Waukewan Shore Owners Association Newsletter

Vol. 18, No.1 **Circulation: 320 Property Owners, Approximately 120 Resident Owners** **June 2007**

Waukewan Watershed Advisory Commission Update

submitted by Bruce Bond

It's been about a year now since the Waukewan Watershed Advisory Committee released the Watershed Management Plan. The Meredith Selectmen accepted the Plan in June 2005, after which the Committee was charged with its implementation. Since that time, the Committee has been working with a number of organizations and groups to accomplish change within the Watershed for the protection of the water quality. The Committee has had some notable successes in the implementation of recommendations in the Watershed Management Plan.

The Committee supported the Town of Meredith's effort to obtain a two year, $50,000 grant from NHDES to conduct biological and chemical testing of the tributaries throughout the watershed for the purpose of determining the health of individual tributaries and watershed areas through which they flow. This work will be conducted by Plymouth State University and will commence this summer.

Throughout the 2005 boating season, the Committee supported the efforts of the Meredith Sewer and Water Department to conduct Volatile Organic Compounds (VOC's) monthly monitoring of different depths within Lake Waukewan to determine the effect of fuel inefficient, two-cycle carbureted motors. It was through this program that the Committee determined that the effect of unburned gasoline in the lake is not as critical as previously feared. However, we will continue to monitor the situation and if it is determined that action needs to be taken to reduce VOC infusion, the Committee will recommend a phase out of the two-cycle, carbureted outboards.

The Committee worked with the Town of Meredith's Planning Board to develop and promote the Watershed Overlay District increasing the subdivision requirement in certain areas within the town from 10,000 square feet to a two acre minimum, thereby reducing potential density within the watershed. Members of the Committee volunteered many hours of their time to support Article # 3 which was placed on the Town Warrant by the Planning Board. The Committee recognizes and appreciates the significant effort of the Waukewan Shore Owners Association in getting out the vote in support of Article # 3. There is no doubt in the minds of the Committee that effort contributed to the voters overwhelmingly supporting the establishment of the Watershed Overlay District. The Committee will be working with the other towns in the watershed to implement similar overlay districts.

The Committee supported the activities of the Conservation Committee in their successful effort to have approximately 175 acres of land (Feltham Property) on the East side of Lake Waukewan, between Jenness Hill Road and Lake Waukewan, declared a town forest. The town had previously acquired the property and had the option to sell the property off for development. The Conservation Commission supported the placement of the property onto the Town Warrant for the voters to determine whether or not the property should be protected.

A Warrant article proposed by the Meredith Parks and Recreation Department and supported by the Committee approved the construction of bathing facilities at the town beach on Lake Waukewan. The voters approved the

appropriation of $40,000 with 50% matching funds from the State to accomplish this construction.

Other efforts of the Watershed Committee include implementation of the educational recommendations of the plan. These include addressing political and civic organizations as to the purpose and content of the management plan; communicating with the Town of Meredith and NHDOT in an effort to have discarded railroad ties removed from the railroad tracks alongside Lake Waukewan and Lake Winona and properly recycled. NHDOT has indicated those ties have now been removed and recycled; working with the Meredith Sewer and Water Department to determine the cost of conducting feasibility studies for extension of town sewer lines down the East and/or West sides of Lake Waukewan; the placement and maintenance of a portable toilet at the launching ramp during the boating season.

The watershed committee is currently working on an educational program aimed to inform home owners within the watershed, whose houses are serviced by private septic systems, of the maintenance issues involved with the proper operation of septic systems. Poorly designed and positioned, improperly functioning and failed septic systems discharge to the environment and introduce nutrients into lakes, ponds, brooks and streams and groundwater of the watershed negatively impacting the water quality and increasing the eutrophication of these the lakes and ponds. Following the educational approach to the home owners, the committee will recommend a septic system inspection program designed to identify those systems which are problematic.

The Committee has a long way to go to accomplish the charge from the Meredith selectmen but as indicated above, progress is being made. If anyone would like to become involved with our effort, please contact me at bondbr@metrocast.net. As we serve under the direction of the town, any application for volunteer service has to be submitted to the selectmen for approval. We are presently meeting the second and fourth Thursdays of each month from 7-9 PM in the Meredith Town Hall Annex.

Confronting Lake Pollution *A Press Release submitted by Roger Hogan*

It's surprising how little people know about lakes, considering they are living in the middle of the Lakes Region. The lakes are probably the reason they are living here, and the things they enjoy most about the lakes are those that are at the greatest risk. I would like to encounter someone with deep pockets and an interest in the environment, to create a Lakes Region natural history museum, just to get people informed about lakes, how they work and their vulnerability to the kind of stuff currently going on up here.

In the meantime, Roger Hogan, an Environmental Biologist, with the Belknap County Conservation District, funded by a grant from the New Hampshire Charitable Foundation, working with Pat Tarpey of the North Country Resource Conservation and Development Area, funded by a New Hampshire DES 319 and NRCS grant, is dealing with reality, and working with residents and towns fostering the watershed approach to protecting lakes. Watersheds are the areas surrounding lakes, which drain water into them.

The size of the watersheds can vary significantly, for example Waukewan in Meredith receives water from an 8,275 acre watershed encompassing 5 towns, and Winnipesaukee, from 236,225 acres in 19 towns. Currently both lakes have watershed studies underway, and according to Hogan and others, probably none to soon. As rapidly as open space is being eaten up, we need to pay particular attention to what it's doing to our lakes. Recently Bob Hill, a member of the Lake Waukewan Technical Advisory Comm., and in charge of overseeing Meredith?s public water supply, discovered the second recorded bloom of blue green algae to occur in the lake, which is the water supply for Meredith. Blue green algae are usually indicators of reduced water quality and can, in larger blooms, produce materials which are toxic.

According to Hogan and Tarpey, the real problems facing the lakes are the various contaminants coming into them from their surrounding watersheds, including those fairly widely known. These include things such as nutrients coming from a variety of sources including septic systems and lawn fertilizers which accelerate the lake aging process.

Other lesser known contaminants such as heavy metals, oil and grease, combustion by- products and road salt, all of which are contributed from runoff from roads and other hard surfaces, can impact the health of lakes. Both agree that there are many instances where people have failed to recognize that lakes are fairly sensitive, and in many ways not unlike living organisms. In the case of Lake Waukewan, the algae bloom, a trend toward higher phosphorus and salt concentrations, and reductions in dissolved oxygen in the lake, are clear warning symptoms that need to be addressed. Protecting lakes has proven to be far easier than trying to bring them back, once they have been pushed too far.

Plan implementation includes *Education; Conservation; Testing, Monitoring; & Regulation.*

In both the Waukewan and Winnipesaukee watershed studies, Advisory Committees have been formed made up of volunteer residents and officials from towns encompassing the watersheds. In the case of Waukewan, a Watershed Management Plan has been written by the 5-town Technical Advisory Committee, and implementation of some of the recommendations, including creation of a Watershed Protection District, has already started. The Winnipesaukee sub watershed group, made up of representatives from Gilford, Meredith and Laconia, was only recently formed, and is moving into the planning process, in many cases learning from the example of the highly regarded Waukewan Watershed Management Plan.

There is no question that this trend toward a more holistic approach to the protection of the lakes is the way to go, says Hogan. The real test of what we are attempting to do will be the willingness of the residents of the Lakes Region to implement the management plans once they have been written. If the Town of Meredith is any indication, I think we have reason to be optimistic. They are getting things done. We just can?t afford to ignore our lakes. They're too much a part of us!

Milfoil Eradication in Waukewan's Canal: The Story of How One Committed Volunteer's Unrelenting Perserverance Made all the Difference

By Robert Wenstrup

In the mid '90s approximately a one-acre portion of the Waukewan Canal that empties into Meredith Bay was infested with Eurasian milfoil grown from the contents of a fish aquarium that was emptied into the canal. The milfoil that was used as a decorative element in the aquarium took root and flourished with a vengeance. Plants grew in length as much as forty feet per year.

Nearby resident, **Betty Bjerklie**, noticed the infestation and reacted. The following narrative describes how she and fellow members acted to eradicate the milfoil from the canal—a stunning story of how one dedicated volunteer persuaded others to join her in addressing and conquering a serious threat to the Waukewan Watershed environment. Her effort lead one of the only complete eradications of milfoil on record in New Hampshire—an extraordinary feat!

The following narrative is taken from WSOA's past President Christopher Williams' article in the Waukewan Shore Owners Association (WSOA) Newsletter of that time and from conversations with Betty Bjerklie:

"In our last newsletter, we alerted you to the fact that Lake Waukewan has had an infestation of milfoil in the outflow canal in Meredith. It has been very frustrating to realize that we have a problem and can do very little about it. The WSOA Board of Directors has worked closely with the Town of Meredith, several members of the State' Department of Environmental Services and the media to identify the extent of the problem, to educate our membership and the public of the problem and to understand its potential impact.

Beyond that, we have tried to work with the Department of Safety and various fishermen's organizations to restrict the use of the canal as a small piece of milfoil cut up by a boat's prop can drop to the bottom elsewhere in the lake and take root. Eventually, it can become so thick that it can make portions of a lake virtually unnavigatible and kill off native species of fish and plants. The sad part is that the Department of Safety will not allow the infested area to be cordoned off and the fishermen have flocked to it because, in its early stages, it is a wonderful fish habitat. A variety of treatment options exist .... manual removal (must be done in an approved manner and only works in a small area ~ unfortunately DES feels our infestation is too big for this option) or chemical treatment which requires approval by the NH Division of Pesticide Control. This approval process takes several months and has been initiated.

As a Board, we felt we needed to become proactive in the situation and scheduled a meeting on January 25 with several people from DES, the Division of Pesticide Control, the Milfoil Crisis Committee and the Meredith Town Manager. We also invited Safety Services and were informed that their tight budget would not allow attendance. It was a very productive meeting and was the first time that many of the people dealing with the milfoil issue had ever sat around a table to talk through the process of dealing with milfoil along with the problems and frustrations that exist along the way. We were very happy with the way the meeting went and found it very productive."

Betty Bjerklie continues the narrative in the same issue:

"At 10:00 AM on January 25th [1995] at the Meredith Public Library Meeting Room, Chris Williams, Betty Bjerklie and Bill Loth of the WSOA Board of Directors met with a group of state and local representatives to discuss the problem of milfoil and how best to deal with it in our lake, in particular, and all of New Hampshire, in general.

It was a meeting coordinated by the Board and resulted in an impressive group of participants: Peter Russell, Meredith Town Manager and Board Member of the New Hampshire Lakes Association; Bob Estabrook, Walter Henderson and Natalie Landry from the NH Department of Environmental Services; Murray McKay and David Rousseau from the NH Division of Pesticide Control; Jacquie Blewitt, Lakes Coordinator for the Department of Environmental Services; George Fangmann and Helen Jones, Milfoil Crisis Committee of Fish Cove on Lake Winnipesaukee and Phil Preston, President of Squam Lakes Association.

Our first concern was our frustration with the slow process of dealing with milfoil from the time of discovery until treatment. There apparently are a number of reasons for this. First of all, the size of the infestation needs to be accurately determined. That means divers from DES need to be involved. In our case, Ken Warren and Walter Henderson accomplished that in August. Then it needs to go out to bid. That also has been done and a company in Massachusetts has been given the contract.

The next step is approval by the Commissioner of DES. Finally, it goes to the Pesticide Board and they make the final decision, with input from Fish and Game and the Department of Public Health on what chemical can be used.

That is usually a 90-day process because public hearings must be held, if requested. At that point, the milfoil can be treated. However, it should be done in late spring or early summer when it is growing at its fastest rate. So, the total process from discovery to treatment take about a year and there doesn't seem to be any way to speed it up."

Bob Estabrook stated that it is very important to eradicate milfoil early. If the infestation is small, pulling it or covering it with screens might work. However, our infestation covers nearly an acre and neither of those methods would be practical. His first choice in herbicides would be 2-4-D because it is systemic and kills the roots of the plant, as well as it's foliage. The second choice is Diquot. It is a contact herbicide and does not get to the roots, so in a matter of a few years, it grows right back.

Murray McKay shared his reluctance to use 2-4-D in a public water supply, but it was determined that the intake was at least a half mile away from the proposed

Milfoil Eradication on Waukewan *continued from previous page*

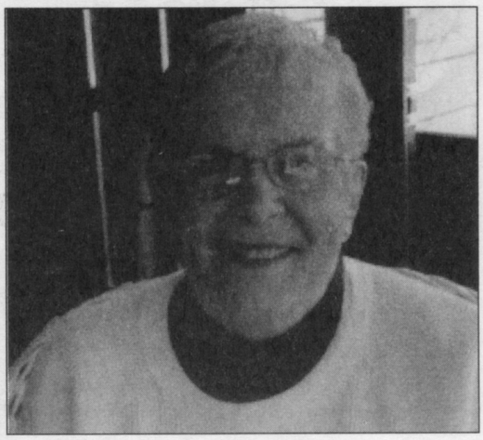
treatment site, the water current is toward town and away from the intake, and everyone one the canal is on the town water supply, so no one is taking their water directly from the lake.

Peter Russell said a plan could be put in place to process the water and fill the million and a half gallon storage tank prior to the treatment process so there would be no need to draw water from the lake for a couple of weeks. All of those factors might make it possible to use 2-4-D, which is clearly the most effective treatment. Diquot would be the back-up choice. No matter what, the Association will have to be diligent in its efforts to watch for any new outbreaks or a re-growth of the old one.

There was some discussion about cordoning off infested areas, so that boats would not get milfoil on their props and carry it to other parts of the lake. It was suggested that we have someone at the ramp on weekends to check boats for milfoil as they go in and out of the lake. No decision was made on either of those suggestions.

All in all it was felt that it was a useful and informative meeting, and we were pleased that so many from the decision-making agencies took the time to sit down and share their areas of expertise with us."

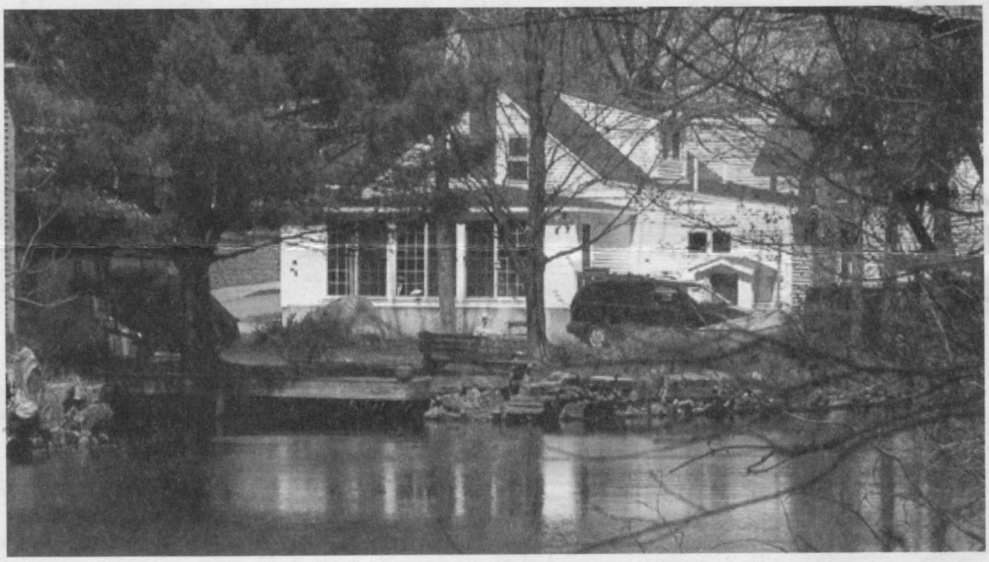
After all this effort, application of 2-4-D

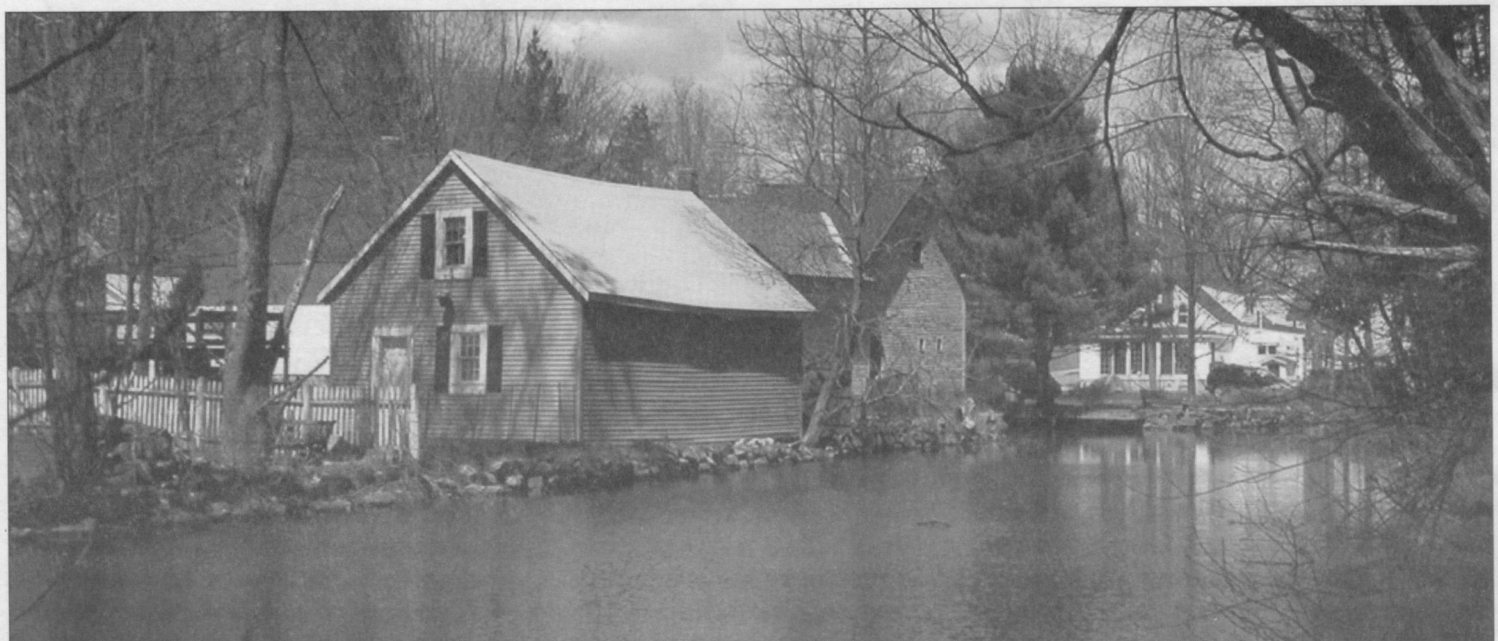


was approved and spread over the affected areas—in minutes. State officials were openly dubious that the milfoil had been completely removed so divers repeatedly inspected the area for milfoil the following years. No milfoil has been found!

The treatment of the Waukewan canal is a rare success story because the site met all of the criteria for application of 2-4-D. It succeeded because one very persuasive volunteer spent a year of her life to remove an invasive weed, apparently dumped in the canal from an aquarium tank.

As a result of this collaboration, the Waukewan Shore Owners Association established a continuing lake host program at the small boat launch ramp at the southeast edge of Lake Waukewan to assist visitors in inspecting their boats for invasive weeds.





Above, two photos of the Waukewan Canal, which flows through the Mills Falls waterfall, and into Lake Winnipesaukee. ***Canal photos by Bob Wenstrup.***

Kodiak Camp on the Snake River, an Update, / *Center Harbor May 15th meeting*

A public hearing was held by the Center Harbor Planning Board on May15th regarding the application of the Legionaires of Christ (aka Kodiak)) for a site plan revision to increase the number of campers at their camp from 65 to 90 campers / adults / counselers, and the number of cars from four to six. This is a 10 day camp permitted on the Snake River with access by canoe under the bridge to a float on Lake Waukewan.

The meeting room was filled to capacity and many people shared their concerns regarding potential damage to the fragile ecology of the river. Although property owners on Waukewan expressed complaints about camp activity and about use of the river, the Planning Board expressed the need for balance between protecting the water quality and rights of ownership.

The Center Harbor Planning Board will look into the environmental study done for Kodiak which may have recommended a 300' setback because of the unique fragility of the Snake River, and it's contribution to the quality of Waukewan's water.

Dave Schimke of Center Harbor expressed his concerns about the use of the Kodiak property on Waukewan as many boaters enter the lake there without any concern for the exotic weeds they could be bringing in on their motors. He felt Kodiak should have this fenced and boats should go in at the Meredith boat ramp where Lake Hosts inspect boats and trailers in addition to educating people.

Lou Kahn, a member of the Meredith Planning Board, read a letter form Tom Swaim, President of WSOA which spoke to the need to protect the Snake River. Lou also pointed out the danger of having 18 kids on a float all at once. He also asked that the site plan have the conditions agreed upon between WSOA and Kodiak written into the site plan. These were agreed upon before the final site plan approval. A document was signed in the presence of attorneys for both WSOA and Kodiak. WSOA will contact Attny. Patrick Wood for a copy of this document at the request of the Planning Board.

Lew Sayers of New Hampton noted that there are no bathroom facilities for the campers once they leave their launch site for an extended period of time.

Meredith Town Planner, John Edgar, presented two reports, one of the Watershed Study and the other of the Natural Resources Inventory. He spoke with great deference making sure the Planning Board knew he was there only to be of help, and that all decisions were up to them. He did offer that the way towns can control water use is by restricting land access and that the local government agency can be contacted for legal advice and maybe environmental expertice. He also emphasized that the Snake River is the most important filtration body of water in the entire 6 town watershed, and that this filtration system is critical to the quality of the water in Waukewan.

A letter from Jody Connor of the New Hampshire Dept. of Environmental Services was submitted by Janan Hays to the board. This in summary discussed water testing that has been done on the Snake River and the fact there has been slight degradation of the water quality in recent years.

A member of the New Hampton Conservation Commission mentioned the fact that a number of bills revising the Shoreland Protection Act making it much stricter and giving state control to certain rivers may very well apply to the Snake River if passed by the Senate.

At this point in the meeting Lou Kahn said there had been confusion in the past about how to register complaints. The Planning board said we should do it in writing to the Board of Selectmen so it becomes a matter of public record.

With nothing more coming from the audience, the hearing was closed to comment and the Planning Board went into deliberations. They decided they would consult counsel as to whether they could give a one-time temporary permit until July 1, 2007 to increase the camp to 90 attendees. If the answer is no, they will not approve the permit request. Board members felt they did not have enough time to educate themselves or to study all the ramifications of this permit change. They will be asking Kodiak to come to them much sooner for their future requests and may require an environmental impact study to be paid for by them. They also will most likely require that they submit a master plan.

The next meeting of the Center Harbor Planning Board is June 5th.

An Update on the Lake Host Program on Waukewan *by Tim Whiting*

This summer, the Lake Waukewan Shore Owners Association and the Waukewan Watershed Advisory Committee will continue to participate in the New Hampshire Lakes Association's Lake Host Program. This means that Lake Waukewan will again be protected from milfoil and other exotic weeds through the diligence of NHDES trained Lake Hosts at our public boat ramp. Lake Hosts distribute literature and conduct courtesy boat and trailer inspections plus educate boat operators to identify, remove and dispose of plant materials found.

Waukewan's Lake Host program needs *your* help in volunteering to protect our lake from invasive species.

Milfoil and other exotic weeds are an extremely serious problem in New Hampshire. Once it's established, there's no known way to eradicate it. Last year the Lake Host program got off to a late start. This year the program will be up and running for Memorial Day. Jim Hughes and Joe LaFrance of Meredith have been hired and will join the returning Bill Thethaway as our paid Lake Hosts. The Paid Hosts will work primarily on weekends and holidays. The NH Lakes Association has given the WSOA a grant of $3000 to operate Lake Waukewan's Lake Host Program.

This leaves the weekday coverage up to our volunteers. Our Lake Host program needs YOUR help. Only one person responded to our appeal last fall! Volunteers are the foundation for the whole program as we must match in volunteer time our $3000 grant money used for compensating our paid Lake Hosts. The time commitment is not very demanding. Each Volunteer will be required to attend a 3-hour training session at DES in Concord either on a weekday evening or on a weekend afternoon. Time spent manning the Lake Waukewan ramp can range from 0-4 hours per week, according to your schedule.

Please contact Tim Whiting now at 279-7834 or at tlwhiting@aol.com to be a 2007 Lake Waukewan Host Volunteer or for more information.

Key Points of House Bill # 383 Shoreline Protection Act Update

There is a House bill before the NH Senate at this time (HB #383) which is proposing stricter regulations for the Comprehensive Shoreland Protection Act (CSPA). There is a strong developer contingent that is trying to kill or amend this bill. Following are the key points:

Requires a permit prior to construction, excavation, or filling activities within the protected shoreland and establishes a permit application fee and fee caps:

- ❑ **Fee: $100 per sq. foot + .10 per sq. ft of affected area**
- ❑ **Caps: Projects of 0-9,999 square feet, $750.**
- ❑ **Projects of 10,000 – 24,999 square feet, $1,875.**
- ❑ **Projects of 25,000 square feet or more, $3,750.**

Creates a timeline that the DES must adhere to in denying or approving shoreland permit applications and waivers. Within 75 days of receipt of an application, DES would be required to either approve or deny a permit or request additional information.

In the case that additional information were requested by DES, the Department would be required to respond to the applicant with a final decision within 30 days of receipt of that information.

It is estimated that the anticipated revenue will immediately generate 6 new shoreland positions dedicated to public outreach, education and enforcement of the Act.

The DES is already performing many of these duties under the CSPA as it is currently drafted, but with only 1 full-time staff member, making enforcement of existing water quality laws lax and the administrative process slow. House Bill 663 will ensure that DES is compensated for the time that it already expends under the CSPA and has the necessary staff to inform the public of the law and enforce it provisions.

Clarifies permitting responsibilities by requiring that any person commencing any of the following activities in the protected shoreland obtain prior written approval from the DES:

(1) Construction of any structure on a nonconforming lot of record;

(2) Redevelopment of any site that contains nonconforming structures or any expansions of existing nonconforming structures; and

(3) Commencement of any coMnstruction that would require a variance.

Further clarifies that DES, not the municipalities, has the sole authority to issue waivers and variances under the Act.

Repeals grandfathering clause for municipalities exempt from requiring a 50-foot primary structure setback. For future homeowners, this means that you will not be able to construct within 50 feet of the average high water line. This addresses the concern by many builders that had expressed a concern regarding the lack of uniformity between municipal setback laws.

House Bill #383 Shoreline Protection Act Update *continued*

River Protection

Changes designation of rivers protected under the CSPA from 4th to 3rd order streams by 2111. It also repeals an existing exemption for the Saco and Pemigewasset Rivers under the CSPA. This means that the area of shoreland currently protected around rivers will double under the CSPA and account for 26% of the state's rivers.

While the change in river protection will affect more shoreline owners, it is not anticipated to slow development or "bog down" the permit application process as DES will be hiring additional staff with the revenue it garners under the permit

The protection of these smaller 3rd order rivers will help to ensure the protection of both our rivers and our lakes by requiring future shoreland development to be developed in a more sustainable manner (see argument under House Bill 383 below). As waters that are further "upstream" from our lakes are better protected, so will our lakes.

Impervious Surface Limitations

Establishes flexible impervious surface limitations on the development of future lots. The percentage of impervious surface allowed would be dependent on the construction design of the site, but would range from 20-30%. Studies indicate that increases in impervious surface over 10% lead to decreases in water quality if not managed appropriately. Any decrease in water quality leads to an economic loss for shoreland property owners.

Repeals the basal area system for tree removal and replaces it with a much easier, more clarified "managed cut" point-based system. The new system proposed is designed to be easier to interpret, specifically for the typical landowner who is not educated in forestry and would be required to hire a technical expert.

Requires natural ground-cover under 3 feet in height to remain intact within the 50-foot "waterfront buffer," subject to many of the exceptions already allowed under the Act (i.e. construction of perched beaches and boathouses, foot paths, and cutting for views).

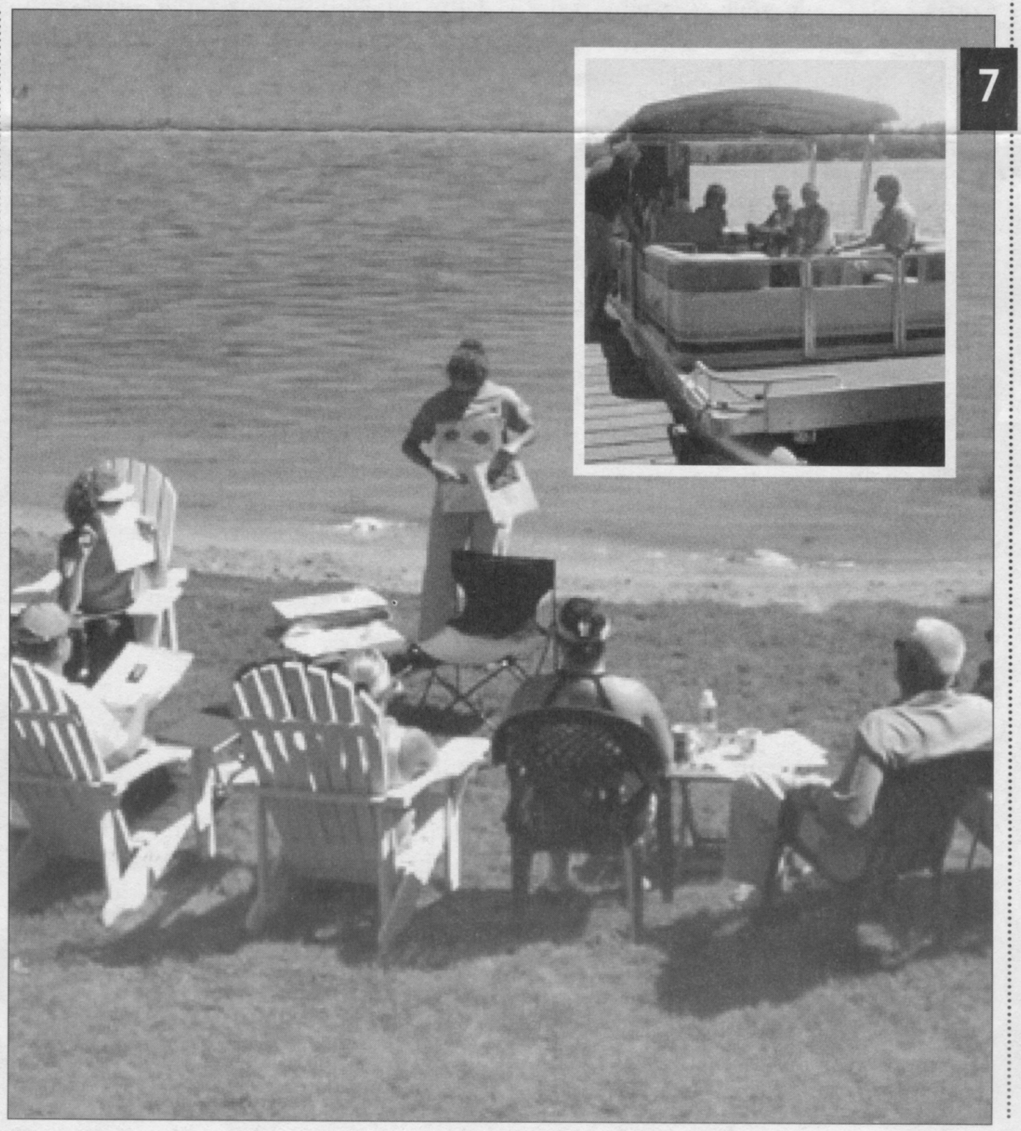
Weedwatchers update *by Janan Hays*

Did you know that last season there were two new exotic weed infestations in NH lakes? It was vigilant weedwatchers who spotted the infestations. Due to early detection, the infestations were still very small so the state was successful in completely eradicating the infestations and those two lakes are considered exotic weed free at this point. Weedwatchers played an instrumental role in these success stories. You can also play an instrumental role in helping to protect the lake by becoming a weedwatcher!

There will be a weedwatcher training session at the home of Janan Hays, point person for the D.E.S. weedwatcher program on Lake Waukewan on Sunday, August 19, 2007 at 10:00 a.m. Being a weedwatcher is simple.

After learning to recognize those invasive aquatic weeds, trainees will be given a section of the lake to monitor. If something is suspicious, the trainee should place it in a baggie and give it to Janan Hayes so that she can take to it to Concord (DES) for identification.

Please call Janan Hays at 279-4944 for more information or to sign up.



most all of your bases. If you are still concerned, you can have a holding ar ea for the tank constructed out of cement or other materials that will contain any spill away from any sumps or floor drains. Of course, with a double walled tank, this is not required. All told, even going with an all-new oil storage system in your home the cost should not exceed $3,000, on the high side.

Underground Oil Tanks

First, there is a misconception regarding the regulation of underground oil tanks. While commercial underground tanks have been regulated and classified as "dispensing" storage, oil tanks that are used exclusively for heating your home, known in the lingo as "consumptive use on premise", are not regulated for removal.

While "consumptive" underground tanks are not regulated at the state, local and federal levels, as long as they are pre-existing, the only real oversight is by lending institutions that will refuse to approve a mortgage. Banks long ago realized the possible financial exposures of underground tanks, even if homeowners have ignored the issue.

New double-walled, alarm equipped underground tanks are available for purchase but are too expensive for homeowners and are mostly purchased by commercial operations. If your home has an underground tank, remove it. Chances are that it is over 20 years old, has been exposed to frost action, electrolysis from dissimilar metals and the oil lines were buried without protection. If you sell your home or seek to refinance it, the bank will force your hand anyway. The best option is to install a new cellar tank with the appropriate safeguards, as mentioned earlier.

Above ground storage tanks

Driving around the Lakes Region, it is amazing the number of oil tanks that lean against buildings, sitting unprotected against the weather, balancing precariously on small blocks and having oil filters and oil lines hanging unprotected from snow or ice falling from the roof. This is a recipe for disaster and should be a top priority to remedy at the first opportunity. The outside tank is subject to large swings in temperature that cause condensation within the tank. The interior water that is created causes the tank to rust from the inside out and it also interacts with the oil to form a corrosive sludge in the tank bottom. The tank can also experience exterior corrosion along the drip line on the bottom of the tank. Furthermore, if placed on the ground or blocks, the tank will actually move as the frost develops in winter placing stress on the oil lines, usually resulting in an oil line failure at the tank or underground.

All above ground storage tanks according to code, whether outside or inside, should be pitched 1/4 inch per foot toward its opening so as to minimize the potential for corrosion. The best remedy, for those with a cellar, is to move the outside tank inside and have the appropriate safety devices installed.

Lacking a cellar the choices get more expensive. An aboveground double-walled tank with a weatherproof cover is available for around $2,,500 to $3,000. This tank will minimize your chances of and constructed of inert materials that will not corrode and has a flat bottom for better stability when placed on a pad. NH DES has published many fact sheets on its website. Refer to *Recommended Installation Practices for Outdoor Heating Oil Tanks* at:
http://www.des.state.nh.us/factsheets/rem/inc/4.html).

Should you have no safe alternate site for your fuel oil storage tank you can consider converting to another fuel source. Most oil equipment can be converted to either natural gas or propane for less money than a major tank project will cost. However, converting an oil-fired appliance to gas does reduce the combustion efficiency and may end up costing you more in the long run.

A full conversion to another fuel is not inexpensive but may be the best solution if you are out of other options. Whatever course of action you decide, **one option should not be to do nothing. Have the discussion with your heating oil supplier and get your equipment checked for both proper installation and maintenance condition.**

If you are still unsure about upgrading or checking your current fuel oil storage tank, please consider the recent experience of a home heating oil customer in Massachusetts. Last winter this customer ordered 100 gallons of oil for delivery. The driver made the delivery, noticed nothing unusual and reported that the tank alarm whistle operated properly.

Upon returning home, the homeowner was greeted by the smell of raw heating oil that had leaked from his tank into his concrete cellar. His 40 year-old oil tank had sprung a leak in the bottom due to corrosion and 80 gallons were released into the cellar.

The spill was contained within the building footprint, as there was luckily no sump pump. Small cracks within the concrete floor, however, allowed an amount of oil to migrate to the environment. Once the spill was reported the homeowner lost all control over the process.

To not report the spill would have been a felony. Massachusetts DEP ordered a clean up company to the site and a vacuum truck soon arrived to clear the oil from the concrete cellar floor. An engineering company arrived on site, dug test wells around the house, tested neighbors water wells for oil migration and set up a recovery tank to remediate any oil that had found its way into the underlying soil.

Layers of administration developed as sections of the floor were removed, samples sent off for testing and a long term clean up process was ordered to reclaim the unaccounted heating oil.

The end result was a bill for the response and clean up totaling over $180,000. The homeowner's insurance company denied coverage.

The State had no insurance coverage to aid the homeowner. The good news was that if the homeowner had lived near a lake that was the drinking supply for a town, the bill would have been significantly higher. A simple tank upgrade costing only a few thousand dollars would have prevented the entire event.

There are a number of other horrer stories with more expensive resolutions.

The old saying, an ounce of prevention is worth a pound of cure, sure makes sense when dealing with this potential liability that could affect not only the tank owner financially but possibly the drinking supply for several thousand residents.

Home Heating Oil Tanks...A Hidden Threat? *by Randy Eifert*

For many homeowners, especially those that own shorefront property, your heating oil storage tank may be the greatest risk of financial liability to which you will ever be exposed. If you are uncomfortable exposing your self to possibly hundreds of thousands of dollars of clean up costs, permanent property devaluation and legacy liens on your property, please read on.

Homes have been heated with #2 heating oil and kerosene for many generations. Both fuels have proven to be safe and reliable forms of home heating energy. Compared to natural gas, propane, electric, and solid fuel - oil and kerosene carry an added risk to the homeowner - the chance of a release of federally designated Haz-Mat material which, exceeding a total release of 10 gallons, requires an extensive and expensive clean up to protect both the environment and its inhabitants from lasting negative effects. For this discussion we will look at heating tanks in three separate categories:

- ❑ **standard home heating oil tanks, usually 275 gallons and located in the cellar**
- ❑ **underground oil tanks ranging in size from 275 gallons to 1000 gallons**
- ❑ **above ground oil tanks located outside or in garages or other outbuildings**

Standard Cellar Oil Tanks

Many homes have a 275-gallon oil tank located in the cellar with a fill and vent pipe terminating to the outside of the home. Current code requires that the fill pipe be equipped with an industry approved fill cap that allows your heating oil supplier to couple their delivery hose to the tank, leak free. The vent pipe, also according to code, shall be of equal or greater size than the fill pipe to relieve tank pressure during the filling process, and shall create a "whistling" audible alarm to alert the oil truck driver when the tank reaches a predetermined fill level. Both fill and vent pipes shall also have weatherproof caps to keep out water and debris.

Inside the home, each tank is required to have a tank level gauge to allow the homeowner to determine the current level of product, two "firomatic" valves that are temperature sensitive and will shut off the oil supply in the event of a house fire, an oil filter, properly installed oil lines and fittings and either an encapsulation for the oil lines or an "oil safety valve" that would shut off the oil supply in the event of an oil line leak. As New Hampshire has been slow in adopting fire safety laws and licensing for heating contractors, there is a very good chance that your oil tank may not meet current code requirements and is putting you at risk financially.

If your vent pipe is undersized or has become plugged or restricted there is a possibility that your tank could rupture during the fill process. If your oil lines, which are copper tubing, are buried in the cement of the floor (a standard practice in the 1950s and 1960s), there is a very good chance they are corroded and are leaking. Replacing an oil line is small change compared to the cost of a slow leak, which in many cases has unknowingly transferred hundreds of gallons into the soil and groundwater. Lastly, if the tank whistle is not working, the drain plugs are loose, or compression fittings rather than flair fittings were used on the oil lines, you may eventually have a leak as well.

If any of these events result in a leak that exceeds a 10-gallon total release, you are now liable for the clean up. First, don't expect your homeowner's insurance policy to come to your aid. In the last twenty years most insurance companies have broadened their pollution exclusion to exclude coverage for these types of claims. Check your policy or call your agent to determine what little coverage you may have. Second, don't assume that your heating oil company will pay for the clean up. If they caused the spill by their hose breaking, truck leaking or some other issue related to their performance, they should pay for the clean up. However, if the release ends up being the failure of your equipment, you may have to dig deep into your own pocket.

Although NH has a reimbursement fund available to help offset clean up costs, there are several conditions and limitations attached to the application process. In addition, beginning in July 2010, if your tank is not brought up to code you will be barred from applying to this fund. We would suggest not waiting until 2010 to begin getting your system up to code. Have the discussion with your heating oil supplier and get your equipment checked for both proper installation and maintenance condition.

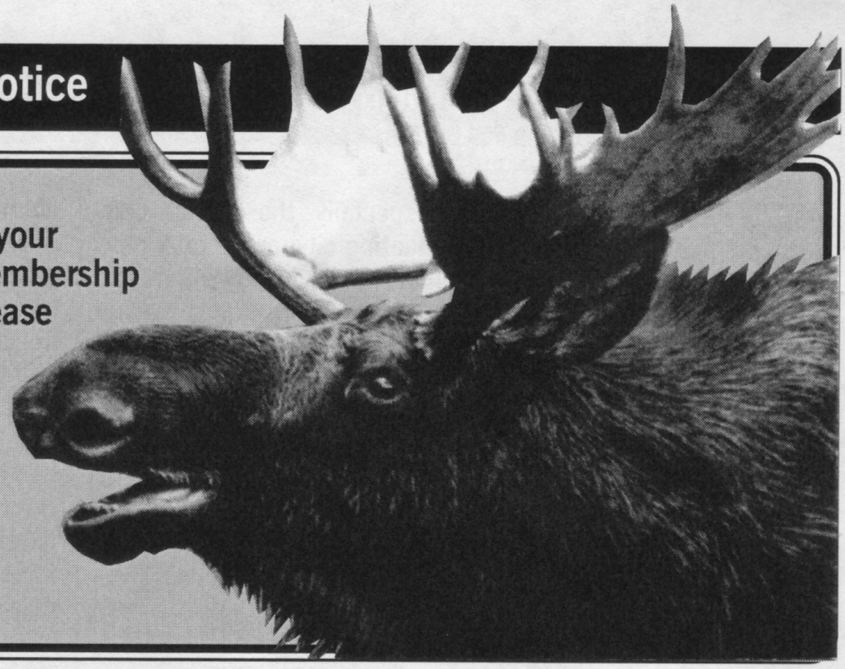
Where Does the Oil Go?

If you have a "finished cellar," one that is poured of concrete or block, you may feel that any spill will be contained. This would be a false assumption. Many cellars have a sump pump or flo or drain that leads to an exterior drainage area. Once outside the building your liability expands tremendously. For homes with dirt floors, oil simply seeps into the ground, hits ground water and migrates on the water column where it contaminates wells, reaches streams or becomes a telltale "sheen" on nearby surface water. For homes without drains or sumps, the oil line from the tank to the furnace may run under the floor and cause a release that you won't see or smell.

Once again the oil will migrate to the water column outside and end up in the surrounding wells, aquifers or surface water. Are there solutions? Yes there are and many are very cost effective. Oil tanks are now available in the traditional sizes that are "double walled", in other words, a tank within a tank. These tanks are built of non-corrosive materials, typically come with a one million dollar warranty against failure and are easily installed.

Most heating oil companies now have some type of ultrasound tank testing equipment and you can contact them to have your current tank checked for pitting or other imperfections. Oil lines are now available that are "encapsulated" so that the copper is protected from corrosives by an inert covering. Should the oil line be under/within the floor, encapsulated lines will prevent the leaking oil from percolating into the underlying soil. Have your vent and fill pipes checked for proper size and function, make sure your fill alarm works and you will have covered

WSOA Dues Notice



If There is a dues return envelope in your newsletter for this years' WSOA's membership and, if you haven't already renewed, please take this opportunity to do so, and enclose your check for $35 and mail to:

WSOA,
P.O. Box 91
Meredith, N.H. 03253

Minutes from the WSOA Annual Meeting of July 15, 2006

The meeting was held in the Meredith Community Center, and was called to order by President Tom Swaim at 9:40 a.m. Tom gave the financial report for Deb Corr, Treasurer, which showed a previous balance of $3,334.01, and receipts of $4557.72. Disbursements for charitable donations and newsletter expenses amounted to $2, 848.65, for a balance of $5,052.08.

Tim Whiting, former treasurer, reported that the lake Host Program was up and running with a grant of $3,000 from the state, and $1,500 from the town. There are four paid personnel to cover weekends and holidays, and many volunteers to monitor the boat launch at other times. Anne Mentioned that the training is one three-hour session held each spring and that anyone interested in becoming a volunteer should contact either her or Tim for more information. Bruce Bond will manage the scheduling of the paid personnel, and Anne Sayers and Bob Vogler will coordinate the volunteers. Tim also reminded people to inspect their own boats if they have been serviced at marinas on other lakes which may have milfoil.

Tom Swaim reported that Lake Waukewan is now classified as a Class A lake, free from milfoil and other exotic species. It is is the most long-standing success story of milfoil eradication in New Hampshire

Anne Sayers reported on the Weed Watcher program, which has six volunteers who monitor the lake for invasive species. Janan Hays is the point person for this program. There will be a four-hour training session by personnel from the DES in early August at Janan's home on Seminole Avenue as there was last year. Call Janan at 279-4944 to sign up.

Tom expressed thanks on behalf of the Board to Janis Roberts for help with compiling and printing out the labels for the mailings of the newsletter, Paula Wanzer for the use of her mailing permit, Jim James for him and his wife's painting and maintenance of the Kiosk at the boat launching site on Waukewan, and for Smyth's work on the newsletter.

Tom presented a synopsis of changes which the board had made to our current by-laws to bring them up to the standards required to qualify for a tax-free status. We will apply for that new status so that all contributions can be deductible for the contributors. The changes were accepted by a unanimous vote.

Bruce Bond, Randy Eifert and Bonnie Ireland gave a powerpoint presentation on the work of the Waukewan Watershed Advisorary Committee which included a description of the Committee's used in gathering the data for it's report, the existing water protection measures being taken, and the recommendations of the committee for future protection. The entire report is available on the Meredith town web site, and is available on CD from the town Hall.

Meeting adjourned at 11:00 a.m.
Respectfully submitted,

—Nancy Curran, Recording Secretary

Treasurer's Report *by Deborah Corr*

Cash Receipts & Disbursements

07/01/06 - 05/31/07

Cash on Hand, 07/01/06:..,..... $5,052.08

RECEIPTS

Member Dues 3,955.00
Additional Gifts165.00
Prior Year's Dues.....35.00
Interest on Checking,,.....2.87
Total Receipts,,,,,,.....,4,157.87

DISBURSEMENTS

Donations
Loon Preservation.....250.00
NH Lakes Assoc.....500.00
Sub Total Donations.....750.00

OTHER

Lake Host/Water
Monitoring.....270.00
Kiosk Maintenance.....100.00
Printing/Postage.....1,069.56
P.O. Box.....26.00
Newspaper Advertising.....38.00
"Thank-you"Gift.....19.99
Sub Total "Other".....1,523.55
Total Expenses.....2,273.55

RECEIPTS OVER DISBURSEMENTS
.....1,884.32

CASH ON HAND, MVSB, as of ..05/31/07
$6,936.40

A Proposed Book on Waukewan Camps

This proposal is submitted by WSOA vice president, Anne Sayers, and Treasurer, Deborah Corr

Change is inevitable, and no where is it more apparent than here on Lake Waukewan. With that thought in mind, some of us have come up with an idea for a project that we hope will be of interest to the members of WSOA. This is a long term effort that will require lots of input and help from all sorts of people. If there is enough interest, we would like to put together a history of the "camps" of the lake. Here are some ways that you might help us in this effort:

- ❑ 1. Pass out information gathering packets to your neighbors.
- ❑ 2. Collect old photos of the lake to use in the book.
- ❑ 3. Help to gather the information by collecting packets.
- ❑ 4. Help with the editing of material when the time comes.
- ❑ 5. Anything else you can think of right now.

This is a large project and will take considerable time and effort, but it could be great fun. If you are interested in helping out, please tell us in the "comments" section of your dues envelope what you might be interested in doing and give us your E-mail or phone number so we can get in touch with you. Thanks in advance. Anne Sayers and Deborah Corr

There will be a WSOA Board Meeting June 30th at Deborah Corr's home, 20 Seminole Avenue at 9:00 a.m.

WSOA ANNUAL MEETING on July 14th at 9:00 a.m.

Meredith Community Center on Route 3. The public is invited, and encouraged to attend. Randy Eifert will give update is on the Waukewan Watershed Advisory Commisison.

Doris Atkinson loved being around, in and on the water! She was a force in the success of three summer camps, including Camp Har-Cliff in Owl's Head, ME that was owned and operated by her and her husband Bill.

It was a long time dream for them to live on a lake. in 1994 Doris and Bill bought land on Water Street, built, and established their year-round home in Meredith.

The first summer they were here was the summer milfoil was discovered and treated on Lake Waukewan. So years later when the Lake Host Program was suggested to WSOA, Doris was well aware of how dangerous it was to our enjoyment of the water. Doris stepped up and volunteered to be our "coordinator".

She was instrumental in getting our first grant from the Lakes Association and hired our first "paid" lake host, Larry Clemens. Doris herself received training to be a volunteer and encouraged friends and neighbors to get involved and be trained. For the first two years she coordinated schedules, submitted time sheets and compiled annuals reports. Until you've done this task you don't realize the time a frustrations involved.

Doris still found time to enjoy the water by swimming, sailing, taking sunset cruises and most of all water skiing. She continued to water ski into her 80th year, especially when showing her grandchildren that growing old didn't mean sitting on the sidelines! She reveled in the ability to water ski without getting her hair wet. There are many who enjoy water skiing today because Doris and Bill loved to teach newcomers to ski.

Doris died at age 81, on November 3, 2006,after a courageous battle with cancer. This was the first year she didn't ask to go skiing on her birthday, October 12th. There are many of us who will miss seeing the "white-haired" grandma out there on skis this summer. We are thankful that her love of this lake helped to establish a program that will keep it healthy for all of us to enjoy.