

SUMMER 2001

The Watershed News

The Watershed News is a quarterly publication of the Green Mountain Conservation Group, a non-profit, 501(c) 3, charitable organization established in 1997 and dedicated to the preservation of the natural resources in the Ossipee Watershed. The towns of Effingham, Freedom, Madison, Ossipee, Sandwich and Tamworth make up the boundaries of the Ossipee Watershed Protection Project. This watershed includes one of the largest and deepest stratified drift aquifers in New Hampshire. It covers 47 square miles and receives drainage from a 330 square mile area. It is a critically important resource for existing and future community water supplies.

The GMCG's purpose is twofold:

1. To provide an organizational structure for a coalition of citizens and local officials interested in identifying sensitive areas within the Watershed in need of protection;
2. To offer public educational events about conservation issues and possible solutions regarding the preservation of this unique natural resource.

Through education and advocacy we strive to promote an awareness and appreciation of our natural resources and encourage a commitment to protect them.

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3rd Watershed Weekend spotlights lake issues

The Green Mountain Conservation Group invites you to its 3rd Annual Watershed Weekend Saturday and Sunday, July 14 and 15. Saturday's events at Camp Calumet in Freedom will begin with several hikes and boat excursions in and around Ossipee Lake, followed by a slide presentation by New Hampshire's lakes coordinator, Jacquie Colburn, of the Department of Environmental Services.

Colburn's slide presentation, which will begin at 1:15 p.m., will explore the competing demands on the state's lakes of increasing recreational use and the need for water quality and wildlife habitat protection. A panel discussion on these various lake management issues will feature Captain Mark Gallagher of the state Marine Patrol, Bob Craycraft of UNH Cooperative Extension's Lake Lay Monitoring Program, Bill Hauser of the state Department of Transportation's Bureau of Environment, Don Miller of NH Fish & Game, and Laura Deming of the Audubon Society of New Hampshire.

The morning will begin with registration from 8:30 to 9 a.m. Karen Bennett, UNH Cooperative Extension forest educator, will lead a canoe trip to discuss forest and plant habitat and its importance to water quality. Laura Deming, Audubon Society of New Hampshire wildlife biologist, will lead a wetland walk to discuss bird and animal habitat. Peter Benson, a land manager for The Nature Conservancy, will guide a hike in the nearby TNC Pine Barrens to discuss this globally rare habitat. Don Miller from NH Fish & Game will lead a pontoon boat excursion on Ossipee Lake to discuss recreation and its impact on fish and wildlife. Each of the outdoor excursions will begin at 9 a.m. and again at 10:30 a.m.

The day's events will include an environmental arts program for families presented by Camp Calumet from 10 a.m. to 3 p.m.

Weekend continues with kayak tour on Squam Lake

Watershed Weekend will continue Sunday, July 15, with a guided kayak tour of Squam Lake from 8:30 a.m. to noon, in cooperation with the Squam Lakes Association. Participants will have the opportunity to learn how appropriate land use has helped balance the competing recreational and water protection demands within the Squam watershed.

SLA was established in 1904 to clean up pollution in the lake caused by excessive logging operations and dumping of household waste. In 1979 a water quality program was initiated to monitor the health of the lakes. Today, SLA's education programs reflect the Office of State Planning's 1991 Squam Lakes Watershed Management Plan.

Watershed planning is based on the idea that protection and development of natural resources should be managed as a whole regardless of town boundaries. For a watershed to remain healthy, its natural resources must be kept in balance.

Eric Morse, natural areas manager, will guide paddlers to SLA's Moon and Bowman islands. Along the way he will explain the organization's lake management goals, including water quality monitoring, promoting low-impact recreation and maintaining 50 miles of hiking trails. Paddlers are likely to see some of the 64 loons counted on the lakes this year.

The kayak tour is limited to 25 people. To register, call GMCG at 539-7926. Kayaks may be rented by calling the Squam Lakes Association at 968-7336. Paddlers should meet at the SLA Boathouse on Route 3 in Holderness at 8:30 a.m.

GMCG gratefully acknowledges the Jocelyn F. Gutchess Fund of the Northern New Hampshire Foundation for continued support of Watershed Weekend.

Special Places

Rebirth of the village store

Editor's Note: *Special Places* is a regular feature of the *Watershed News*, highlighting an historical or cultural resource within the Ossipee Watershed. GMCG has endorsed the Land and Community Heritage Investment Program, a public-private partnership committed to conservation of New Hampshire's natural, cultural and historical resources. For more information on LCHIP, call Citizens for NH Land and Community Heritage at 230-9729.

BY BECKY SINKLER

The old country store is as endangered as the Karner Blue Butterfly. Lured by lower prices and wider choices, customers have been forsaking their village shops for supermarkets and convenience stores. Small proprietors have been burned out and are closing down all over New England.

When the A.G. Burrows store in Center Sandwich closed last Thanksgiving, town folk were alarmed. Where would we get our papers? Our bread and beer? Our gossip?

Though the store had been in business continuously since the 1840's, the deteriorating building next door had had many lives. It might have been a coffin shop at one time. It was definitely a Baptist Sunday School — the Christian Endeavor Hall — during the late 19th and early 20th centuries. And for a short time in the 1920s it was a tearoom staffed by the ladies of the newly founded Sandwich Home Industries.

One evening last November, a small group was bemoaning the passing of the store. By evening's end, we were dreaming up a solution. That core group then reached out to other town residents with special skills: construction, retail experience, marketing, personnel and finance. The store seemed doomed if we continued to sell just groceries. We found that small stores that were surviving offered food service of some sort. What if we added breakfast service, and lunch, and homemade bread?

Perhaps then we would stand a chance. Of course that required space, which we happened to have in the form of an adjoining small — and deteriorating — building.

Though it would have saved untold dollars to tear down the old Christian Endeavor Hall and build an addition to the store, the guardian angels of Sandwich's history persuaded us not to. Instead, we sought more funding, moved the Hall and slipped an addition between the two old buildings.

After six months of trial and error, good luck and some unfortunate surprises, plus an outpouring of the town's good will and used coffee mugs, the Sandwich General Store and Endeavor Café is up and ready to go in July. If people can save the loon, why not the country store?

Becky Sinkler is a member of the Sandwich General Store Group and a resident of Sandwich.

CONSERVATION CONVERSATIONS

Editor's Note: This feature, Conservation Conversations, is intended to provide a forum for the Conservation Commissions in the six towns of the Ossipee Watershed to share news of their activities and an opportunity to find creative solutions regarding watershed issues. In this issue, GMCG focuses on the Natural Resource Inventory mapping project that is being conducted throughout the watershed.

Think Locally; Act Watershed

In April 2000, the Green Mountain Conservation Group partnered with UNH Cooperative Extension and the Society for the Protection of New Hampshire Forests to produce a series of Natural Resource Inventory maps for each town in the watershed including, **Effingham, Freedom, Madison, Ossipee, Sandwich, and Tamworth**. NRI maps are designed to provide an overview of natural and manmade resources within a community. The data for these maps already exists in GIS (geographic information systems) computer systems and did not have to be collected from individual landowners. These maps include information on hydrology, soils of statewide importance, town conservation land, unfragmented land, public water supplies, known and potential contamination sites and co-occurrences of important resources. Finally, a tax map overlay of each town was created to make it easier to locate the important natural resources in each town.

Phil Auger and Amanda Stone, from UNH Cooperative Extension, and GMCG members have been presenting the maps to town officials in each town suggesting ways communities can use them to plan for future development while protecting natural resources.

A number of non-regulatory growth management techniques can be used for natural resource protection including: educating landowners about the importance of voluntary land protection; encouraging landowners to follow best management practices; learning more about the economics of open space; working with all town boards and encouraging towns to work with regional organizations; managing and protecting town-owned property.

The maps will be laminated and a flyer will be produced to explain how they were created, what the information represents and how towns can incorporate them into their master plans. Smaller scale maps as well as a set of resource planning books will be donated to town libraries in the coming months. For more information about the Watershed NRI project, call GMCG at 539-7926.

Notes from Downstream

“Borders? I’ve never seen one but I heard that they exist in some people’s minds.”

Thor Heyerdhal

Editor's Note: GMCG recently added a representative from the Ossipee Watershed in Maine to its Board of Directors. Our downstream neighbors are represented by Dennis Finn, executive director of the Saco River Corridor Commission. SRCC is made up of 20 towns from Fryeburg to Saco. SRCC will be training GMCG water quality monitoring volunteers in New Hampshire soon. Please watch for more details in your local paper.

In June, the Saco River Corridor Commission held its first training session for new volunteers for the water quality monitoring program. Facilitating the training was Jeff Varricchione from the Maine Department of Environmental Protection. He explained how to perform field tests for pH, dissolved oxygen, turbidity, nitrate, and temperature. Additional parameters include total phosphate and E-coli, which will be tested in a laboratory.

The program will test 21 sites on a bi-weekly schedule from May to October. The list of testing sites within the corridor was broken up into four sections to help ease the rigorous testing schedule and lessen the need for additional equipment. It will take four days to complete testing for the entire corridor instead of trying to complete all tests at all sites on one day. The fact that all tests have to be completed by 8 a.m. has been a challenge in itself for the program managers and volunteers. A water quality monitoring program that encompasses more than 280 miles of riverfront is an often frustrating and difficult challenge. However, the product of this program will be a solid and on-going appreciation of what is happening within our watershed.

For information on additional training and volunteer opportunities, please contact Dennis or Lynn at Saco River Corridor Commission at 207-625-8123.

Watershed Birder Studies hold hope for Great Northern Diver

BY SUSAN H. LEE

North America is home to five species of loon, including the Red-throated Loon (*Gavia stellata*), Pacific Loon (*Gavia pacifica*), Arctic Loon (*Gavia arctica*), Yellow-billed Loon (*Gavia Adams*) and Common Loon (*Gavia immer*.) The Common Loon is the most widespread and well-known species, and the only one that breeds in New Hampshire. In Britain and northern Europe the Common Loon is called the Great Northern Diver.

According to Harry Vogel of the Loon Preservation Committee (LPC), loons, like ducks, geese and grebes, are water birds, but they are classified separately by scientists. Loons are reported to be among the oldest groups of birds still living today, with a history some think stretches back more than 50 million years. Their closest living relatives are penguins and the tube-nosed swimmers (Albatrosses and Shearwaters.)

In New Hampshire, although the Common Loon is a threatened species, it is still a common summer resident on the lakes and ponds of the Ossipee Watershed. Loons have been legally protected from hunting since 1918, but increased recreational use of lakes and ponds has affected nesting success. Loss of nesting habitat and acid rain, which threatens the loon's source of food, continue to raise concerns about loon populations in the Ossipee Watershed. Results of mortality studies made by the Loon Preservation Committee have shown that lead sinkers and jigs are the primary cause of death of adult loons on New Hampshire lakes, accounting for 50 to 80 percent of all adult deaths; while boat and personal watercraft collisions account for more chick deaths than any other cause. Loss of breeding habitat as a result of shoreline development is another of the main causes of the reduction in loon numbers throughout New Hampshire.

LPC helped pass legislation to restrict the use of lead sinkers and jigs on lakes and ponds in New Hampshire. The law took effect January 1, 2000. The total loon population in New Hampshire in 2000 was estimated to be 675, which included 432 paired adults. The number of chicks surviving last year was 128. With the passage of the new law, it will be interesting to compare loon mortality due to lead over the next several years.

Scientists and volunteers monitoring loon populations have growing concerns about a new potential threat to loons — the increasingly popular “Jetski” (also known as personal motorized watercraft). Jetskis have the potential to harm loons in several ways. On many lakes, extensive human use of small islands has increasingly driven loons to nest in quiet, shallow bays and marshes — areas that formerly excluded motorboats. Loons adapt as much as possible to human presence and can even do so quite well, providing that the level of disturbance is reasonable. But now even these small quiet backwaters are being invaded by high-speed Jetskis. Jetskis have no propellers to get tangled in weeds and they float high in the water, so they can travel freely in these shallow bays. The presence of a Jetski can easily force a loon off its nest, leaving the eggs exposed to predation and the elements. Moreover, the wake from jetskis can wash eggs out of low-lying nests at the water's edge. Loon chicks are not safe either. Accidental deaths of baby loons can and do occur. Quite unlike adult loons, downy loon chicks (which are not very visible to begin with) are very buoyant, cannot dive well and cannot get out of the way

of a fast-moving watercraft like Jetskis. Not only can chicks be run over, the too-close presence of a careless boater near a loon family can impede the parental care and feeding of chicks. Repeated or prolonged interruptions can have dire consequences for chicks already stressed by scarce food resources. Anecdotal accounts of loons being disturbed or harassed make it clear that Jetskis are having an effect on loons on some lakes. The Canadian Lakes Loon Survey has been conducting research on this issue since 1996.

Between 1987 and 1990, the Canadian Lakes Loon Survey (CLLS) gathered data that indicated that the most important factor influencing loon reproductive success was the size of the nesting lake. Loons were more likely to be found on large lakes than small lakes, and had higher breeding success on large lakes. This finding is consistent with results found elsewhere in North America, and may be related to the amount of fish produced in small versus large lakes. One study in Nova Scotia suggested that loon pairs need approximately 40 hectares to provide enough fish to successfully raise chicks. Lakes smaller than 80 hectares generally support a single pair.

In addition to the lake area factor, CLLS found that territorial pairs tended to avoid acid lakes as breeding sites, and when they did use them, they tended to be less successful on lower pH lakes. While there was only a trend of lower reproductive success for loons breeding on somewhat acidic lakes, survival of two-chick broods was 9% lower on these lakes, a significant difference. Loon parents may have difficulty finding enough food to successfully rear two chicks on acid-stressed lakes. It is well-known that the availability and diversity of many of the important prey species for loons (e.g. fish, crayfish) are reduced on lakes below pH 6.0. When loons hatch two chicks on these lakes, the larger sibling may dominate the parents' attention and obtain most of the food captured for the young.

Parents may lay only one egg when they breed on acid-stressed lakes. The combined findings that loons avoid breeding on acid lakes, that when they do they tend to have lower breeding success, and that two-chick broods fare poorly on these lakes provide strong evidence that lake acidity has a negative influence on Common Loon reproductive success.

Loons are an effective biomonitor of lake acidification, so long-term monitoring on loon reproductive success is critical to determine not only whether the situation with loons is improving, but whether the situation with other wildlife is expected to improve. Efforts must continue to curb the emissions of acid-causing pollutants in both Canada and the United States so that we can continue to enjoy the wild sounds and fascinating behavior of the Great Northern Diver.

Susan Lee is an avid birder and a longtime resident of the Ossipee Watershed. Share bird sightings or comments with her by e-mail at leegull@landmarknet.net.

Forestry in the Watershed

Compromise needed to protect water resources while harvesting timber

By DAN STEPANAUSKAS

It is undeniable that the best thing that we could do to protect water resources from being harmed by forest management activities would be to not harvest timber. Now that I have been forced to blurt that out, there must be some reasonable compromise that I, as a forester, can reach. How can we enter nature, which is whole, take out what we need for our culture, and leave nature whole? The issue appears to be an oxymoron and the search for a compromise ensues.

Leaving as much biomass in the forest as possible provides a source of scarce calcium to enrich our soil and water and to provide a buffer to acid rain. Tree tops and limbs are a rich source of stored calcium, and they should be left in the forest rather than chipped and removed. The more nutrient poor the soils, the less they can afford to lose and still have fertility and buffering capacity. These sites coincide with most of our aquifer soils, the glacial outwash plains. These soils have been washed clean by glacial meltwater, like the sand on a beach.

Timber harvest laws in New Hampshire require that no more than 50% of the basal area (a standard measure of forest cover) be harvested within 150 feet of a navigable river (by canoe), standing body of water greater than 10

acres in size, or within 50 feet of any waterway that flows throughout the year. This law is commonly violated. Call the Division of Forests and Lands in Concord if you find such a violation. When our northern waters, which frequently contain a good deal of organic debris, are exposed to direct sunlight, algae blooms grow due to the increased photosynthetic potential and the warmer water. The algae uses much of the oxygen in the water. Salmonoid species of fish decline as a result.

Natural disturbances, such as blowdown, generally result in small openings in our mixed species northeastern forests. Relatively small man-made openings in our forests (as small as a quarter of an acre) will successfully regenerate and grow even our most shade intolerant species. Avoiding larger clearcuts, which often include areas containing surface waters, will prevent the warming and degradation of these waterways.

A careful effort in the selection of which trees to harvest, as well as when and how, can lead to a healthy forest with minimal negative impact on our waters and wildlife. I am still amazed at how specifically targeted wildlife species thrive in a timber harvest designed for their benefit. Can we sustain this harvest regimen, which society — that's us — has promulgated upon our natural world indefinitely? I doubt it. But I hope we can hold it afloat until we find a solution to our consumptive, non-renewable ways.

Daniel Stepanauskas is a consulting forester from Silver Lake.

Calendar

SATURDAY JULY 14 *WATERSHED WEEKEND: LAKE MANAGEMENT ISSUES IN THE WATERSHED*, featuring interpretive walks, guided pontoon boat and canoe tours, BBQ lunch, environmental arts program and afternoon symposium on Lake Management Issues. Jacquie Colburn, DES will be the keynote speaker... sponsored by GMCG and Camp Calumet. *Camp Calumet on Ossipee Lake, Freedom*, 8:30-a.m. to 4 p.m. See brochure for more details or call GMCG at 539-7926.

SUNDAY JULY 15 *WATERSHED WEEKEND: KAYAK TOUR OF SQUAM LAKE*. Eric Morse, Natural Areas Manager for SLA will lead a tour of the Lake while discussing watershed protection and management by this nearly 100 year old watershed group. Meet at Squam Lakes Association Boat House, Route 3 Holderness at 8:30 a.m. This event is limited to 25 participants. Please register with GMCG by calling 539-7926. If you do not have a kayak you may rent one by calling SLA at 968-7336.

SATURDAY, JULY 21 *The Wonalancet Out Door Club (WODC)* will sponsor its annual trail clearing days. Everyone is invited to help and learn more about the trails that the club maintains. **Meet at the Ferncroft kiosk in Wonalancet at 8:30 a.m.** The day will be followed by a potluck supper in the evening. For more information contact Judy Reardon at 323-8827 or visit the WODC website at www.wodc.org.

FRIDAY, JULY 30 *ELLEN SNYDER, EXTENSION SPECIALIST, BIODIVERSITY COORDINATOR, NH ECOLOGICAL RESERVE SYSTEM PROJECT* will give a slide presentation on **Finding and Protecting Critical Wildlife Habitat and other Biodiversity**. **At the Benz Center, Center Sandwich, 7-9 p.m.** For more information call GMCG at 539-7926.

WEDNESDAY, AUGUST 15 *TOM HOWE, SENIOR LAND PROTECTION SPECIALIST FOR THE SOCIETY FOR THE PROTECTION OF NEW HAMPSHIRE FORESTS AND PETER BENSON, LAND PROTECTION SPECIALIST FOR THE NH CHAPTER OF THE NATURE CONSERVANCY*, will present a workshop for the *Green Mountain Conservation Group, The Wonalancet Out Door Club and the Wonalancet Preservation Association* on land conservation. The workshop will focus on the different options landowners have for ensuring long-term protection of their

land. Associated tax benefits and limited funding sources will also be discussed. **At the Wonalancet Chapel, Route 113 6:30-9:30 p.m.** There will be an ice cream social from 6:30-7 followed by the workshop from 7-9:30 p.m. For more information call GMCG at 539-7926.

For more information about activities, or to find out how you can help or participate please call GMCG at 539-7926 or 539-7095.

To submit Calendar listing for the Fall issue of **THE WATERSHED NEWS**, please send information to GMCG *Calendar* by September 21, 2001. Thanks

WATERSHED ACTIVISM

“I am only one, but still I am one. I cannot do everything, but still I can do something.”

Edward Everett Hale

New sign informs public about caring for Ossipee Watershed

Visitors to the Pine River boat launch on Route 25 in Ossipee will be greeted by a colorful new sign that depicts a map of the Ossipee Watershed. The Green Mountain Conservation Group worked with the Ossipee Conservation Commission and the NH Department of Resources and Economic Development for the past year to design and create the sign.

“The sign shows the great expanse of the state’s largest stratified drift aquifer and points out the important natural resources found in this region,” said Blair Folts, executive director of the Green Mountain Conservation Group. “The Ossipee Watershed is a sub-watershed of the Saco Watershed, a region that stretches from Bartlett to Wakefield and encompasses nearly all of Carroll County. This watershed crosses the border into Maine where it continues to the Atlantic Ocean.”

Folts said that the Pine River boat launch is one of the main access points to Ossipee Lake and sees a high volume of traffic on summer weekends. “There are concerns about parking, garbage and bathrooms as well as water quality at the site and dock maintenance,” Folts said. “An issue that is unique to this site is its location over the state’s largest stratified drift aquifer and within the wellhead protection zone for the town of Ossipee’s drinking water.”

“This boat launch provides a wonderful way for the public to access Ossipee Lake,” Folts said, “but it is important for visitors to understand the need to recreate with care since this is an important area for regional drinking water protection. Also, Ossipee Lake was listed in the 1995 Environmental Protection Agency study as one of the top six areas of New Hampshire to protect due to the unusual plant, forest and insect habitat.”

GMCG and the Ossipee Conservation Commission worked together to design a sign that would better explain the important features in the area. They then worked with Seth Prescott, a drafter with DRED, to create a watershed map that would highlight the important water resources in the region.

“We would like to extend a thank you to all those who helped design the sign as well as to Commissioner George Bald from DRED for financing, producing and installing the sign. This is the best looking sign in the state and we hope that it will help folks understand how important the Ossipee Watershed is ” said Folts.

