, indicating that this is where most of the algae live. Note also that the oxygen level near the bottom of the pond is almost zero. When algae die they eventually sink to the bottom and decay. The decay process uses up oxygen and enough dead algae soon collects to use up almost all the oxygen at the bottom. As a result fish can't survive there. You can see from the chart that things haven't changed a lot since 1987.



Since phosphorus is so important to the pond, we monitor it directly each season. Judith and I collect samples at several depths and send the results to a laboratory in New York for analysis. In 1988, the average of all phosphorus measurements (taken at various dates and various depths) was 27 parts per billion of phosphorus in the water (by weight). In 2001,

the average level was 13 parts per billion. The results of all these measurements can vary significantly during the year, and from year to year, but in spite of that, we can still see from the data that the quality of the water seems so far, at least, to be holding its own. However, there is still enough phosphorus to cause the smelly algal scums we see every year.

In addition to the water monitoring program, some other processes were put in motion that we hope will stop the pond from getting worse. There are two major sources of phosphorus entering the pond. The first source is from septic systems. Effluent adds phosphorus to the groundwater, and although most of this can be removed in the soil, any that is not removed will turn up in the pond. To tackle this, the "Friends" have encouraged residents to make sure their septic systems were functioning properly, and several times in the past had arranged a group rate for septic pumping purchases. The second source is phosphates from surface water run-off. Phosphorus falls from the air on all surfaces, and this phosphorus added to the pond whenever surface water runs into it. This is particularly damaging during storms. The most critical site of surface run-off into the pond was at the bottom of the boat ramp. With funding from the "Friends" and the State, and with David Berg's leadership, the Town installed catch basins and leaching fields along the access road to catch surface run-off before it could get into the pond.

However, the basic sources of phosphorus are still with us: septic systems, and surface water run-off. There are two things each of us that live around the pond can do to fight this battle. First, we must keep our septic systems pumped and working well. (If we can get the Town to pump our sewage away from the pond altogether, this would eliminate this source altogether.) Second, we can make sure that any water from our property does not run into the pond, even in a storm. Runoff from our roofs, driveways, and paths are should go into the ground, not into the pond.

The next time you see two people in a canoe on the pond with no fishing poles in sight, you'll know why we are there. Give us a wave!

George Sprott

To protect the pond from giardia and cryptosporidia contamination, we need to continue to be vigilant about maintaining sanitary practices on and around the pond, such as changing diapers away from the water and keeping horses at least 100 feet from the pond.

New Neighbors

It is time to begin welcoming new neighbors at Frost Farm in Sudbury. The 44 unit development is nearing completion and all units have been sold to eligible individuals who must be 55 years or older. The new owners are expected to start moving in over the summer. Although their new address will be Sudbury, they are immediately adjacent to the town line and a stroll away from White Pond and both Concord and Sudbury conservation land. Some new owners are already visiting the pond in anticipation of moving to Frost Farm, and there should be plenty of opportunity to meet others in the months to come. We have other new Sudbury neighbors, as well. Immediately behind the Cummings building (the old Unisys/Sperry Rand building), and adjacent to the Frost Farm units is Northwood, a luxury residential community for active adults, aged 55 plus. Only partially completed at this time, Northwood will eventually include a total of 65 residential units. Two large apartment buildings are already finished and are occupied.

An easement agreement signed by Concord and Sudbury in 1992 gives Sudbury residents free access to an active trail system maintained by Sudbury's Conservation Commission and to the trails on Concord's Conservation and Reservation land. The agreement also established the pedestrian and emergency access road from the Sudbury town line through Concord land to Sachem's Cove (on the south shore of White Pond). This route is now approached through the Frost Farm development. A second access route is from the Cummings property to a very pretty Sudbury trail winding around the outskirts of the development, then following the network of trails to the edge of the opening between our woods and into the

Concord portion of the upland meadow bordering Frost Farm.

Together, Frost Farm and Northwood make up a fair sized community. They may not all gravitate to the pond, but it's fair to assume that the shores and trails of White Pond will attract many residents and their visitors. This community creates a barrier to many existing abuses of the Concord reservation land, such as driving into the woods and parking. It may very well help deter other problems as well, such as fires and drinking parties. However, there is likely to be a significant increase in foot traffic on the Concord lands and that will cause even more "informal" trails to be created and even greater erosion of existing trails in the area. These eroded trails have a serious impact on the land and on the pond. In addition, the Cove shoreline, and the shallow waters in the Cove area, could become even more crowded. For these reasons, it is important that the town of Concord move forward in designating members for the task force that is to develop a comprehensive land use plan for the Concord reservation and conservation lands around White Pond. This plan will establish the now greatly needed policies and processes to safeguard the wildlife and vegetation of the town lands, to maintain the trails, and to protect White Pond itself.

We look forward to welcoming our new 'friends of White Pond' from Sudbury. This issue of Ponderings will be posted in the Frost Farm community center to provide our new neighbors with information about the precious resources of White Pond land and water that we cherish and share.

Joan Turner and Wendy Holt

FRIENDS OF WHITE POND

President pro tem: Kate Blair	369-9194
Treasurer: Judith Sprott	369-4850
Secretary: Kate Blair	369-9194
Newsletter: Wendy Holt	369-9558
Judith Sprott	369-4850



FOR THE FRIENDS OF WHITE POND

**Wastewater Planning Committee
Neighborhood Meeting
White Pond area**

**Monday, June 17, 2002
7:30 p.m.
Willard School Cafetorium**



Best Western – Elm Street view



Best Western – Elm Street side view



A large building for an above ground cluster system





VOL. 14 NO 1

PONDERINGS

BY THE FRIENDS OF WHITE POND

APRIL 2003

SPRING IS HERE

And so is your copy of Ponderings. Almost every spring, the Friends of White Pond puts together a Ponderings to bring everyone up to date with what is happening on and around the pond.

MANAGING OUR WASTEWATER

Almost 20 years ago, White Pond began having algal blooms (smelly algal scums on the water surface), a major symptom of water quality degradation. There had been concerns that something like this would happen as a result of loading the pond with phosphorus and nutrients from so many homes and their wastewater on so many small parcels in the watershed. We were faced with a serious problem for which the major part of the solution should be to get the wastewater out of the watershed. However, common knowledge was that “there never will be sewers way out here to help us and the pond”. So, we all did what we could, without sewers, to help the pond by preventing surface run-off and erosion and by encouraging good on-site (septic/cesspool/tight tank) wastewater system use and maintenance.

Where are we 20 years later? The water quality data indicate that the degradation of the pond has leveled off, but the data does not show a return to the cleaner water we used to have. Although the amount of phosphorus in the pond water is not increasing, the dissolved oxygen levels continue to be very low in the deep waters and very, very close to zero in the bottom waters in late summer. This is not good news. If the dissolved oxygen reaches zero in the summer for several years, that could trigger the release of phosphorus stored in bottom sediments, causing even more water quality problems. More visibly, the original symptom, the algal blooms, have continued, worse in some years than in others.

What about the next 20 years? The primary source of nutrients (and potential pathogens) in the pond is our on-site wastewater systems. The solution for this continues to be sewers; but now they are a real possibility. Here I write as a White Pond resident, although I am also a member of the Wastewater Planning Committee. The Comprehensive Wastewater Management Plan the committee has helped develop makes it possible for sewerage to come to White Pond. We can begin moving our wastewater out of the immediate watershed, and the pond can begin to recover. It won't be cheap – but neither is trying to replace a cesspool or a septic system on our small lots, with our wells and our pond to protect. All we have to do is support the Plan by voting in favor of Articles 36 and 37 at Town Meeting this year, and, when the time comes, we have to vote at Town Meeting and at the polls to fund the design (TM 2004) and construction (TM 2006) of sewerage for our area.

There are still hurdles to be overcome. Finding a site for our neighborhood treatment system, is one hurdle. A second hurdle is that the Plan is intended to be ‘growth neutral’; that is, undesirable new development and ‘mansionization’ (expansion of existing homes) must be properly managed. Although there are many “empty” lots around White Pond, few of them are developable, with or without sewerage. Mansionization is the primary concern for the White Pond neighborhood. The necessary planning/zoning tools to manage both forms of growth are being developed for each area in the plan, including ours, so that sewerage can go forward without undesirable consequences.

Many folks have attended meetings about the Plan and are familiar with it. In addition, there is now a Comprehensive Wastewater Management Plan Summary available that gives a good review of the process and the final recommendations. The CWMP Summary, Newsletters, and all the reports and data from the last 3 ½ years of devel-

oping the plan are available on-line at www.concordnet.org/dpw/cwmpsummary.htm and at the Libraries, and the Town House. Print copies of the Summary can be picked up at the CPW offices, Libraries and the Town House.

Judith Sprott

MANAGEMENT PLAN FOR RESERVATION LAND MOVING FORWARD

Last summer the Town Manager asked White Pond Advisory Committee Chair Ken Miller to head up a Task Force to design and recommend a management plan for the Concord Reservation - sometimes referred to as the old Unisys property. The 40-acre Reservation includes 1200 feet of shoreline extending from the Cove area up to Sudbury's new Frost Farm development and eastward to the Town well land. The land is managed by the Natural Resources Commission and is therefore subject to the rules and regulations governing Concord conservation land. Enforcement of these regulations, however, has been a challenge. Of particular concern to the Task Force is the overuse and abuse of the woodlands and fragile banks leading down to the pond's shore.

Whereas the Task Force's primary mandate is to recommend a management plan that will ensure the long-term health and stability of the Reservation, a preliminary report detailing problems requiring immediate attention has been submitted to the Natural Resources Commission. On Tuesday April 15, NRC Administrator Markus Pinney convened a meeting with Task Force members and Town officials to consider use of the land and beaches during the coming summer, to understand the implications for potential abuse of the land, and to formulate a realistic plan of action and enforcement. The agenda included: a plan to repair the Easement Road leading from the Cove to the Sudbury town line, Conservation land rules and regulations that are particularly important for the Reservation (especially concerning swimming, fires, and alcohol), erosion of the banks, parking, trash, signage, and stewardship.

The White Pond Advisory Committee and Task Force would like to get input from you, our neighboring White Pond residents, concerning your vision of long-term management issues, but particularly any thoughts you may have about making the coming summer months as pleasant as possible for all who enjoy our precious natural resource. The WPAC will dedicate its regularly

scheduled meeting on Tuesday, May 27th as a public information session – with a detailed presentation and discussion of problems that have been identified, and solutions that are on the table. We welcome your attendance and input. WPAC meetings are regularly held on the second floor of 141 Keyes Road at 7:30 p.m. on the last Tuesday of each month.

Joan Turner

HARK, HARK

When spring arrives, we open our window to the warmer temperatures and welcome the fresh air. But with the fresh air comes the sound of barking. The White Pond neighborhood is full of dogs, and they all like to communicate with each other and with their owners and anyone on the street. This can get pretty noisy, especially if the dogs are leashed outside for long periods of time. The warm air also brings the dogs and their owners out for walks. And like the parks in Concord Center, the lawns here in the neighborhood are full of dog dirt from both winter and spring walks. The pond beaches are especially vulnerable; animal dirt can be washed into the pond by the rain, and is both a biohazard and a nutrient provider. We hope that the neighborhood dog owners will pick up after their pets during walks, and bring their pets inside if they start to bark incessantly. That way we can all sit out on our lawns, or open our windows and enjoy the fresh air.

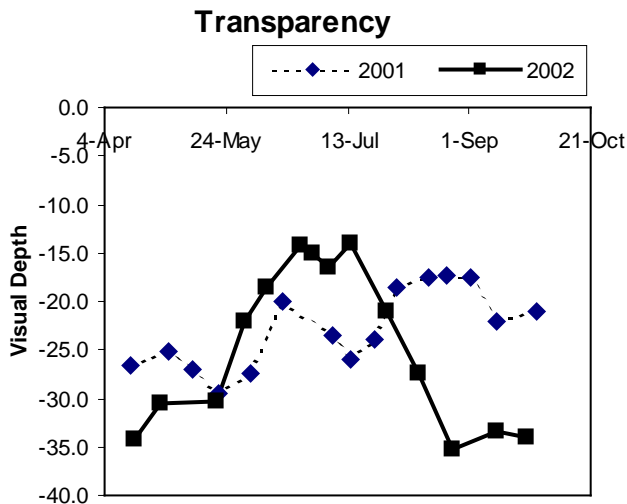
Katy Blair

MONITORING FROM THE RED CANOE

After this winter's snow levels we might tend to forget how dry last summer was. Then it looked like you could have driven a jeep around the pond without getting the wheels wet. Drought or not, we had two algal blooms last year and expect no less this year. But it is a relief to see the water level has risen in response to our snowy winter.

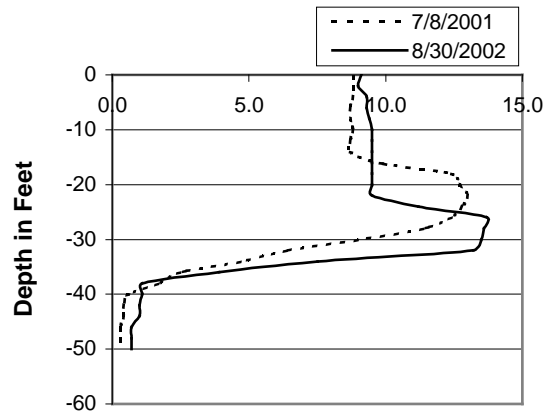
Water quality testing was conducted last year from April through November. Again, we had the professional assistance of hydrologist and limnologist Dr. William Walker. And this year we also had the assistance of Shore Drive's Len Rappoli, a groundwater specialist, who also volunteers with the Organization of the Assabet River (OAR). Judith Sprott took the transparency readings, often with my assistance.

Transparency of the pond was measured several times a month by lowering a Secchi disk in the pond and recording the depth at which it was no longer visible. Last season the deepest transparency reading was 35 feet, and the shallowest was 14 feet. The minimum transparency occurs around mid-summer and is caused by algae in the water obscuring the disk. The following graph compares last year's transparency values with the previous year. The plot shows the depth you can see to (going downward on the plot), with greater transparency (clearer water) represented by points lower on the plot. The 2002 results show more variation between the high and low transparency periods, with an earlier and more substantial reduction in transparency in early July than in 2001. The spring and fall transparency values were better and the summer values were worse than in 2001.



Profiles recording the concentrations of dissolved oxygen (DO) at two-foot intervals from the top to the bottom of the pond were taken on four occasions by Dr. Walker and Judith Sprott. On two other occasions, measurements of DO, as well as pH and conductance, were taken at five depths by Len Rappoli and Judith Sprott. From July through August the profiles show a 10 to 15 foot high depleted zone at the bottom of the pond where there is not enough oxygen for fish and other life. This is similar to what we've seen in previous years.

Dissolved Oxygen in ppm



The graph above shows the dissolved oxygen concentration as a function of the distance below the surface. Two profiles are shown, one for 2001 and one for 2002. Both are from the period when the dissolved oxygen at the bottom reached its lowest concentration. You can see that the surface concentration, which is in equilibrium with the atmosphere, is around 9 parts per million (ppm). The big bump at 30 feet shows a substantial increase in oxygen. This increase is due to the oxygen produced by a major population of photosynthesizing algae. Below 30 feet the oxygen concentration decreases rapidly to a level below 1 ppm. Fish typically require a minimum of 3 – 5 ppm oxygen for their survival.

George Sprott

THE REAL 'CNN'

The Concord Neighborhood Network (CNN) is a Town organization, which was formed to help neighbors in time of need and to work together when a Town emergency occurs. The organizers have designated 150 neighborhoods for the 16,000 residents in Concord. Each neighborhood has a Neighborhood Contact (NC). Presently there are three designated neighborhoods for the White Pond community:

1. The Seymour St., Granby St., Paul St., and Tracy St. neighborhood for which Joan Turner (978 369-7864) and Gail Jewell (978 369 4058) are the NCs.
2. The Mitchell Rd. and White Ave. neighborhood for which Bob Gravel (978 369-2666) is the NC.
3. The Dover St./Shore Drive neighborhood for which Scott Anderson (978 369 9558) is the NC.

Anyone living in these two neighborhoods who would like information about CNN, please call your NC.

Bob Gravel

WALK ON THE WILD SIDE

I have often enjoyed looking for signs of wildlife while wandering around the network of abrupt slopes and wetlands around White Pond. One quiet late winter morning, I followed a skunk's tracks as it first ringed the dumpster near the Association Beach, then made its way over the ice to check each ice hole for any chance tidbit left by a fisherman.

Fisher, members of the weasel family that do not fish on the ice or elsewhere either, are fun to follow in the snow as they cozy up to large white pines and zigzag in and out of wetlands. They are carnivores primarily, sometimes preying on animals the size of muskrats and porcupine, but they also will eat fruits and nuts. This late winter their scat showed they were eating a large quantity of winterberry, those lovely bright red berries in our wetlands. Evidence of another in the weasel family, the mink, can be seen at the water's edge, their trails of star-like, muddy tracks going in and out of the water.

Beaver, too, have found the White Pond environs. Signs of their presence - a small dam and lodge, foot-wide trails crisscrossing the ice, and many chewed sticks - can be seen in the wetlands behind the town well in the area known as "Dunge-hole Meadow".

It is easy to keep focused on the ground and not notice some of the other clues animals leave. Whether or not I can see the tracks, I know red fox frequent the area. Sudden whiffs of their sharp, skunk-like odor, strongest during the winter mating season, make me look up and around in hopes of catching sight of one of these graceful canids. Their cousin, the coyote, is also at home here. Tracks and scat tell the story of their persistent and successful hunts for small mammals in scattered nooks in the woods and wetlands.

In your own travels near White Pond, keep an eye out for the signatures and stories left by these animals and others who share with us nature's "gem of the woods".

Lydia Rogers

SMOOTH ROADS IN THE FUTURE!

Eaton Street and Shore Drive are taking advantage of the mechanism approved by Town Meeting several years ago for repaving the private roads in the White Pond area. In a two-stage process, 60% of road residents can petition the Town for repaving. The Town responds with a cost estimate for the work and a schedule for apportioning the cost to property owners based on the road frontage of each property, and any other relevant factors. This proposal is reviewed at a public meeting of the Public Works Commission, and a final proposal is presented in writing to residents of the road. If 60% agree to participate, then the work is undertaken and all residents pay for the work over a period of years in the form of a betterment fee added to property taxes.

Eaton Street and Shore Drive residents submitted their petitions last fall, and Concord Public Works is developing its response.

We applaud these efforts. In addition to the appearance and the obvious difficulties of navigating the puddles, cracks and craters, the damaged roads around the pond can be a source of phosphorus-rich runoff into the pond. Paving Shore Drive and ensuring that its runoff is kept away from the pond is important.

Wendy Holt

JUNE 20...A SOLSTICE ON THE POND!!

Greetings to all our neighbors, old and new. Springtime this year - with its promise of blessed summer soon to follow - has been a long time in coming. Daily visits from hooded and common mergansers, the return of the kingfishers, and morning birdsong all remind us that the miracle of Spring is happening once again. As the days grow longer, we look ahead to summer's symbolic opening day, the longest day of the year, Summer Solstice - an occasion for celebration.

SO LET'S CELEBRATE! Let's celebrate the advent of summer this year. On Saturday, June 21st, let's create our own Solstice festival! Let's sail, canoe, raft, and row-row-row our boats all over the pond! Let's decorate our docks and decks! Ideas? Let Wendy Barnes know your ideas about how we can celebrate (978 3695246). We'll send you a flyer with all the details when they've been worked out.

Joan Turner

SHORELINE CLEANUP?

A couple of people have asked for advice about disposing of large, heavy objects such as discarded boats, old docks, and other waterfront stuff no longer in use. One solution might be to arrange for a hauler to do a pick up at the foot of the access road next to the White Pond Association beach - assuming that the objects in question can be rowed, towed, or otherwise transported by their owners to the access road. I'd be glad to research the availability and cost. Give me a call at 369-7864 if you are interested.

Joan Turner

ABOUT FRIENDS OF WHITE POND

As part of this year's issue, we thought it might be nice to review the history of our organization, for our old and our new friends.

The Friends of White Pond was created in 1987. In that year, because of concerns about the degradation of the water quality of the pond, the Town's White Pond Advisory Committee held a public meeting for concerned neighbors of the pond. In that meeting, they reported that based on the experiences of other ponds around the state, the best way to protect the pond would be to have a grass roots citizens organization whose main focus would be to monitor, advocate for, and improve the water quality of the pond. People who cared about the pond responded, and the "Friends" was born.

The mission of the Friends is to monitor the quality of the pond and its surrounds and to spearhead improvements where they were needed. The main emphasis has been on the water monitoring, but there has been progress on many fronts over the years, including:

- The Town commissioned a water quality study of the pond.
- The White Pond Advisory Committee developed a catch basin system to control a major source of surface run-off into the pond from the public access road. The state and the Friends of White Pond contributed funds for materials and the Town installed the system.
- The FWP began a cooperative pumping program for on-site wastewater systems.
- Residents worked on many Saturdays helping our Natural Resources administrator re-build a seriously eroded bank on the Conservation Land.
- The FWP has sponsored and assisted a local diving club in cleaning up trash on the pond bottom.

- Pond residents contributed money for, and supported the purchase of, the Unisys land to prevent undesirable development.

- Pond residents pitched in (with Board of Health financing and equipment) to start an on-going water quality monitoring program.

- The state banned phosphates in almost all home-cleaning products.

Water quality testing has been a primary task. We can't tell if the pond is changing for the worse or the better unless we frequently measure it. We have the assistance of a respected hydrologist, Dr. William Walker, to guide these efforts, and the volunteer assistance of pond residents to do most of the week-to-week monitoring. This year's results have been described in a separate article.

George Sprott

LOOKING FOR MORE FRIENDS

The Friends of White Pond is a group of concerned White Pond neighbors who deeply appreciate the special attributes of our beautiful pond and commit to doing our part to maintain the pond's health and well-being. We meet infrequently. We share information and concerns with the greater White Pond neighborhood through our newsletter, Ponderings. We look to you, those of you who share our sense of stewardship for the pond, to join us in our work.

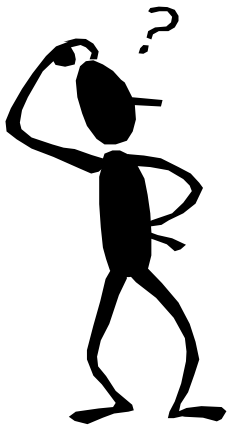
Volunteers are always welcome to participate in Friends activities. Specifically, we are looking for three or four new people to become actively involved. To join as an active member, call: Joan Turner at 978 369-7864.

The Friends collects dues periodically, to pay for expenses that we may incur. Lately our expenses have only been the cost of sending water samples to a laboratory in New York for phosphorus analysis, and for copying the Ponderings newsletter for distribution. If you can't join as an active Friend at this time, please consider supporting Friends of White Pond with a contribution of \$10 or more. Thank you.

To contribute: Make your check payable to "Friends of White Pond" and mail to our Treasurer: Judith Sprott at 43 White Ave.



For the Friends of White Pond



MAKE YOUR VOTE COUNT

Town Meeting begins
7 p.m. Monday April 28

CCHS

**Join the White Pond
Advisory Committee at
141 Keyes Road on**

**Tuesday May 27 at 7:30
p.m.**

**to discuss the Reserva-
tion Land**





PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 15 No. 1

JUNE 2006

SUMMERTIME- and the water is rising.

A canoe cruise around the pond's shoreline shows water lapping up against the banks where one would normally expect to see sandy "beach." The exception is the White Pond Associates' swimming beach, which itself has been reduced to half its size. One of the consequences that we all need to be aware of is the fact that having open sandy beach around the pond helped absorb surface run-off (from paths, steps, erosion, impervious surfaces, etc.) before it reached the pond. The waters will recede in the years to come. In the meantime, the Pond will require special attention and stewardship from those who care. What can be done to help? There are stewardship tasks for everyone.

- If you notice a spot where run-off can directly go into the pond, diverting the run-off so it can be absorbed before reaching the water will help lessen the amount of phosphorus in the water to feed the algae, etc.
- For those who live on the pond, rake your water! Your sandy beach, now flooded, is home to increasing amounts of floating and rooted aquatic vegetation. It shouldn't be there and mustn't be encouraged. Rake it out! Compost it or take it to the landfill and let the Town compost it for you.
- Nutrients from chemically-treated lawns and gardens can find their way into the pond more than ever during years of high water. If you must use lawn and plant food, use slow release, organic types. Spread the word!
- Faulty septic systems have been identified as a source of phosphorus and potential pollutants in the pond. Has your septic system been pumped within the last two years?

Joan Turner

IN MEMORIAM

The Friends of White Pond lost two very important members in the last few years. Past presidents Herb Kottler and Ruth Ames worked very hard to ensure that the pond and its water quality were protected. Without their help and guidance, many of the programs that the Friends have sponsored would not have been possible.

Herb Kottler was one of the founding members and first president of the Friends in 1987. He and his wife, Jan, hosted our meetings on their lovely back porch overlooking Herb's serene oriental garden. We would enjoy Herb's favorite snack, peanuts and raisins, while discussing water quality problems and solutions. Herb had a doctorate in physics. As an associate director of the MIT Lincoln Labs, he specialized in sensor system design, testing and development, and managed several divisions. He used his expertise in science and group dynamics to mold our discussions. We would not have been successful in our endeavors to initiate the erosion control program, water-quality monitoring program, or septic pumping program, without his leadership. Herb died in 2002 of cancer. We sorely miss his gentle, knowledgeable guiding hand.

In 1992, Ruth Ames accepted the presidency. Under her auspices, the Friends continued the work started by Herb Kottler, as well as new initiatives. Ruth was the member of the Friends with the longest association with the pond: she had grown up in her house on Preston Street, and knew many of the original families of the 1930's subdivision. She became our ambassador to the community. As president, she used her communication and organizational skills to make sure that the Friends gathered together on a regular basis, including instigating neighborhood pot-lucks. Ruth was a warm, witty woman, who

could light up a room with her sparkling eyes and gentle humor. She had a Masters in rural sociology, and was a candidate for a Ph.D. in social psychology. She was the beloved manager of Concord's Belknap house, a well-elder facility, and later the manager of assisted living at Carleton-Willard in Bedford: she knew how to lead groups successfully. She died of cancer in 2004. We miss her strength and humor.

The Friends are lucky to have had such wonderful presidents over the years. As we continue our stewardship of the pond, we thank Herb and Ruth for their leadership, humor and grace.

Kate Blair

WATER QUALITY UPDATE

We continue to monitor the clarity of the pond and the amount of dissolved oxygen in the water. Last year's data are very similar to the data of recent years. They show that there continues to be a sizeable floating algae population that reduces the clarity of the pond as the summer goes on. The data also show that dissolved oxygen in the lower waters of the pond continues to approach zero during the summer, which is not good news.

Also not good news is that there is a new form of algae in the pond. You may have noticed what looks like a green "cloud" on the bottom of the pond close to the shore along some of the shoreline. When you try to pick it up, it just passes through your hands. It is a type of filamentous algae and is another indicator of the excessive phosphorus that feeds both algae and aquatic vegetation.

Judith Sprott

WHITE POND AND THE RAIL TRAIL

Then and Now - Years ago we could set our clocks by the sound of the afternoon train passing by the west side of White Pond. Today the trains are gone and the rail bed has been adopted by wild life, walkers, cross-country skiers, and lady slippers. It is now proposed to convert the rail bed to a Rail Trail that would serve everyone from Lowell to Framingham, from cyclists to equestrians, from walkers to roller

bladers. There was a rudimentary feasibility study in 2005, the Bruce Freeman Rail Trail (BFRT) Environmental and Engineering Report - Concord Section, which concluded that it is feasible to build the Rail Trail in Concord. A Town committee, the Bruce Freeman Rail Trail Advisory Committee, has been charged by the Board of Selectmen to carry this project forward. At this year's Town Meeting, an appropriation of \$160,000 was approved for a 25% Design Study. Once the Design Study is completed, the Town is entitled to apply, without further citizen approval, for 90% construction funding from the state and Federal government.

The proposed Rail Trail raises very serious concerns for the water quality of White Pond.

Members of the Friends of White Pond have made presentations to the 2006 Town Meeting and to the BFRT Advisory Committee about the water quality problems White Pond is already having, what the sources of those problems are, the serious impact we foresee if the Rail Trail is constructed along the pond's shoreline, and possible solutions. The rail bed right-of-way is about 100 feet wide in most places. At its closest point it is 35 feet from White Pond and the pond is clearly visible.

The pond's water quality is already degraded

by algae and aquatic plants that are fed by excessive nutrients. The problem nutrient is phosphorus, which can reach the pond from surface run-off and septic systems/cesspools. Algae and vegetation both live and die in our pond. When they die their decomposition uses up dissolved oxygen in the lower waters of the pond, making these waters uninhabitable for fish and other air-breathing creatures. To add insult to injury, when the free-floating algae die, first they float to the surface and cause an unpleasant algal bloom and then they sink to the bottom to decompose. Dissolved oxygen levels in the lower 20 feet of the pond already approach (and may reach) zero during late summer and in the fall. This lack of oxygen can bring about a change in the chemistry of the sediments on the bottom of the pond. These iron-rich sediments have bound up phosphorus, keeping it from circulating in the water. Lack of oxygen could cause the release of the bound phosphorus to feed more algae and more vegetation.

One source of phosphorus is surface run-off.

Both rainwater and soils naturally contain phosphorus. Under normal circumstances, rainwater is “held” by the ground cover so that it can be absorbed by the soils below. As a result, rainwater falling around the pond is absorbed and filtered by the soils before reaching the pond. Human activity, such as climbing up and down the banks of the pond, damages the ground cover. Without that cover, especially in a heavy rain, the water can run straight down to the pond, eroding the surface soils and carrying phosphorus into the pond.

We have all seen the new “paths” that visitors eager to reach the pond have created and the erosion that results. Many of us have seen the even greater damage that rope swings, and riding bicycles up and down the banks can create. It has been estimated that the Rail Trail would bring 77,000 visitors annually in view of White Pond. How many of them would climb down a bank to visit the pond? How many of them would be enticed to take a break and, perhaps, a swim right then and there? How many of them would decide to come back and visit the pond at a later date?

The second source of phosphorus is human waste.

Phosphorus (and a lot of other things) are contained in human waste. The Town’s plan to sewer the homes in the White Pond watershed and remove septic effluent as a source of phosphorus to the pond is on hold until a discharge site can be found. This situation makes controlling any additional phosphorus sources to the pond all the more important. Humans swimming in a pond can be a very direct source of phosphorus; this is sometimes called the “pee factor”. A U.S. Geological Survey report in 2001 estimates that as much as 50% of the phosphorus that Walden Pond receives in the swimming season is from swimmers’ urine despite the availability of public sanitary facilities. White Pond has not yet had a swimmer population large enough to be a significant source of phosphorus. The Rail Trail could change all that, depending on how many Rail Trail users become White Pond swimmers.

The ideal solution would be to reroute the Rail Trail away from White Pond. Otherwise, protection of the pond must depend on fencing to

keep users on the Rail Trail, constant and vigilant enforcement by rangers and police of “no swimming” from Town-owned lands (this doesn’t solve the problem of undeveloped privately-owned shoreline), and constant and vigilant enforcement to keep all visitors to Town land on designated trails.

The cost of maintaining the Rail Trail and abutting Town land as well as the patrolling and enforcement necessary to protect the pond would be the Town’s responsibility, that is, our responsibility. Information on the Rail Trail and the Committee’s work is available at the Town’s website, www.concordnet.org.

All of us who are concerned about the impact of the Rail Trail on White Pond need to let the Selectmen and the BFRT Advisory Committee know how important it is to protect the pond.

Judith Sprott

SEWERING WHITE POND’S WATERSHED

Concord’s Comprehensive Wastewater Management Plan (CWMP) was approved by both the Town Meeting and the state in 2003. This plan lays out a 4-phase program for sewerage areas of Concord where new or replacement septic systems will not meet state standards. The White Pond watershed was determined to be the neediest area in town and was initially recommended for sewerage in Phase 2 of the plan.

This was great news for the pond since our septic systems and cesspools are one of the sources of the phosphorus that feeds the algae and the aquatic vegetation that degrade the pond’s water quality. Reducing the amount of phosphorus reaching the pond would mean less “plant” food and a healthier pond.

Since it is not environmentally or economically desirable to send our wastewater to the Town’s wastewater treatment plant on the Concord River, the CWMP calls for White Pond to be served by a local wastewater disposal system. This package treatment system requires a small area for a treatment facility and a larger area for disposal of the treated wastewater. There is a

possible site for the treatment facility, but no wastewater disposal site has been worked out yet. Therefore, sewerage the White Pond watershed will not be part of Phase 2 and is on hold for the indefinite future: this is sad news for the pond for now.

Judith Sprott

CONCORD'S SEPTIC BETTERMENT LOANS

Loans of up to \$20,000 at 2% interest are available to eligible property owners with failed septic systems. These loans can be used to replace or repair non-functioning systems or systems that do not comply with current state and local regulations and have not passed inspection during property transfers.

Visit or call the Concord Health Division at (978) 318-3275 for more information.

Joan Turner

our work was developed by – and is informally supervised by - Dr. William Walker Jr., a Concord resident and Environmental Engineer. Our program includes regular and frequent testing, conducted throughout the spring, summer and fall. We maintain a water quality database dating from 1949, which is available at the Concord Health Department and Natural Resources offices.

The **White Pond Associates** is a private beach association that offers swimming memberships to Concord residents. They may be contacted at Post Office Box 1136, Concord, MA 01742.

The five-member **White Pond Advisory Committee (WPAC)** is appointed by Concord's Board of Selectmen to review and analyze the concerns of the White Pond neighborhood. The committee has contributed an article for this issue of *Ponderings* (see below)

Wendy Slattebo et al.

WHITE POND ORGANIZATIONS

The Friends of White Pond is a grass roots organization formed in 1987 in response to the first algae blooms ever experienced in White Pond.

Our mission is to monitor and foster the water quality of White Pond and its surrounds and to spearhead improvements when needed. Through our newsletter, *Ponderings*, we seek to educate ourselves and others living in the White Pond watershed, about the state of the pond and how activities around and in the Pond affect its water quality. Our membership is composed primarily of families living in the White Pond watershed, but includes others who enjoy the unique beauty of this Pond and want to help preserve it.

Over the years we have labored to rebuild eroded public land, raised money for surface runoff projects, published our newsletter, *Ponderings*, and supported efforts to protect the water quality of the pond.

However, the focus of our activity is a comprehensive long-term volunteer water quality monitoring and testing program initiated in 1991 with equipment and lab testing funds from Concord's Health Department. The protocol for

UPDATE FROM THE WHITE POND ADVISORY COMMITTEE

The White Pond Advisory Committee (WPAC), established by the Board of Selectmen in April of 1973, has as its charge, the responsibility "to review and analyze the concerns of the areas and play a leadership role in programming the solutions to the recognized and accepted problems." We work in conjunction with the Friends of White Pond and appreciate the opportunity to share our perspective in this newsletter.

The intent of this article is to share some of what the WPAC has learned about the status of the Bruce Freeman Rail Trail (BFRT) project and efforts to improve the management of the Town land surrounding the Pond.

In past summers, there has been a high level of illegal swimming from the undeveloped shoreline of White Pond. Therefore, the efforts to convert the railroad bed to a rail trail have raised the possibility of even more people accessing and using the pond in that area. The WPAC recommended in its management plan submitted to the Board of Selectmen that the 40.5 acre White Pond Reservation be transferred to the

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Natural Resources Commission (NRC) as conservation land.

Ken Miller, a past chairman and current member of the WPAC, sits on the Bruce Freeman Rail Trail Advisory Committee. Two of the issues currently under discussion are the width of the trail and whether its finished surface will be soft paved, hard paved, or a combination of the two. The WPAC and others strongly recommend a soft surface and narrow trail. Other issues, provisions for trash and human waste disposal, have yet to be resolved. There is also the question of ranger patrols and the number of hours per week they will be at White Pond. The WPAC has gone on public record that one of the primary conditions for their support of the proposed BFRT is a viable people management plan for White Pond.

Before creating this proposed plan, the WPAC reviewed the published rights pertaining to Great Ponds in the Commonwealth and determined that swimming was not a right. With that in mind, the key points of the proposed People Management Plan for White Pond include the following:

- a) More rigorous enforcement of existing regulations
- b) The hiring of rangers who will have the power and willingness to issue fines
- c) The collection and review of trail and pond activity.

More review and diligence will be required to prevent and minimize any adverse impacts on the water quality of White Pond. If you are interested in learning or doing more, please look for updates on these issues in future editions of the *Ponderings*, and/or attend a meeting of the WPAC. The committee typically meets on the last Tuesday of the month at 141 Keyes Road, second floor, but please check the Concord website at www.concordnet.org, for confirmation. There is also a vacancy on the WPAC that you could consider filling if you are so inclined.

David Bearg, WPAC Chair

NEW FRIENDS WANTED

White Pond is a rare and beautiful, but also fragile, part of Concord's landscape, a gift whose stewardship has passed from generation to generation. The Friends of White Pond seek to honor our role as stewards of the pond's water quality. We meet infrequently. We share information and concerns through our newsletter, *Ponderings*. We conduct water testing throughout the spring, summer and fall. We welcome others -new Friends - to participate in our activities. Specifically we are looking for people interested in helping to do water quality testing and in helping to publish *Ponderings*. If you are interested please contact Joan Turner at jpturn@verizon.net or Wendy Slattebo at wendyslattebo@comcast.net.

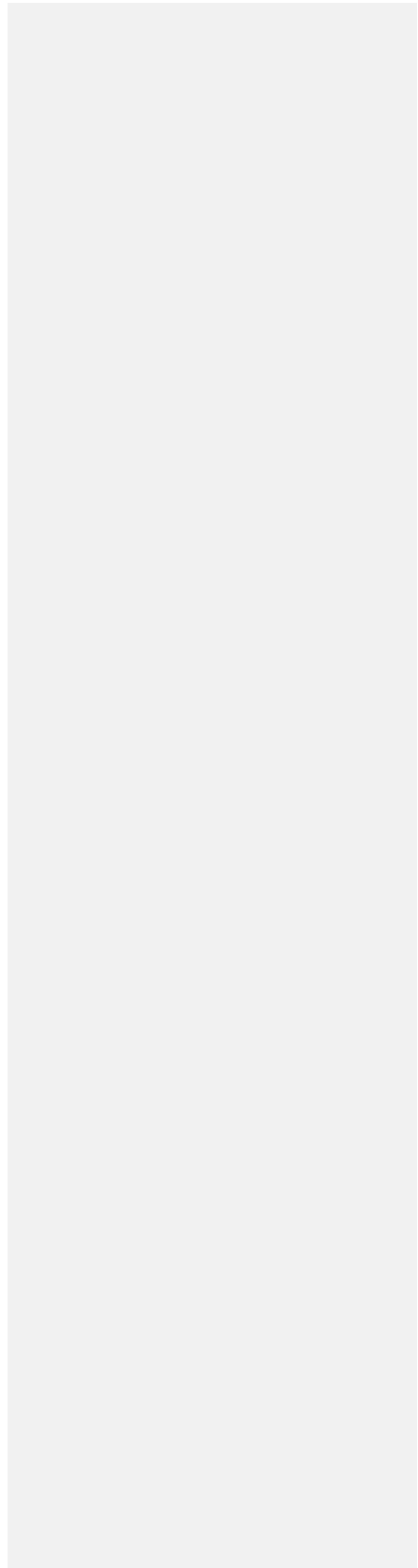
The Friends collect dues periodically to pay for our minimal expenses. Please consider supporting the Friends' work by becoming a member with a contribution of \$10 or more. Make checks payable to "Friends of White Pond" and mail them to our Treasurer, Judith Sprott, at 43 White Avenue.

Wendy Slattebo et al.

FRIENDS OF WHITE POND

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 Co-President: Wendy Slattebo– (978) 369-5246
 Secretary: Kate Blair – (978) 369-9194
 Treasurer: Judith Sprott – (978) 369-4850

If you would like to receive future copies of *Ponderings* electronically please send your name, postal address and email address to kdblair46@comcast.net





PONDERINGS

BY THE FRIENDS OF WHITE POND

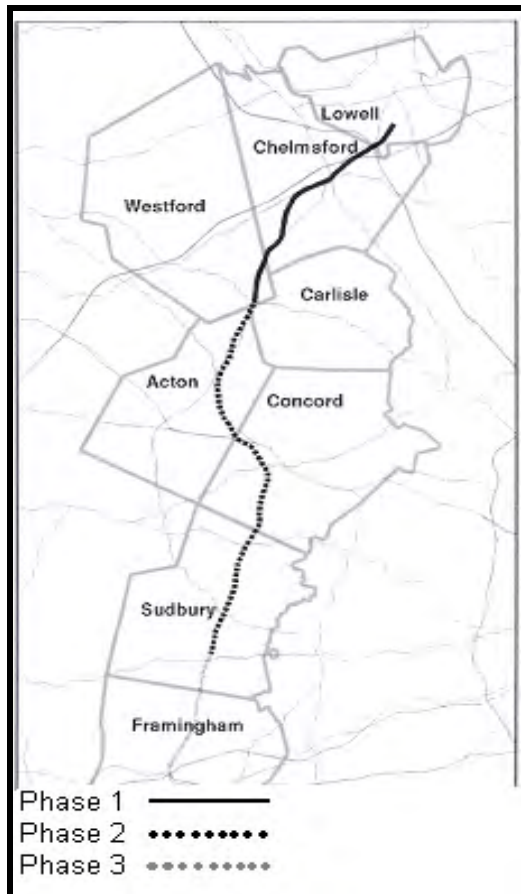
VOL. 16 No. 1

MAY 2007

BRUCE FREEMAN RAIL TRAIL - COMMUNITY OUTREACH MEETINGS

THIS MEANS US !!!

White Pond neighbors have recently received a hand-delivered flyer from the Town's Bruce Freeman Rail Trail Advisory Committee (BFRTAC) announcing a number of community outreach meetings scheduled for May and June.



The proposed 25 mile multi-purpose rail trail would be built in 3 phases and would eventually extend from Lowell to Framingham. Phase 2 includes a 3.5 mile section in Concord, and would

pass under Powder Mill Road and end at the Sudbury town line at the southern edge of the White Pond Reservation.

White Pond area residents are encouraged to attend these outreach meetings - to listen, question, and contribute to design decisions that could have a lasting impact on the water quality of our pond, the health of our natural environment, and the quality of life of those who live in the White Pond neighborhood.

The seven BFRTAC meetings listed below will take place on Thursday evenings in the Town House Hearing room from 7:30 to 9:30 pm. Noted in italics are agenda items that will be of particular interest to White Pond area residents.

May 10: Design criteria / landscaping / cross sections / surface treatment

Trail width...clearances...alternate surface considerations...drainage

May 17: Bridges / amenities

Powder Mill Rd culvert...rest stops...trail enhancements

May 24: People management / trail alignments / access points

*Parking areas...path end treatment
...private property protections*

May 31: Design concerns from Acton line to Old Marlboro Rd.

June 7: Design concerns on trail from Old Marlboro Rd to Sudbury Line

June 14: Trail alignment through West Concord Center

Sept 11: Environmental issues / landscaping *Wetlands...wildlife...invasive species*

For more information, you can go to the BFRAC web page at either www.concordnet.org or www.concordma.gov.

Friends of White Pond representatives will attend all of these meetings. We encourage you to do the same. Joan Turner

WHITE POND HAS ITS OWN WEB SITE

If you haven't discovered it yet, there is an exciting new internet resource for the White Pond neighborhood and anyone who is interested in learning about and discussing White Pond watershed issues. The site, "White Pond Forums" is just getting started and can be found at www.whitepond.org. Its charter states it is "pro-White Pond and preservation based, formed to introduce responsibility and collaboratively make aware, the myriad of issues befronting this threatened, delicate resource...". The site has several White Pond affiliates including: Friends of White Pond (FOWP), White Pond Advisory Committee (WPAC), White Pond Associates, Friends of Concord Rural Trails, the Dover Street Property Owners, and Old Pickard Farm Trust. Our sub-forum contains an archive of all issues (1987 to the present) of "Ponderings", the FOWP newsletter, as well as Water Quality Data from 1949 to 2006. Check it out: www.whitepond.org.

Wendy Slattebo

2006 RANGER PROGRAM SUMMARY

The following is a summary of the Natural Resources Division's report on the 2006 Ranger Program.

From early July to early September 2006, the Town employed two Rangers to help monitor Town-owned land and ensure compliance with Concord Land Use Regulations. They also collected trash, assisted the Conservation Crew with land management projects, maintained daily activity logs, and issued parking tickets.

The Rangers made about five trips daily to White Pond and were there about 2.5 hours each day, which represented about 30% of their time. Most of their time was spent educating people that swimming from Town-owned land that is

governed by conservation regulations is not allowed. On most of the days, the number of swimmers was five or less, but on very hot days, the number could be up to twenty-five. About 50% of the swimmers would get out of the water voluntarily and say that they were not aware of the regulations. There were also swimmers who were angry and confrontational and would refuse to get out of the water, or threaten to get back into the water after the rangers had left. However, the Town feels that the Rangers were able to reduce illegal swimmers by up to 50% and ensure compliance with the Concord Land Use Regulations.

Kate Blair

[Editor's Note: The pond's high water levels in 2006 decreased available beach area and may have decreased the number of visitor/swimmers the rangers encountered.]

KEEPING TRACK OF WHITE POND

- **2006 Water Quality Monitoring Results**

After the big scare last summer when the Secchi disk disappeared from view at 8 feet, we were all relieved when the transparency readings got somewhat better. However, if we compare the average transparency for last year with 2005 and 2000, it looks like this: in 2006 the average for the season was 20.14 feet; in 2005 it was 26.39 feet, and in 2000 it was 23.25 feet. Since we continue to have very high water, which can affect transparency, it will be interesting to see what readings we get this year.

We did some very limited phosphorus testing in the 2006 season and I believe the results don't indicate any worsening of the phosphorus levels in the pond. I look forward to getting Dr. Walker's feedback about this new data as our 2007 water quality monitoring gets underway. Dr. William W. Walker, as some folks may remember, was the environmental scientist who did the original White Pond water quality study in 1987-1990. He has continued to help out with our monitoring program.

Our other water quality monitoring results, dissolved oxygen, pH, etc. were pretty typical. The extremely low dissolved oxygen in the deeper water of the pond during the summer

months continues to remind us that the pond has important water quality problems.

To see all our water quality monitoring data for 2006 (and all the historical WQ data as well) go to the Friends of White Pond forum at www.Whitepond.org.

- **Need for an Aquatic Vegetation Expert**

Dr. Walker has recommended some other elements that would be useful to add to our White Pond database. He has recommended an aquatic vegetation survey, a shoreline survey and perhaps more phosphorus sampling. However, we don't have the expertise or the funds available at this time. The White Pond Advisory Committee may be undertaking a shoreline survey, which would be a great asset. If there is anyone who has the expertise necessary to manage an aquatic vegetation survey, we would love to hear from you (call any one of the officers listed at the end of this newsletter).

- **Possible Town-sponsored Initiative**

Last October some Friends of White Pond and White Pond Advisory Committee members met with Town Manager, Chris Whelan, and other Town staff to talk about water quality monitoring at White Pond and Dr. Walker's recommendations for additional data gathering. Chris discussed his thoughts for a broader approach. He proposed that the Town undertake a professional study of the threats to White Pond and remediation or mitigation measures that might be appropriate. The Town would expect to share the costs with the Friends of White Pond and any other interested parties. We'll keep you posted (check the Friends of White Pond forum at www.Whitepond.org). Judith Sprott

"BIG NIGHT" IN VERNAL POOLS

Our Natural Resources Administrator, Delia Kaye was the leader of a group of curious observers of "Big Night", when salamanders reappear from their underground hiding places to make their annual trek to the vernal pool of their choice. It turned out that a Sunday night with cold, cold, pouring rain was her best bet for "Big Night". Dave Trask and I (old Big Night trekkies) showed up at 141 Keyes Road at 7 p.m. expecting to see

no one else, but there were perhaps 10 others plus Delia - who led us to the rail trail access off Powder Mill Rd. The idea was for us to split up and observe and document sightings of salamanders and wood frogs that were in the process of crossing the railroad tracks on their way to one of three vernal pools in the area.



Results: there were no sightings on the tracks north of Powder Mill Road. BUT to the south there was a lot of action as we approached Heart Leaf Pond. We saw 4 or 5 spotted salamanders in the pouring rain tediously making their way up and over the rails, headed for their vernal pool, plus numerous wood frogs. Altogether a very successful venture. Delia was pleased. We all were. Joan Turner

LOOKING DOWN ON WHITE POND

There is a new technology available that uses a specially equipped airplane to fly over any site that has been chosen for inspection and scans it with various wavelengths of light, such as infrared. These "groundwater intrusion overflights" are used to locate problem septic systems and surface run-off sites that are nutrient and contamination sources for lakes, ponds and rivers, threats to well-sites and other contamination problems that are ordinarily difficult to "see". At least one neighboring town, Wayland, has chosen to have an "overflight" done of several of their ponds and well sites. Concord is looking into using this technology to identify surface run-off and septic plumes affecting Nagog Pond, in particular, and possibly also for other ponds and sensitive areas, such as White Pond. We'll keep you posted (check the

Friends of White Pond forum on
www.Whitepond.org). Judith Sprott

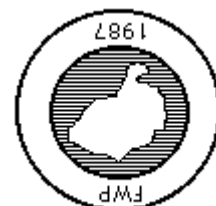
THANK YOU MICHAEL MOORE

Our thanks to Michael Moore, Concord's Public Health Administrator, who resigned in April. We appreciate the support that he and the Health Division gave to the White Pond water quality monitoring program over the years. We are also grateful to him for representing the concerns and experience of the Board of Health and the Health Division regarding wastewater management decisions for the White Pond watershed. We will miss Mike. Wendy Slattebo

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FOR THE FRIENDS OF WHITE POND





PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 17 No. 1

JUNE 2008

BRUCE FREEMAN RAIL TRAIL UPDATE

This spring Town Meeting voted to accept the Bruce Freeman Rail Trail Advisory Committee's (BFRTAC) article for the 25% design of the Bruce Freeman Rail Trail, but with two very important changes to the committee's recommendations. The first major change was a vote to replace the culvert at Powder Mill Road, which the committee had not recommended. In a second major change, Town Meeting voted to accept an article to pave the trail with asphalt in its entirety. The committee had recommended asphalt for part of the trail and a non-asphalt surface for part of the trail including near White Pond. The developed trail will end at the Powder Mill Road culvert until such time as Sudbury moves ahead on building the rail trail through Sudbury. There is still more design work to do, Town and state approvals required, and funding to be obtained before construction of any part of the rail trail in Concord can begin. This may take several years to accomplish.

The Friends of White Pond are charged with the stewardship of the pond's water quality. We strive to keep the pond healthy for future generations to enjoy. We remain concerned that the increase in visitors that will result from building the rail trail will further impact the water quality of the pond. Large numbers of rail trail users will be introduced to the pond, and will have access to its banks, shoreline, and water. It is well documented that bank and shoreline erosion and increased swimming activity degrade water quality and accelerate eutrophication, resulting in more algae, more aquatic vegetation. Protecting the pond now and in the future from these impacts by visitors is our highest priority.

The White Pond Advisory Committee has presented a "People Management Plan" to the Town that includes strategies for protecting the pond. We support their efforts to get the plan fully implemented. The plan can be read at www.whitepond.org in the WPAC section and also at the Town's website www.concordma.gov in the BFRTAC section. We are encouraged by the Town's new ranger program and we are pleased to report that once again the Town has budgeted for two full time, uniformed rangers this year. (Please see separate article on the rangers in this Ponderings.) We will continue to express our concerns to the Bruce Freeman Rail Trail Advisory Committee (BFRTAC) as they work on the 75% design.

Kate Blair and Wendy Slattebo

THANK YOU ANDREA . . .

Andrea Siani has served well and faithfully on Concord's Bruce Freeman Rail Trail Advisory Committee since the committee was appointed several years ago. She has decided not to serve a second term on the committee.

Serving on this committee has been demanding, difficult and, sometimes, contentious. Andrea has been a thoughtful, honest and well-spoken contributor to the committee's work. She has represented the interests of White Pond by making clear the impact of increased visitors that will result from building the BFRT. She has represented the Town's interests by pointing out the need to budget and implement the necessary programs to protect the pond from that impact. Her efforts at a critical time in the advisory committee's work are greatly appreciated.

Judith Sprott

REGULATIONS AND RANGERS

Concord Conservation Land Regulations have been established by our Natural Resources Commission to encourage passive recreational use while maintaining these areas in a natural condition now and for future generations. The following excerpts from these regulations apply particularly to Town-owned land on White Pond. Violations are punishable by a fine of not more than \$100.

1. There shall be no fires except with a written permit.
2. Activities after dark, and overnight camping without written permission, are prohibited.
3. Swimming is not permitted.
4. No person shall cut, break, remove, deface, or defile any structure, fence or sign.
5. Litter, cans, refuse, bottles and trash shall be removed by the user.
6. Dogs shall be kept under owners' control at all times.
7. Alcoholic beverages are not allowed.

Again this year Town rangers will patrol several Town conservation lands, including White Pond land and shore, to ensure compliance with the above regulations. They will be on duty from 9 to 6:30 daily and on weekends. Because they cannot be at the White Pond site at all times, Delia Kaye, Concord's Natural Resources Director, asks White Pond residents and others to report violations they notice on Town Land. During office hours (Monday through Friday, 8:30 am to 4:30 pm), calls should be directed to the Natural Resources office at 978 318-3285. During off hours, weekends, and holidays, calls should be directed to the Concord Police Department at 978 318-3400.

Joan Turner

PARKING ON WHITE POND STREETS

As the heat of summer returns, so do cars parked up and down White Pond neighborhood streets marked "no parking" or "permit parking only", etc. Police Chief Wetherbee wants people to know

that parking enforcement is picking up and asks us to help by reporting illegally parked cars to the police at (978) 318- 3400. He also suggests that anyone planning a party involving parking cars on the street notify police ahead of time.

A little known fact is that resident vehicle stickers and guest parking permits are available for residents of "no parking" streets by applying in person with your car registration(s) at the Town Clerk's office. Both resident vehicle stickers and guest parking permits are 75 cents each.

Joan Turner

FREQUENTLY ASKED QUESTIONS BY WHITE POND RESIDENTS AND VISITORS:

There seem to be more and more dogs coming to the pond - is that a problem?

It is a problem for several reasons. Some people say dogs won't urinate or defecate while in the water - if true, that's good. However, dog waste along the water's edge can pollute the pond when rain washes it into the water or it is carried into the water on visitors' feet. Dogs scrambling up and down the banks of the pond create erosion problems (as do people) and erosion is a major problem for the pond's water quality.

It is interesting to note that the Sudbury Valley Trustees have sent out a brochure to their members asking them to "not allow their dogs to go into streams and ponds" at SVT properties because it "causes damage to fragile habitats and increases erosion and siltation". They have also limited the number of dogs a visitor/dog walker can bring to three dogs. For more details on their dog walking policy go to www.svtweb.org.

At White Pond, the White Pond Associates and the Dover Street Property Owners do not allow dogs at their beach-front properties. Perhaps the Town should consider a dog-control policy for Town-owned lands on the pond.

The pond looks pretty good most of the time - how's it doing?

It does look good and the water quality data are generally stable. The data on the clarity of the water show no obvious change in the amount of algae in the pond. Data from our minimal phosphorus testing last year didn't show any significant change in phosphorus levels over the last five years. We are concerned, though, about the consistently extremely low levels of dissolved oxygen (DO) in the bottom waters – this already means fish can't survive in the bottom waters. There may be more vegetation growing on the bottom of the pond in some areas of the pond, but it is difficult to quantify.

I've heard that using fertilizers around the pond is bad for the water quality- why is that? What can we do?

Phosphorus is one of the components of most fertilizers, and phosphorus is the most critical nutrient feeding the algae and aquatic vegetation that degrade the pond. All of us in the residential watershed (bounded by Stone Root Lane, Powder Mill Road, Plainfield Road and Hemlock Street) can help the pond by eliminating or greatly limiting our use of fertilizers. This is especially true for shoreline properties where both run-off and leaching through the sandy soils can send phosphorus into the pond. Eliminating or minimizing lawns and plants that require feeding to be healthy and beautiful will help reduce the amount of phosphorus reaching the pond.

Another source of phosphorus is cleaning products. Fortunately, MA state law does not allow phosphorus in common household products such as laundry detergents and cleaning products. In July of 2010, phosphorus will be banned in our dishwasher detergents, as well. Until then Seventh Generation and Trader Joe's dishwasher detergents do not contain phosphorus. Unfortunately, phosphorus is still allowed in heavy-duty cleaners such as TSP (trisodium phosphate), frequently used to wash houses in preparation for painting. It is a good idea to check the ingredients of any special

cleaners before you purchase them. There are usually effective non-phosphate alternatives.

I've seen ropes and signs on the Town lands on the pond – what's up?

The Natural Resources Division (NRD) is trying to prevent further erosion on some of the “spontaneous” paths leading down to the water on Town land by installing rope fences and signs. Sadly, but not surprisingly, there has been vandalism of some of the NRD's “fences” and of their signs. For example, you may have noticed that there was some “recycling” going on last year – some of the rope fencing the Town installed got “recycled” into a rope swing – not good!

What's happening about the sewers the Town was proposing for White Pond?

The Town's plan for sewerage White Pond as part of the Comprehensive Wastewater Management Plan (CWMP), which the Town adopted in 2003 and the state subsequently approved, is on hold. There was a long, dedicated search for a suitable local site outside the pond's watershed for disposing of the effluent, but none was found. There is no doubt that the on-site sewage disposal systems around the pond are contributing phosphorus to the ground water and so to the pond. Eliminating on-site systems would have permanently removed one significant source of phosphorus, much to the benefit of the pond.

Judith Sprott and Wendy Slattebo

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Find out what people are talking about and White Pond organizations are doing at www.whitepond.org, including what's going on with water quality and back issues of *Ponderings* in the “Friends of White Pond” section.

NAME: _____
ADDRESS: _____
TELEPHONE: _____ EMAIL ADDRESS: _____

WOULD YOU LIKE TO MEET WITH THE STEERING COMMITTEE OF THE FRIENDS OF WHITE POND? YES: ____ NO: ____

WOULD YOU LIKE TO HELP MONITOR WATER QUALITY? YES: ____ NO: ____

IF YOU HAVE QUESTIONS OR CONCERNS, FEEL FREE TO SHARE THEM.

WE ARE ASKING ONCE AGAIN FOR YOUR SUPPORT FOR *PONDERINGS* AND OUR WATER QUALITY MONITORING PROGRAM.

DUES FOR 2008 MEMBERSHIP ARE: INDIVIDUAL - \$10 FAMILY - \$20

PLEASE MAKE YOUR CHECK PAYABLE TO 'FRIENDS OF WHITE POND' AND SEND TO OUR TREASURER: JUDITH SPOTT, 43 WHITE AVENUE, CONCORD, MA 01742

FOR THE FRIENDS OF WHITE POND





PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 18 No. 1

JUNE 2009

VOLUNTEERS HELPING WHITE POND

The White Pond Advisory Committee is a voice for expressing the needs of the White Pond Community to Town officials. However, recent trends, such as the reduction in Town funding for the Rangers and continued Town funding for the Rail Trail, have made it clear that the stewardship of our pond falls more on our community than on the Town.

Members of our community have been keeping the pond and public land beautiful with spontaneous good deeds such as:

- Picking up trash
- Taking down rope swings
- Closing off eroding trails with brush
- Calling the Police Department at (978) 318-3400 to report illegal activities
- Conducting water testing on a volunteer basis (thank you Judith Sprott and FOWP!)

In addition, the White Pond Advisory Committee is working with the Town to make a few things happen over the next year or two:

- Adding wooden "No Swimming" signs to the existing signposts at the entrances to the Town Land
- Pursuing funding for a Pond Management Plan to guide and justify the Pond restoration and use requirements
- Promoting efforts to restore eroded banks near the shoreline

In the past few meetings, the WPAC has been interviewing professional lake and pond consultants in connection with the Pond Management Plan. As these experts describe the issues facing other ponds in the state, we are struck by what great shape our pond is in to start with, and what diligent effort it will take from all of us to preserve this rare pure resource.

Thanks to all who have been helping, keep up the good work and welcome to others interested in volunteering!

Fred Lindgren
Chair, White Pond Advisory Committee

CONCORD'S WETLANDS PROTECTION BYLAW

As most of us know, the 2009 Town Meeting voted to approve the Natural Resources Commission's new Wetlands Protection Bylaw. Essentially the new bylaw brings Concord into the state's formal program of regulations and compliances designed to prevent degradation and encroachment of valuable wetlands.

The new bylaw spells out in great detail specific activities that could jeopardize the protection of wetlands and the pond itself. Briefly, the bylaw applies to land within three areas all measured in distance from the shore banks:

- A 100 foot restricted activities "buffer zone"
- A 50 foot zone (part of the 100 foot buffer zone) with a few additional restrictions
- A 25 foot "setback" in which any "activity or alteration" is prohibited.

However, at the same time, the bylaw exempts maintenance and repair of existing buildings and structures (with some restrictions), as well as exempting assorted additional activities, thus allowing them (sometimes conditionally) in the 100 foot buffer zone. In the same way, the bylaw also exempts "routine maintenance, repairs, and construction on legally preexisting structures or continuation of a legally preexisting use" in the 25 foot setback area.

This bylaw also gives the Natural Resources Commission power to levy fines up to \$300 per day on property owners who are not in compliance.

We strongly recommend that all Ponderings readers locate and read the 10 page Wetlands Protection Bylaw available online at www.concordma.gov or www.whitepond.org.

If our readers plan any activities (e.g. tree work, fencing, planting, building repairs) on land in any one of these zones along the shoreline of the pond or any wetland, and if you have questions or concerns, you should call the Natural Resources offices at (978) 318-3285.

Joan Turner

THANK YOU FRED...

Fred Lindgren has stepped down as chair of the White Pond Advisory Committee. We appreciated his vision, commitment and skill as the leader of a hard-working committee, especially at this critical time for White Pond. Fred tirelessly led his committee on developing a comprehensive Pond Management Plan, seeking Town funding for Rangers as well as the Plan and responding to the NRC's Wetland Bylaw proposal. Throughout his tenure Fred served as an articulate spokesperson for the needs of the White Pond Community. Thank you Fred!

Wendy Slattebo

WHITE POND AREA TRAILS ARE FOCUS OF TOWN COMMITTEE

The Trails Committee, a sub-committee of the Natural Resources Commission, was created in October 2007 to monitor the condition of existing public woodland trails, identify areas needing improvement and propose appropriate locations for new trails.

The Hapgood Wright Town Forest was chosen for the trail marking pilot project because of its popularity with hikers. The Town Forest and adjacent conservation lands comprise 183 acres and form the largest conservation area owned by the town. To guide walkers, a 3-color system of plastic blazes has been adopted: main trails and loops are marked with yellow blazes, secondary trails with red, and connecting trails with blue. The project was completed in November. Maps are placed at the entrance of the Town Forest and can be downloaded from the town website.

Early this year the Trails Committee decided to focus on the White Pond area for its second project, knowing that some of the existing trails need to be closed to help prevent erosion of steep banks going down to the pond. Approved trails throughout the area will be identified and clearly marked. The Committee is working closely with the White Pond Advisory Committee and has already walked the land to become familiar with the site. Expect to see a lot of action by the Trails Committee during the summer.

Ken Miller
Trails Committee Chair



FREQUENTLY ASKED QUESTIONS BY WHITE POND RESIDENTS AND VISITORS:

Q: I've heard that phosphorus getting into the water is bad for the pond – what can I do about that?

A: Phosphorus is the nutrient that is degrading water quality. The four common sources of phosphorus are: erosion, surface water run-off, fertilizers and septic systems. We can all become stewards of White Pond in the following ways.

If you live near the pond:

- Have your septic system pumped regularly – check with the Health Department (978 318 3275) if you are unsure how often your system needs pumping
- Eliminate/minimize using fertilizers (chemical and organic)
- Check your property to be sure that there is no erosion damage or surface water run-off reaching the pond.

Residents and visitors:

- When you go down to the water, choose established trails that show no signs of surface water run-off into the pond.
- Prevent your dogs from running up and down the banks of the pond. They can damage the leaf litter and vegetation cover, which leads to erosion and surface water run-off into the pond
- Keep your eyes open for erosion damage and/or surface water run-off on Town-owned lands. If you see erosion or run-off, report it to the Natural Resources office (978 318-3285).

Q: Is it normal for the pond to be so high?

A: It is normal for the water level of kettle ponds such as White Pond and Walden Pond to vary a lot. Their water levels rise and fall during the year, but they also rise and fall even more over a period of years. Snow and rainfall on the surface of ponds add water; evaporation from the surface removes water. Since kettle ponds have no surface inlets or outlets, they also gain water from groundwater inflow and lose water from groundwater outflow. There seems to be a tendency for these ponds to cycle back and forth - rising for several years in a row and then reversing themselves and falling for several years.

What is 'normal' is hard to say. Low can be very low, for instance after some years of generally falling levels, so much 'beach' can be exposed that a 4-wheel vehicle can drive around the pond without getting its wheels wet. High can be very high, just take

a look now. After reaching a low point in 2002, the water level of White Pond began to rise and has risen about four feet so far. In fact, the pond is as high now as it has been in at least 35 years.

Q: What's all the green stuff growing on the floor of the pond? Should we worry?

A: There are two kinds of "green stuff" growing on the floor of White Pond. Most often it is some kind of aquatic plant that is there all year round. But there is a second kind of green stuff growing on the pond's floor, a filamentous algae. Algae are not plants and this filamentous type only grows briefly and close to the shoreline. It can look quite dense in the early spring and is usually gone by early summer. If you try to get a handful of it, it slips through your fingers. Should we worry? Yes and no. Read on.

Aquatic plants can either be entirely underwater, such as White Pond has, or they can be rooted at the bottom but with long stalks that allow them to have their leaves at the surface, or they can float on the surface of the water without any connection to the floor of the pond at all. Most plants need sunlight to make food, so they grow in fairly shallow water. White Pond is lucky that it only has underwater plants so far. The other two kinds can change the appearance of a pond significantly and make boating and other recreation unpleasant and difficult.

White Pond has quite a few different types of algae. Other than the filamentous algae, most of the pond's algae are floating types that affect how clear the water looks.

The "green stuff" reminds us that there is an excess of the phosphorus that the green stuff needs in order to live and reproduce in White Pond – and that is worth worrying about. Judith Sprott

UPDATE ON THE BRUCE FREEMAN RAIL TRAIL

Concord's 2009 Town Meeting approved an expenditure of \$125,000 from the Concord Community Preservation Fund to continue work on the design for Concord's section of the proposed Lowell to Framingham bike trail. The trail would connect to Concord on the north side of Route 2 at the Acton Town line, pass through West Concord to Sudbury and beyond. The southern endpoint of Concord's section of this trail is at the Sudbury Town line located in the woods abutting White Pond, which is not a suitable endpoint for a major bike trail. In 2008 Concord's Bruce Freeman Rail Trail Advisory Committee stated that "Unless and until Sudbury moves forward in building its portion of the trail, the southern endpoint of Concord's portion of the BFRT

will be at Powder Mill Road" [BFRTAC 2008 FAQs, www.concordma.gov BFRTAC].

The status of Sudbury's trail planning is very important to Concord and the White Pond community. Several years ago Sudbury hired consultants to do a feasibility study, but Town staff had complaints about how it was done. Their 2008 Town Meeting voted a large amount of Community Preservation funds to acquire the section of the rail corridor still owned by CSX, if an acceptable price can be negotiated. Given current economic conditions, Town officials apparently now consider the project to be a low priority. The Town did not request any new funds this year beyond permission to use \$25,000 remaining from unspent Community Preservation BFRT funds` for the creation of a concept plan for the rail corridor.

Kate Blair, Wendy Slattebo, Judith Sprott

WELCOME AND THANK YOU

In 2008, the Friends were joined by 7 new members/families – welcome!

Between June 2008 and the present, the Friends have received \$370.00 in contributions. These funds will continue to pay for publishing *Ponderings* (about \$100 per issue) and some minimal expenses to support the water quality monitoring program. We would also consider supporting projects that will directly contribute to improving, or at least maintaining, the pond's water quality. Contributions can be sent to Judith Sprott, 43 White Ave. Concord.

Judith Sprott

FRIENDS OF WHITE POND

Co-President: Joan Turner

(978) 369-7864; jturn@verizon.net

Co-President: Wendy Slattebo

(978) 369-5246; wendyslattebo@comcast.net

Secretary: Kate Blair

(978) 369-9194; kdblair46@comcast.net

Treasurer: Judith Sprott

(978) 369-4850; jksprott@comcast.net

Find out what people are talking about and White Pond organizations are doing at www.whitepond.org. You can click on the Friends of White Pond section of the whitepond.org website and read the current *Ponderings* and water quality data as well as back issues of the newsletter and past water quality data.

We are considering publishing *Ponderings* only on the whitepond.org website. Please let us know what you think about this by phone or email.

FOR THE FRIENDS OF WHITE POND



PONDERINGS

BY THE FRIENDS OF WHITE POND

JUNE 2010



VOL. 19 No. 1

THE CONSEQUENCES OF HIGH WATER

Local lore has it that White Pond's water level is higher now than it has ever been in living memory. Informal measurements show that the water level has risen more than 15 inches just since last fall. Kettle ponds cycle from low to high to low water levels over the years, but this has been a particularly dramatic cycle so far. The water level rises from precipitation, inflows of groundwater and residential wastewater (non-sewer), as well as surface water run-off. The water level falls by evaporation, plant uptake in the watershed, as well as well pumping and groundwater outflows. In the last few years evaporation and outflows have been overwhelmed by precipitation and inflows and it is impossible to predict how quickly this will change. Even if there is a significant decrease in annual rain and snow fall, it will take years, not months, before we see wide beaches around the pond again.

What does high water mean for the pond? As the water rises it continues to scour the banks of the pond bringing additional organic debris and soils into the pond water. Organic debris and soils are sources of nutrients, especially phosphorus, which support the algae and aquatic vegetation that degrade the pond's water quality. The pond is so high now that there are no beaches and very little level land for chairs and beach towels. Visitors solve this problem by using the steep banks of the pond instead, creating "clearings" that lead to additional erosion and surface water run-off bringing still more phosphorus into the pond.

High water causes a multitude of problems. Although it doesn't directly affect water quality, high water is killing trees, shrubs and other vegetation. Both water and, especially, ice have damaged steps, retaining walls, docks and other structures all around the pond. The drowning of shoreline vegetation and structures has created underwater hazards making it difficult to safely wade, swim or boat close to shore. The surfaces of drowned objects grow algae of various sorts making them very slippery. These algae "farms" also attract fish that attract fishermen and their fishing lines and hooks, which then get snagged and left behind to catch a human instead.

PHOSPHORUS, RUST, ALGAE AND BAD SMELLS

Everyone who has found little rust spots on their laundry knows that untreated Concord water has a lot of iron in it. Iron may be a problem for us, but for White Pond it is a very good thing. The iron in our water comes from Concord soils, including the sediments under White Pond. As chemistry would have it, much of the phosphorus in the pond water gets "bound up" by the iron in the sediments, keeping it out of the water column and unavailable for feeding algae and aquatic vegetation. We can see that even the comparatively little phosphorus that hasn't gotten bound and remains in the water feeds plenty of algae and water weeds. But all this can change if there is little or no oxygen in the bottom waters part of the year.

Ordinarily there should be some oxygen dissolved in the water from the top to the bottom of the pond. However, one of the signs of degraded water quality is the depletion of dissolved oxygen (DO) in the bottom

\$\$\$\$ Phosphorus Testing is Expensive \$\$\$\$

From April to October this year we will be doing a full set of phosphorus tests to measure current phosphorus levels. In the past, the Town helped pay for phosphorus testing, but not anymore. The Friends of White Pond will be paying the entire bill – about \$700.00. Any and all contributions for this testing will be gratefully accepted. Please make your check out to Friends of White Pond/Phosphorus Testing and send it to Judith Sprott – FWP Treasurer, 43 White Ave., Concord, MA 01742

White Pond is not alone in having problems as a result of the high water. The Boston Globe ran an excellent article on high water at Walden Pond on May 27, 2010, currently available for reading at www.boston.com/news/local/massachusetts/articles/2010/05/27/high_water_swallows

Judith Sprott

White Pond is a rare and beautiful, but also fragile, part of Concord's landscape, a gift whose stewardship has passed from generation to generation. The Friends of White Pond seek to honor our role as stewards of the pond's water quality. We meet infrequently. We share information and concerns through our newsletter, *Ponderings*. We conduct water testing throughout the spring, summer and fall. We welcome others - new Friends - to participate in our activities. Specifically we are looking for people interested in helping to do water quality testing and in helping to publish *Ponderings*. If you are interested

NEW FRIENDS ALWAYS WANTED

summer.

be the White Pond area stewards this maintenance. Jim Lyons and Ken Miller will Town trails and check for areas needing is introducing a stewardship program to patrol Committee Chair, reports that the committee currently under water). Ken Miller, the Trails trails. (One blue trail around the cove area is Street parking lot, the "official" entrance to the available later this summer at the Vanick connecting trails with blue. Maps will be yellow blazes, secondary trails with red and Commission. The main trails are marked with committee of the Natural Resources

- Trails on Town land at White Pond have now been blazed by the Trails Committee, a sub-committee of the Natural Resources Commission. The main trails are marked with yellow blazes, secondary trails with red and connecting trails with blue. Maps will be available later this summer at the Vanick Street parking lot, the "official" entrance to the trails. (One blue trail around the cove area is currently under water). Ken Miller, the Trails Committee Chair, reports that the committee is introducing a stewardship program to patrol Town trails and check for areas needing maintenance. Jim Lyons and Ken Miller will be the White Pond area stewards this summer.

White Pond Trails

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Concord's Wetlands Bylaw Regulations

- 2010 Town Meeting passed new regulations for Concord's Wetlands Bylaw. These regulations affect many property owners around White Pond. The regulations are not yet available at the Town's website, but you can contact the Natural Resources Division at 978 318 3285 if you have questions.

Rangers

- Due to the Town's budgetary constraints, there will not be any rangers patrolling Town conservation land, including around White Pond, this year.
- 2010 Town Meeting passed new regulations for Concord's Wetlands Bylaw. These regulations affect many property owners around White Pond. The regulations are not yet available at the Town's website, but you can contact the Natural Resources Division at 978 318 3285 if you have questions.

- This newly published book will tell you all about everything you want to know about kettle ponds. The title is "Beyond Walden: The Hidden History of America's Kettle Lakes and Ponds", written by Robert M. Thorson and published in 2009 by Walker & Co., NY.
- The Concord BFRF Committee is studying different options for the West Concord

Great summer reading

NEWSBYTES:



Over the years, as the extent of oxygen depletion increases, the release of phosphorus from the sediments increases. In time, this will cause a significant increase in the phosphorus levels in the pond, feeding still more algae and water weeds. In view of the pond's history of periods of zero dissolved oxygen in the bottom waters in recent years, last year we did a "sniff test" of a sample of the bottom waters when there was no dissolved oxygen present. The sample smelled like rotten eggs – hydrogen sulfide was present. This bad smell showed there were anaerobic (no oxygen) biochemical processes going on at the bottom of the pond. Have these processes caused a measurable increase of phosphorus in the water? Testing will tell us. Our last phosphorus tests were done in 2006, so we will be testing this summer to document any changes in the phosphorus levels.

waters during the late summer months. DO in the pond is used in the decomposition of organic matter, especially at the bottom. Our water quality testing shows that in recent years there has been little or no DO in the bottom waters of White Pond by late summer. The biochemical processes that happen at the bottom of the pond when there is no oxygen present are different that those that happen with oxygen present. When there is no DO at the bottom, oxygen mixes into the bottom waters when the pond "turns over" in the fall (colder surface water containing lots of DO sinks to the bottom). Much of the phosphorus gets "re-bound" as DO levels at the bottom rise again in the fall and winter.

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Judith Sprott

Although we did not receive the CPA funding for 2010, we are working on our 2011 application with the hope that funds will be available for this project. **We are also soliciting for private donations.** Checks can be made out to the Town of Concord and mailed to James Lyon, WPAC, 51 Mitchell Road, Concord, MA 01742.

WPAC monthly meetings: Please feel free to join us the 3rd Tuesday of every month at 141 Keyes Road on the 2nd Floor at 7:30pm to voice any concerns or see what we are all about.

Please support the Friends of White Pond with your contribution to water quality testing. They are currently accepting donations for such testing so that we may have comprehensive data pertaining to the trends of White Pond.

The WPAC appreciates your interest and support! Jim Lyon

Editors Note: The White Pond Advisory Committee (WPAC) is a Town committee, established by the Board of Selectmen in April of 1973. Selectmen appoint its members and its charge is "to review and analyze the concerns of the areas and play a leadership role in programming the solutions to the recognized and accepted problems."

please contact Joan Turner at jpturn@verizon.net or Wendy Slattebo at wendyslattebo@comcast.net.

UPDATE FROM THE WHITE POND ADVISORY COMMITTEE

The White Pond Advisory Committee (WPAC) had a busy, successful year.

WPAC Members:

We would like to thank outgoing chair Fred Lindgren who is still on the committee and outgoing members David Bearg and Julie Melbin for their hard work and dedication. We would also like to welcome Addie Conner and her fresh ideas to the committee. Our committee of five members includes Jim Lyon (Chair), Arra Avakian, Fred Lindgren, George Barnard and Addie Conner.

We are in the process of looking for new members

to replace members whose 3-year term is ending and welcome anyone who would like to participate and contribute to our committee and the long-term protection of the pond. Please contact any of our members if you are interested.

Maintenance projects:

In working with the Natural Resources Commission, new light fencing and erosion control matting was put in place in Sachem's Cove. Additionally, we installed a new water bar in an area of continued erosion. While not long-term solutions, these measures have been most effective and illustrate what can be accomplished when working with the Town of Concord committees.

Your help is needed with pond cleanup: It would be of great help if everyone living on White Pond could take some time this year to remove any debris, old docks, etc., from your portion of the waterfront, to help with Pond cleanup. By pitching in individually, you can make a big difference with the appearance of the Pond, as well as helping with better water quality.

White Pond Management Plan: This year the WPAC also applied for CPA funding for a Pond Management Plan. This plan would provide Concord with a comprehensive strategy to define immediate and long-term priorities as well as initiatives to enhance the pond's use as a recreational resource. To view the specifics of this plan, please visit our website at: www.concordma.gov/pages/ConcordMA_BComm/whitepond

Find out what people are talking about and what White Pond organizations are doing at www.whitepond.org, You can click on the Friends of White Pond section of the whitepond.org website and read the current *Ponderings* and water quality data as well as back issues of the newsletter and past water quality data.

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FOR THE FRIENDS OF WHITE POND





PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 20 No. 1

AUGUST 2011

THANK YOU, FRIENDS

for your membership and generous contributions last year. Thanks to you the phosphorus testing was completed and analyzed. The lab and mailing costs added up to \$458.47, which were met by dues, and monies marked specifically for that task. Other expenditures included an underwater Secchi disk viewer to be used for transparency testing, a 3 year domain name rental, and support of the website www.whitepond.org, as well as payment for the publishing of last year's and the current issue of Ponderings. After all this, we are delighted to say that we still have money in our piggy bank. Thank you again for your support.

GREAT NEWS!

For many a year, Ponderings readers have found in this space an article devoted to the need for a long-term management plan to preserve and protect the water quality of White Pond and the banks and trails leading into the wooded lands surrounding the pond. Thanks to the initiative and years of hard work by the White Pond Advisory Committee, the town submitted an application in January to the Concord Community Preservation Committee for a grant in support of a comprehensive management plan for White Pond and its watershed. We are very happy to report that the application was accepted by the CPA and approved at the 2011 Town Meeting by a unanimous vote. The grant will be executed by Concord's Division of Natural Resources under the direction of Delia Kaye, Natural Resources Director.

The Plan as approved by CPA will provide Concord with a roadmap to define immediate and long-term priorities regarding:

- Preserving and protecting the water quality of the Pond
- Existing and future recreational use of the Pond
- Addressing the degradation and erosion of banks and trails
- Preserving current wildlife habitat especially during construction of the Bruce Freeman Rail Trail.

Joan Turner

THANK YOU, WPAC

The Friends of White Pond would like to thank the White Pond Advisory Committee, and especially Jim Lyon, for all the work they did to get Town support and funding to create a management plan for White Pond and its watershed. We look forward to the day that the plan is in place and helping to keep the pond and its watershed healthy and beautiful.

FROM THE WHITE POND ADVISORY COMMITTEE CHAIR; A NEW ISSUE FOR WHITE POND

The Town of Concord Solar Siting Committee recently published a draft report (available on the Town website) listing their recommendations for potential Town-owned sites that could collectively support 25 megawatts of utility-scale solar generation on a total of 125 acres of Town-owned land. I strongly encourage you to carefully read and comment on the Solar Siting Committee's draft report recommendations for the use of the White Pond Reservation. The report can be downloaded from the Town's website at concordma.gov in the Solar Siting committee's webpage listed under "Boards and Committees". If the Town were to follow the recommendations currently in this report, then several acres of the forest currently on the White Pond Reservation could be cleared for a large solar panel array. Such a project would obviously have a great impact on current recreational users of the reservation, as well as the view and watershed, and thus the pond itself.

Investing in renewable power generation is a worthy endeavor both because it saves resources and because it reduces our consumption of fossil fuels and helps reduce air (and water) pollution and greenhouse gases, which would directly and indirectly benefit the pond. However, the proposal to clear several acres of the forest currently on the White Pond Reservation presents challenging options for the best use of this valuable public resource. Opinions on the best use of this land will undoubtedly vary, so record yours www.concordma.gov

The White Pond Advisory Committee will be drafting a formal response to this draft report, and we welcome

your input to our response, but more importantly, we encourage you to respond as individuals and record your opinion on how this proposal could impact the future of the pond. We also invite you to attend any of our committee meetings and share your views on this and any other issues regarding the pond. The WPAC meets on the third Wednesday of each month at 7:30 PM in the 141 Keyes Road 2nd floor conference room. Our meeting agendas and notes are also posted on the Town website.

Chris Leary, Chair
White Pond Advisory Committee

Editors Note: The White Pond Advisory Committee (WPAC) is a Town committee, established by the Board of Selectmen in April of 1973.

BRUCE FREEMAN RAIL TRAIL UPDATE

The Friends of the Bruce Freeman Rail Trail (FBFRT) are in the process of raising funds to help design a small section of the trail in Sudbury close to White Pond - the half mile portion of the trail that runs from the Concord/Sudbury town line in the woods adjacent to White Pond south to Route 117 in Sudbury. The impetus for this proposal is that the design of the BFRT is well underway in Concord but, unless Sudbury moves forward with plans, construction of the trail through Concord will end at Powder Mill Road. The FBFRT group is scheduled to meet with the Sudbury Board of Selectmen on Tuesday, September 27, to present their proposal to fund the design of this portion of the trail.

FBFRT's brochure entitled "Bring the Trail to Sudbury" describes the following benefits of their proposal: access to Frost Farm and Davis Field Conservation Lands with a parking lot at Davis Field. (The brochure does not mention White Pond nor is White Pond included on their map). The FBFRT group believes that once their proposed extension of the trail is constructed "it will demonstrate the benefits of the Bruce Freeman Rail Trail in Sudbury and invigorate long-standing plans for the construction of the trail south to Route 9 in Framingham".

The Friends of White Pond (FoWP) are concerned that designing and building this half-mile section of the trail in Sudbury (with potential extensive parking at Davis Field) will introduce more visitors to White Pond's shoreline, banks and water, which can cause shoreline erosion and degraded water quality. We hope that the new White Pond management plan will help solve this kind of problem.

Wendy Slattebo



A SUMMER DAY IN THE LIFE OF WHITE POND

7 a.m. Early morning appearance and gentle voices from a flat bottom, electric motor boat as a father and son quietly cruise the pond with their fishing gear already in use. Presumably they are parked at the State-owned, tiny, public boat-launch access road. Fishermen and families can be found on the pond or along the shore throughout the year, including ice fishing in winter. The State's Department of Wildlife and Fisheries stocks the pond several times each year with rainbow and brown trout and there are "native" fish, too.

10 a.m. Chatter from Thoreau Club campers as they launch their colorful fleet of 4 sailboats from their own dock, accompanied by their instructor's yellow canoe. Always a beautiful sight to behold!

12 noon: As the temperature climbs, the White Pond Associate's swimming beach next to the public access road is filling up. The Associates operate a privately-owned, membership beach of approximately 500 Concord families who swim, picnic and socialize on the beach from early morning until dark. Lifeguards are on duty on the beach when swimmers are in the water and on the large floating dock when swimmers are using it. Members also enjoy the convenience of parking as well as bathroom and changing facilities.

4 p.m. More boats and lots of swimmers as folks with day jobs, pond residents and neighbors with access to the pond show up for their afternoon swim or sail. The most active time of day for the pond.

6 p.m. The Appalachian Mountain Club kayakers are arriving for their 2-days/week group lesson! Surely the most colorful event of the day.

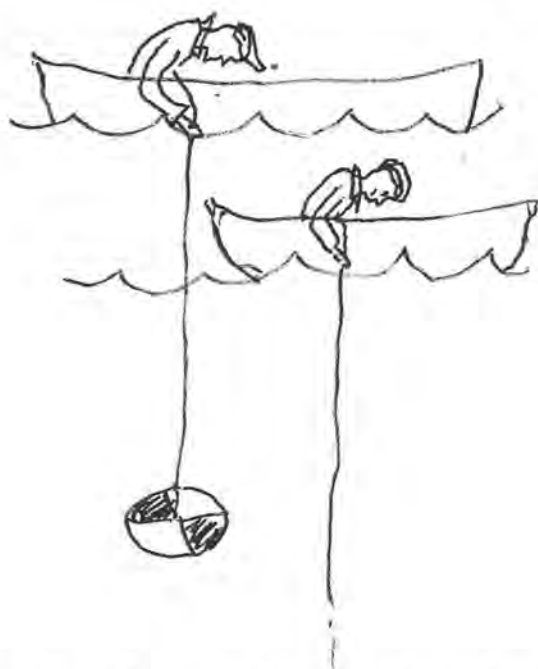
8 p.m. As daylight softens, so does the pond. Cloud formations set the stage for a beautiful sunset. Great Blue Herons head back to their rookery; the bullfrogs can be heard, and shore-front residents lucky to have their own docks sit quietly and take it all in.

Joan Turner

NEWSBYTES:

Rangers: Again this year, the Town cannot afford to have rangers patrolling Town land around White Pond. Fires and other problems should be reported to the police (978 318-3400) and the Natural Resources office would also like to be kept informed of problems (978 318-3285).

Changing water levels: Some White Pond residents have been watching in wonder as the pond's water level has risen to new heights in recent years, only to fall more than 30 inches since spring 2010. What next?

THE GREAT SECCHI DIP-IN by Dave Trask

What's a Secchi Disk?

Now you see it...

Now you don't.

For some years now the Friends of White Pond have submitted our transparency data (taken around the 4th of July) to the Kent State "Great Secchi Dip-In" database. Many pond organizations all over the continent submit their data in an effort to provide enough data for enough years to help look for trends in freshwater pond water quality. Our transparency levels have varied quite a bit over the years, but this year it was good news: The Secchi disk was visible at 26.67 feet on July 2, 2011. You can see their database, including the White Pond data at <http://www.secchidipin.org>.

Judith Sprott

RECENT WATER QUALITY RESULTS

The phosphorus levels in White Pond are tested periodically, usually about every five years and last year's phosphorus testing results are good news: The levels of phosphorus in the pond have not gotten any higher. The not-so-good news is they haven't gotten any lower either. Excessive phosphorus reaches the pond from erosion, surface run-off and, potentially, septic systems. Algae and aquatic vegetation require phosphorus to grow. A very healthy pond would have little or no aquatic vegetation or algae, both of which indicate degraded water quality. White Pond has both algae and aquatic vegetation. Less phosphorus would have been really good news.

Definitely not good news: Perhaps some of you have noticed that sometimes there are green-gold "specks" floating just below the surface of the pond. They are clumps of algae and they can be found both close to the surface and at deeper levels. Earlier this year, "specks" of algae were so plentiful and close to the surface that they were easily visible. Some of them ended up dead as a green "scum" on the surface of the pond along parts of the shoreline. This was the first "algal bloom" we have seen in several years. Large concentrations of algae, especially dead and dying algae, have a bad smell. It's no wonder that people in and on the pond reported bad-smelling pond water during the bloom. It is fortunate that the algae that live in White Pond have not been the kind that can sometimes be harmful to mammals, including us.

For the last several years a new kind of algae has appeared along parts of the shoreline in the spring. It is a filamentous algae and is hard to describe, but you can see images of it on the Internet (just ask for "filamentous algae images"). This kind of algae disappears in early summer, only to return the following spring: but not this year – there was none to be seen. Hopefully, that's good news.

We are well into the 2011 water quality monitoring season now and have been testing dissolved oxygen levels, transparency (Secchi disk), pH, etc. Dissolved oxygen levels are particularly important as they tell us a lot about the general conditions in the pond. Oxygen should be mixed (dissolved) into pond water all the way to the bottom all year around allowing fish and other "animals" to survive there. If the oxygen in the bottom waters is depleted, it is because it has been used up by the decomposition of algae, vegetation and other dead organisms that have fallen to the pond floor. A significant population of these organisms would not be present and decomposing in a very healthy pond. If there is no oxygen in the deeper, cooler water, fish and other organisms have

Cont'd

to move to higher, warmer water where there is oxygen. For some organisms, warmer water is fine, for others it is not.

In addition, the chemistry of the sediments can change as a result of lack of oxygen in the water above them. This can lead to a release into the pond water of phosphorus that is normally bound up in the sediments where it can't do any harm. More phosphorus in the water will feed more algae and aquatic vegetation – a vicious circle.

So far this year, we have already seen the usual drop in dissolved oxygen levels below 40 feet deep (the pond is about 59-60 feet deep now). This is just plain bad news: Lack of dissolved oxygen in the deeper waters of the pond continues to be a serious concern. All the dissolved oxygen data (and all the water quality data for years past) can be seen at whitepond.org as part of the Friends of White Pond material.

Judith Sprott

FRIENDS OF WHITE POND

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FOR THE FRIENDS OF WHITE POND





PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 21 No. 1

October 2012

WHITE POND MANAGEMENT PLAN UPDATE

The Natural Resources Commission (NRC), with the assistance of the White Pond Advisory Committee (WPAC) is in the final efforts to issue the Request for Proposal (RFP) to the potential consultants for preparation of the White Pond Management Plan. The WPAC met with the NRC over the summer and developed a draft of the RFP, that the NRC will now finalize and hopefully issue for bid later this fall. This has been a frustratingly slow process (yes, it has been over a year since the Community Preservation Committee (CPC) funds were allocated), and required more work than any of us believed, but hopefully it will be worth the wait.

The WPAC is very eager to receive the White Pond Management Plan because we believe that it will prove to be a valuable tool for the committee and the community. First, while the WPAC attempts to offer the Town Selectmen advice regarding the Pond based on our best judgment and intuition, none of us are technical experts on what is best for the Pond, so we expect that this report will help us to make technically founded recommendations and to help us to prioritize our efforts. Furthermore, we hope that the report will help us as a tool to convince the town to allocate the proper resources to care for the pond, whether erosion control or people management.

As always, we welcome the involvement of the White Pond Community as we work with the selected consultant over the winter, and then re-prioritize and re-strategize our efforts after receiving the final report. The WPAC usually meets every third Wednesday at 7:30 PM on the 2nd floor of 141 Keyes Road.

Chris Leary
Chair of the White Pond Advisory Committee

WATCHING THE POND'S WATER LEVELS

An ancient Greek philosopher once said 'change is the only constant' and it is a good description of White Pond. The most noticeable change these last few years has been the water level. First it rose to heights that even the old timers had never seen before (about 1 foot a year between 2008 and 2010). Then the water level began to fall faster than anyone could imagine possible (about 2 feet between 2010 and 2011 and another foot between 2011 and mid-summer this year). What will happen next? Will it continue to fall? Stabilize? Rise?

What causes the changes in water level? What puts water into the pond?

- Rainfall – yes. Higher than average rain, higher pond and vice versa.
- Snowfall – yes – same as rainfall. Rain and snowfall contribute to the water level both by falling directly on the pond and by falling in the watershed and contributing to the groundwater that reaches the pond from the watershed.
- Changes in the aquifer – yes. An aquifer is an underground layer of water-bearing permeable rock or gravels, sands or silt. Our pond is a big hole in the ground that is so deep that it is always filled with the groundwater in our local aquifer- the pond shows us the water table. Our aquifer is part of a larger regional watershed and the regional watershed contributes groundwater to our aquifer as it flows towards the Sudbury River. Our local aquifer and the regional watershed all receive water from the same kinds of sources as the pond.
- The water that White Pond residents put into the ground from our waste disposal systems: lawn watering, car washing, etc. also contribute to the pond.

What about losing water?

- Evaporation is a major reason for loss of water from the pond
- Wells also remove water from the pond's groundwater system. There are at least two municipal wells in the local area that affect our aquifer, the White Pond well and a nearby Sudbury municipal well. White Pond residents with private wells also take water from the pond. Residents on Town water take water that comes from the White Pond well, as well as the other Concord municipal wells it gets mixed with. For both sources of water, most of it is returned to the pond through our disposal systems and the resulting groundwater flow to the pond.
- All the groundwater in our regional groundwater system reaches the Sudbury River and becomes part of the river and eventually reaches the Atlantic Ocean. That water loss will, hopefully, be recovered through future rain and snowfall.

As we have watched the pond's water levels change in recent years, we have seen how dramatic the interplay of all these water gains and losses can be. And, in this time of more extreme weather patterns and events, we may see more extreme behavior, even from our placid pond.

Judith Sprott



WATER QUALITY TESTING – 2012

There is one thing about the pond that is not changing significantly – the water quality. White Pond's water quality has been degraded over the years by excessive nutrients (especially phosphorus) reaching the pond. The Friends of White Pond measure the dissolved oxygen, temperature, pH, and conductivity of the pond water. We also do transparency testing to track the pond's algae population, which lives on the

excess nutrients in the pond water. The data that we collect each year from spring until fall has remained more or less the same over the years, meaning some things that we wish would change significantly for the better, remain stubbornly similar from year to year. For instance, a primary indicator, the amount of dissolved oxygen in the bottom waters of the pond, continues to be below living levels for fish during the summer. And last but not least, a very good change has been the response to my appeal for help with the transparency testing (Secchi disk). Every 10 days or so we go out and lower the Secchi disk to observe where the algae are living below the surface of the water. Five people volunteered to help this year and I especially thank Meg Anderson, David Caruso, Trisha Solio and Kathy Power for coming out with me in the red canoe to watch the Secchi disk disappear in the algae.

Judith Sprott

BRUCE FREEMAN RAIL TRAIL UPDATE

Concord's 2012 Town Meeting voted to authorize the Selectmen to acquire the BFRT Phase 2 Right of Way from the state, along with any abutting properties as necessary or desirable for providing access to the rail trail area for construction, maintenance, and repair. This was a routine but necessary step in order to go forward with the BFRT plans. Meanwhile, Concord's BFRTA committee is researching right of ways in West Concord and along the trail. The committee plans to schedule a meeting later in October to discuss people management and fencing in the White Pond area.

At the 2012 Sudbury Town Meeting and Annual Election, the town indicated its support by a majority vote for "efforts to develop old rail lines into a recreational bike trail". The Sudbury Selectmen will therefore begin to look into steps to renew discussion of the development of the rail trail. Town staff, in conjunction with the Rail Trail Conversion Advisory Committee, will study parking, recreation and rights of way issues and plan to give a report to the Selectmen at their November meeting.

The Friends of the Bruce Freeman Rail Trail have offered to donate \$50,000 to the Town of Sudbury. This donation would pay 100% of the preliminary design of the half mile portion of the proposed rail trail from the Concord-Sudbury

town line in the woods adjacent to White Pond south to Route 117. The Sudbury Selectmen have neither accepted nor rejected this offer, choosing to wait till more information has been gathered.

For current updates, please visit www.sudbury-ma.gov/departments/BoardofSelectmen, and www.concordma.gov/Pages/ConcordMA_FreemanMin/

Kate Blair

PROTECTING CONCORD'S WETLANDS, PONDS AND STREAMS

Many of the readers of Ponderings live within Wetland resource areas or buffer zones, which are regulated by the State, under the Wetlands Protection Act, and Town, under the Wetlands Protection Act and town bylaw. It is important for these homeowners to understand their responsibilities when planning to landscape, cut trees or shrubs, control invasive species, build or rebuild additions, decks, sheds or shoreline structures.

The Natural Resources Division of the Town of Concord recently published "A Homeowners Guide to Working Near Wetlands and Streams" in order to acquaint residents with the laws and regulations that govern these activities. (This brochure will be mailed to all Concord residents soon). Any activity that will alter a wetland or its buffer zone must be permitted by the Natural Resources Commission. If you are planning activities within these areas the NRC encourages you to "ask before you act." For more information contact Natural Resources at 978-318-3285 or www.concordma.gov.

Wendy Slattebo

WHITE POND'S FALL AND WINTER.....

This is Pondering's first Foliage Issue. White Pond neighborhood residents and others on our mailing list are accustomed to receiving our annual Ponderings newsletter in May or June. Here, after a glorious summer on the pond, we bring to our readers a different seasonal perspective of change in and around White Pond during the fall and winter.

The biggest change, of course, is the 'icing over' of the pond – an event that 'changes everything' for fish and other natural life living year round in the pond, and for fisherfolks, Nordic skiers and

skaters, who all look forward to a long, cold winter. The icing process, from beginning to end, takes place over a time frame of several days, even weeks – during which flocks of water birds assemble on the pond as their last resort for open water. Gulls, buffleheads, goldeneyes, mergansers – even a loon – have been spotted and followed through the binoculars of many birders. Mallards have been known to flock and stay for days, as many as 100 strong.

What happens to the fish in winter? When the pond freezes it still has access to sunlight and the dissolved oxygen in the water that provides their livelihood. When snow builds up on the ice the fish move down into the warmest layer of water where they fall into a sedentary state.

The big meltdown usually takes place in mid March. In the meantime, the surface of the pond is made up of various layers of snow – sometimes fresh and white, artistically marked by ski trails, animal tracks, footprints, and ice-holes active or left behind by fisherfolk and their families.

Come and see for yourself!

Joan Turner

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FOR THE FRIENDS OF WHITE POND





PONDERINGS

BY THE FRIENDS OF WHITE POND

VOL. 22 No. 1

JUNE 2014

WHO'S WHO ON WHITE POND

The Friends of White Pond (FoWP) have honored our role as stewards of the pond's water quality since 1987. We meet infrequently. We share information and concerns through our newsletter, *Ponderings*. We carry out and support water quality monitoring throughout the spring, summer and fall. We welcome others – new Friends – to participate in our activities.

This issue of *Ponderings* contains articles updating the activities of several other groups and committees connected with the White Pond area:

The **White Pond Advisory Committee (WPAC)** is a Town committee, established by the Board of Selectmen in 1973. The Selectmen appoint its members and its charge is "to review and analyze the concerns of the area and play a leadership role in programming the solutions to the recognized and accepted problems."

The **Bruce Freeman Rail Trail Advisory Committee (BFRTAC)** is a Town committee, established by the Board of Selectmen in 2007 with members appointed by the Selectmen. Its charge is "to advise the Board of Selectmen and Town Manager on matters concerning the design, development, and long-term maintenance of the BFRT.

A new **WPAC/BFRTAC sub-committee** has been set up this year to foster coordination between these two committees.

Dr. William W. Walker is the consultant who did the original water quality studies of White Pond for the Town in 1988-1990. He designed a volunteer water quality monitoring program for White Pond in 1991, which continues to this day with leadership from Judith and George Sprott working with other loyal volunteers and Bill's participation. At this time Bill has volunteered to take the leadership role in the monitoring program and we look forward to his greater input and initiatives.

WHITE POND WATER QUALITY MONITORING PLAN FOR 2014 AND BEYOND – Dr. Walker

This summer I plan to continue monthly monitoring of dissolved oxygen, temperature, and transparency with help from several volunteers.

The logistics have yet to be worked out for collecting weekly transparency data, at least during the critical months of July and August.

A new platform for monitoring the pond water levels is needed since the benchmark used by Judith & George Sprott was destroyed by ice last winter. It would be useful to have a consistent long-term record of the depth.

White Pond monitoring data is kept in an Excel database that I will update in the fall and post at www.walker.net/whitepond. That site currently contains links to my previous reports and analyses of White Pond data collected through 2006. I will post other relevant reports and updates at that site. The analyses describe seasonal variations and trends in transparency, as well as correlations with water level and precipitation. Analyses of water temperature and dissolved oxygen data will be more robust using data from 2005 forward, when the town purchased a new meter for our volunteers to use, and parallel sampling was performed using OARS equipment.

I attended the White Pond Advisory Committee meeting on June 18. Draft results of the ESS study being prepared for the Town will be appearing in pieces over the next couple of months for written review before being presented to the Selectmen. It would be very useful if the report could be presented and discussed at a WPAC meeting, where there would be more opportunity for a dialogue that would help to focus the questions and issues before the report is presented to the Selectman.

The concept of getting additional technical review of the ESS report was discussed at the WPAC meeting also. Professors from Tufts and Union College known to the WPAC members were mentioned as potential candidates. I have enlisted another longtime Concord resident, Dr. John Colman of the US Geological Survey. He was a principal

investigator in the studies of Walden Pond that were completed in 2001 and is still involved as an advisor to the state. While the USGS studies were much more detailed than those expected from ESS, they provide a frame of reference and basis for formulating questions. (<http://pubs.usgs.gov/wri/wri014153/>, <http://pubs.usgs.gov/wri/wri014137/>). According to Dr. Colman, Walden does not have a long-term monitoring program for water levels or nutrient-related water quality.

Both Walden and White Pond levels are now very low, despite the wet winter. This is in contrast to a few years ago, when the levels in both ponds were extremely high. It will be interesting to see the ESS analysis of factors controlling the water levels. The low water levels will have to be considered in interpreting the water quality data. My previous analysis of historical data through 2006 suggested that clarity was lower in years with higher water levels and /or precipitation. That would make sense if the pond were responding to nutrient and turbidity loads in runoff.

Ideas for other types of monitoring that could be considered in the future that take advantage of evolving technology:

- Install one or more webcams at select locations around the pond to record legal and illegal recreational use intensity. That seems to be a major concern about the Bruce Freeman Rail Trail. The technology and software are readily available and inexpensive. The "surveillance" could help the Town Police to target their patrols. The cameras might also pick up some of the interesting wildlife. Shoreline residents may have concerns about their privacy.
- Establish a bulletin board where users could record their subjective observations on water quality conditions with respect to aesthetic qualities and suitability for swimming and boating. While the data would not be used to set a standard for White Pond, it would help to document trends or episodes in water quality as perceived by the user community.
- Install automated sensors to track water quality (e.g. temperature, oxygen, light intensity, conductivity, pH at 15 minute intervals). There is an evolving grass-roots effort to develop automated and affordable technology that can be implemented on a

wide scale and posted on the web (<http://publiclab.org/wiki/open-water>). This is more of a long-term idea since affordable sensors are under development. It could be an interesting high school science project that would stimulate interest in the Pond and environmental field.

- Continue use of whitepond.org or move to another platform for sharing news and ideas about the Pond that can be more easily maintained by a local resident.

Hopefully, a practical and affordable long-term monitoring plan can be developed by the Town and White Pond community based upon recommendations from the ESS study, the existing program, and other ideas such as those listed above.

Looking forward to more special moments on the Pond this summer.

Bill Walker

WHITE POND ADVISORY COMMITTEE UPDATE

Development of a Management Plan: A new swimming season is here, and many of us will frequent White Pond to enjoy its serenity and clear waters. And to ensure that its beauty and natural environment will continue long into the future, the Natural Resources Commission (NRC) and the White Pond Advisory Committee (WPAC) have engaged an environmental consulting firm to develop a White Pond Management Plan to guide the Town's preservation efforts. Between proposal preparation, Community Preservation Committee (CPC) fund approval and allocation, and vendor selection, it has been several years in coming. But our patience has been rewarded as the studies kicked off late last summer and are due to be completed by the end of this summer.

Many different parameters and perspectives are being studied such as usage patterns, surface and sub-surface water flow, flora and fauna including any invasive species, and of course water quality. The studies have occurred throughout the year at various points around the pond and in a variety of weather conditions. The resulting report will include detailed management options and cost estimates enabling us to make sound and technically founded recommendations for future efforts. And we hope that the report will serve as a tool to convince the town to allocate the proper resources to care for the pond, whether for erosion control or people management.

We welcome the involvement of the White Pond community in this and all our projects, and we encourage you to get involved. If you have any questions or comments about this study, or on any other efforts of the WPAC, please come to our meetings. The WPAC meets every third Wednesday at 7:30 PM. Our meeting place has been changed temporarily to the Harvey Wheeler Community Center at 1276 Main Street In West Concord. Please check the Town website to confirm when our meetings move back to our usual meeting place at 141 Keyes Road.

Jerry Frenkil; Chair of the WPAC

BRUCE FREEMAN RAIL TRAIL UPDATE.

The White Pond Advisory Committee and Bruce Freeman Rail Trail Advisory Committee (BFRTAC) made great strides in 2014. Both committees have been working much more closely with positive attitudes and results. The White Pond Advisory Committee is planning on another productive year under the leadership of chair Jerry Frenkil and new members Stephen Goodman, Norman Willard and Deborah Ellwood. A round of thanks to Arra Avakian who is leaving after serving nine productive years on the WPAC as well. Previous chair, Jim Lyon has been selected to serve on the Bruce Freeman Rail Trail Advisory Committee in the abutter position, replacing Jim Coutre.

A new WPAC/BFRTAC sub-committee has been set up further fostering this relationship. Chris Leary and Alan Whitney have been on site walks along the trail where it borders White Pond. Currently they are working on signage to direct traffic and educate users of the trail about the sensitive environment around the pond.

Much has been accomplished this past year with the hard work of the BFRTAC. After many meetings, site walks and discussions, the BFRTAC is hoping to complete the 75% design for section 2C this fall. A highlight for those around the pond is the fencing that is suggested in the 75% design. On the pond side it will be 6 feet high, wrought iron style with vertical bars running the length of the pond. This is a much more aggressive and protective fence than originally suggested and shows the willingness of the BFRTAC to make changes based on citizen and committee feedback. Also, the entrance to the Town Trails from the BFRT has been moved 84 feet further south of its current location.

The Town of Concord has made no concrete plans as of 2014 regarding maintenance and enforcement. A maintenance line item will show in the Town budget for 2016. The Town is waiting for

the final results of the White Pond Watershed Management Plan before making any decisions regarding enforcement issues. It is our hope that concrete suggestions are weighed and implemented accordingly by the Town. Besides that outcome, it has been stated by the Town Manager that there will be regular police patrols that will have much better access to the cove and problem areas. It is a wait-and-see approach and hopefully the Town will act accordingly. There is also hope that a stewardship committee will be set up by the Friends of the BFRT to help educate its users.

Sudbury has recently voted to proceed with their section of the rail trail as well. Approximately \$150,000.00 in funding has already been allotted towards the 25% design of the four miles of trail leading to Route 20. It is imperative that Sudbury proceed as quickly as possible, since any fencing and work from the Powder Mill culvert south will only be completed when Sudbury has finalized plans for their section of the trail.

Moving forward, please attend meetings of the WPAC and BFRTAC. It is the best way to stay current with news and provide direct feedback to those that need to hear it. Please continue to pick up any trash around the pond and report any illegal activity to the Concord Police Department non-emergency number. Thank you and have a great summer!

Jim Lyon, member of the BFRTAC

FRIENDS OF WHITE POND UPDATE

The Friends of White Pond co-presidents, Joan Turner and Wendy Slattebo, are stepping down from their posts after more than eight years of service. As long-time abutters of the pond, they are passionate about maintaining its water quality. Under their leadership, the Friends have successfully continued the water quality testing program and raised money for surface-runoff projects. Both Joan and Wendy have written educational and inspirational articles for *Ponderings*, including pieces about the Bruce Freeman Rail Trail, septic betterments, the ranger program in the cove, vernal pools, erosion, the pond in winter, the sewer program, permit parking, and the wetlands bylaws. Wendy has documented the pond in all seasons with her camera. Joan has paddled around the pond in her canoe monitoring wild life and erosion. Each has been a stalwart steward of White Pond, and we thank them both for their energy, drive, and commitment. Although they will no longer be serving as co-presidents, they have agreed to act as advisors as well as members-at-large. Kate Blair will serve as President pro tem, with Judith Sprott as Treasurer. Kate Blair



Adieu, kind friends. Adieu. To: Judith and George Sprott, informal keepers of White Pond for 36 years, who will soon be moving to the Carleton-Willard community in Bedford. You will be especially missed by the Friends of White Pond and this our Ponderings newsletter. We will miss the sight of the two of you in your red canoe anchored atop the deepest point of the Pond, measuring and recording data pertaining to water transparency, algae and phosphorus content.

Adieu, kind friends. Adieu.

Joan Turner, Kate Blair, Wendy Slattebo

FRIENDS OF WHITE POND

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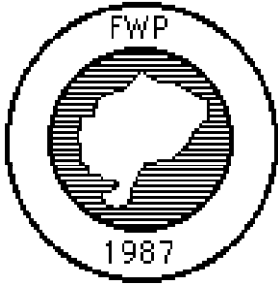
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Read about white pond water quality at bill@wwwalker.net/whitepond. Find FoWP information at www.whitepond.org. Click on the Friends of White Pond section of the whitepond.org website and read the current Ponderings and water quality data as well as back issues of Ponderings and past water quality data.

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FOR THE FRIENDS OF WHITE POND





PONDERINGS

FROM THE FRIENDS OF WHITE POND

VOL. 23 No. 1

OCTOBER 2015

THE STATE OF THE POND

This has been an eye-opening summer for those who care about and for White Pond. The pond has had algal blooms off and on since the 1980's but nowhere near the size, severity and frequency that we have seen this summer. What's going on?

An over-abundance of nutrients in White Pond, particularly phosphorus, and the eutrophication that this over-abundance causes has been a concern for decades now. Eutrophication is the fate of a pond rich in nutrients, such as phosphorus, that results in a dense algal, cyanobacterial and aquatic plant population. Eventually, eutrophied ponds are seriously impacted by the aquatic vegetation as well as the algae and cyanobacteria that occasionally increase in numbers and then die off in "algal blooms". These blooms become scums of dead algae and cyanobacteria on the surface of the pond. The organisms in the blooms eventually decompose and sink to the bottom using some or all of the oxygen in the deeper waters which impacts animal and plant life in the pond. Lack of oxygen in the deep waters also changes the biochemistry of the pond, releasing more phosphorus that has been stored in the sediments – a very vicious circle.

Most algal blooms are a nuisance and an unwelcome experience. However, sometimes the cyanobacteria in the bloom population produce toxins. There are different kinds of cyanobacteria and each produces its own unique toxin – some more harmful than others. White Pond has cyanobacteria that produce the toxin Microcystis and this is what has happened this summer in White Pond. There is a useful article on cyanotoxins in Wikipedia.

The response to this summer's blooms has been swift and intense. Dr. William Walker (who carried out the 1988/89 water quality studies of White Pond and is the head of the volunteer water quality monitoring program), the Friends of White Pond (volunteer water quality monitoring and advocacy group), the Concord Natural Resources Department, the Concord Health Department, the Massachusetts

Public Health Department and Environmental Science Services (ESS - the Town's current environmental consultant on the White Pond Watershed Management Plan) have all stepped forward to gather data, to understand exactly what has happened, and to work out plans to manage/eliminate future toxic blooms. We are grateful for their efforts.

Judith Sprott

What now? There are things that can be done immediately to limit the amount of phosphorus getting to the pond:

- Prevent surface water run-off from carrying phosphorus into the pond.
- Ensure regular maintenance and properly functioning septic systems in the watershed to limit the phosphorus in the leachate as much as possible.
- Avoid plantings (especially lawns) in the watershed that require significant water and fertilizer to grow well.

THANKS TO THE DIVISION OF NATURAL RESOURCES

Delia Kaye (Natural Resources Director), Natural Resources Division staff, Town rangers and a group of volunteers from the watershed began implementing the White Pond Watershed Management Plan, following its approval by the Board of Selectmen. On July 8th they erected erosion control blankets and installed coir logs and other temporary measures to restore the banks of the pond and mitigate erosion caused by surface water run-off and overuse.

For a more permanent fix, the Natural Resources Division has submitted a Department of Environmental Protection Section 319 Non-point Source Pollution Grant application to implement watershed improvements at White Pond. The application focuses on managing Town lands, restoring eroded slopes, and upgrading surface water run-off management at the public boat launch and access road. Decisions on the grant will be made by the Commonwealth's Department of Environmental Protection in October.

The mitigation efforts would be designed over the winter and implemented in the summer of 2016.

The Town has contracted with Environmental Science Services (ESS) to take samples from the water to try to identify algal species in the pond, and collect further data on phosphorus and nitrogen levels, temperature, dissolved oxygen, turbidity, and other water quality parameters.

Delia Kaye is in contact with the Commonwealth's Division of Fish and Wildlife to determine if the current fish stocking plans are appropriate considering the possibility that the fish population may play a role in the pond's algal bloom problems this summer.

Kate Blair with Delia Kaye

WHITE POND ADVISORY COMMITTEE UPDATE

While the past year may have been quiet on White Pond due to the lengthy closure, it was anything but for the White Pond Advisory Committee (WPAC). The first major committee event was the receipt and review last fall of the draft Watershed Management Report from environmental consultant Environmental Science Services (ESS). This report identified key management issues, assessed town-owned parcels in the watershed, and described and prioritized critical actions to protect the watershed. After lengthy reviews and discussions with ESS, they delivered the final report on May 29.

In the middle of winter, along with Concord's Planning Department and the EPA, the WPAC helped organize, plan, and execute the White Pond Forum, a public forum on the many issues facing White Pond. Following the Forum, and incorporating information collected from it, we prepared a report for the Select Board entitled "A Shared Future: A Comprehensive Vision for White Pond, Its Watershed, and Its Neighborhoods". This Vision expanded upon the ESS report and described in detail the areas of Major Concern, namely Water Quality, Neighborhood Issues, Recreation and Stewardship, and Town Support. More importantly, this Vision report outlined actions that the town should undertake to address both Resource Management and People Management. Several of these actions have already been initiated, including the stabilization of heavily eroded areas on Town land.

Throughout the year guest speakers have helped the WPAC collaborate and coordinate with various town departments. Representatives from the Police Department, the Division of Natural Resources, and the Health Department each met with the WPAC to discuss areas of common concern including regulation enforcement, water quality measurements, and the algal bloom.

The coming year promises to be busy as well, as much work remains to be done to address the algal blooms and the many interconnected issues.

If you have any questions or comments about these topics or the work of the WPAC, we encourage you to attend our meetings. The WPAC usually meets every fourth Wednesday at 7:30 PM at 141 Keyes Road in Concord.

Jerry Frenkil, Chair

BRUCE FREEMAN RAIL TRAIL UPDATE

The BFRTAC continues to make great strides in the completion of the Bruce Freeman Rail Trail. Another year of meetings at the local and state levels, site visits and continued discussions have resulted in more finalized plans for the trail. A major milestone has been the submission of the 75% design of the 2C section of the trail being submitted to MassDOT. Once they have reviewed this document, a community meeting will take place to discuss the final results. Hopefully this meeting will take place by December and I encourage everyone from the White Pond community to attend.

There were multiple site walks along the Jennie Dugan section of the trail as well. This included neighborhood feedback on tree removal; fencing and questions about trail alignment and easements. These were very positive site walks, which included members of the WPAC, BFRTAC, NRC, Town Planner and abutters.

Currently the 2C section of the trail will end at the Powder Mill Road culvert. The hope continues to be that Sudbury moves their section along as soon as possible so all fencing along White Pond can be installed.

The WPAC/BFRTAC sub-committee continues their work together for the betterment of the White Pond watershed. New members Deborah Elwood and James Lyon did a site walk earlier in the year for proposed historical and informative signage along the BFRT. Currently we are discussing stewardship and gathering ideas to be presented for a long-term stewardship commitment.

Please continue to attend meetings of the WPAC and BFRTAC. It is a great way to stay informed.

Jim Lyon, BFRTC member

WHITE POND ON-LINE

The world-wide web has become a major source of information and interaction about White Pond. Here is a list of the websites that the Friends of White Pond are aware of:

1. www.wwwalker.net/whitepond

This is the website of Dr. William W. Walker, Jr. He did the original water quality studies of White Pond (1987-90) and has continued monitoring the pond's water quality with the volunteer monitoring group he established. His website contains historical and current water quality data, including transparency and dissolved oxygen testing, as well as his extensive analyses of the trends shown by the data, and other information. If you click on the "Friends of White Pond" category on his home page, you can also read copies, from 1987 to the present, of *Ponderings*, the Friends' newsletter. *Ponderings* is an easy way to track 25+ years of life on, in and around the pond.

2. www.preservewhitepond.org

This website belongs to White Pond residents Robert and Christine Gerzon and represents the Preserve White Pond Coalition. Its mission is to raise awareness about issues concerning the pond and its environs and support the White Pond Management Plan, which, when implemented, will preserve White Pond, its ecosystem and its watershed. The website is a valuable resource, both for general information about White Pond and current Town activities concerning White Pond, as well as day-to-day happenings around the pond. It has a blog feature for comments.

3. www.white-pond@googlegroups.com

Dr. Walker has established a Googlegroup website for White Pond where we can post information, offer opinions, ask questions, etc. for anyone to read and to reply or comment, etc.

4. www.concordma.gov

This is the Town website and it includes entries for Town boards, committees, and commissions, such as the Natural Resources Commission and White Pond Advisory Committee, which can have minutes and other materials with information about White Pond. Also, anyone can sign up with the Town for internet copies of the Town Manager's Report and other documents that can be useful for information about White Pond issues and activities.

Judith Sprott

HELP NEEDED

The Friends of White Pond underwrite a yearly volunteer water quality testing program that would make a wonderful summer activity for adults or science project for youngsters. It could be a perfect opportunity for anyone who lives on or near the water to get their feet wet in a scientific study (pun intended) while simultaneously aiding the pond.

Watershed resident Matt Leblanc has very generously donated the use of his green aluminum rowboat, electric motor, and battery, giving volunteers the chance to gather data with much less effort than had previously been required. Volunteers who live on the pond could store the battery and motor on their property, and then take Matt's boat to the deepest part of the pond to record weekly transparency measurements and monthly dissolved oxygen and temperature readings.

It would require some training by Dr. Walker and his volunteers. Boating experience, strength, attention to detail, and loyalty to the program would be some requirements. But, speaking as someone who has undertaken the testing tasks, the rewards of going boating on a beautiful day while doing something worthwhile for the pond, far outweigh the sacrifice.

The testing season runs from late May to mid-September, perfect for students and retirees. If you are interested in helping the pond, please call Kate Blair, at 978-340-0514, or email her at kdblair46@aol.com. It would be fantastic to have a group of volunteers who could either take turns, or work together to gather information that might help us avoid another toxic algal bloom. And what a great science fair project!

Kate Blair

KEEP UP THE GOOD WORK

The pond is fortunate to have so many individuals and groups that care about its future and are working to preserve and protect it. It has been a hard summer, but the job has just begun. We all need to stay informed - use the White Pond websites and attend meetings - and do what we can on our own properties and work with others to prepare for a better summer next year.

Joan Turner

FRIENDS OF WHITE POND

President pro-tem: Kate Blair

(978) 340-0514 - kdblair46@comcast.net

Treasurer: Judith Sprott - jksprott@comcast.net

Ponderings is distributed to over 200 households in the White Pond watershed as well as Concord Town officials and other interested parties.

Membership dues (\$10) and contributions are gratefully received by the Treasurer, Judith Sprott, c/o 20 Darton St., Concord

FOR THE FRIENDS OF WHITE POND



