The Sampler

PROTECTING NEW HAMPSHIRE'S LAKES THROUGH THE DEDICATION OF VOLUNTEERS

PUBLISHED BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
VOLUNTEER LAKE ASSESSMENT PROGRAM, SPRING 2011

Mt. Monadnock from Rockwood Pond by Frank Bateman. 2010 Photo Contest Honorable Mention.

Sounding Off – The Art *and* Science of Bathymetry

By Scott Ashley, DES Environmentalist

Bathymetry is the art or science of measuring (sounding) the depth of a water body. Creating an accurate lake bathymetry map/profile is equally important to lake managers and lake users. Accurate bathymetry allows lake managers to calculate a precise lake volume, which is invaluable for managing nutrients, lake draw-downs or water withdrawals. And more recently, accurate bathymetry has been required for exotic plant management to safely and effectively apply a precise dose of herbicide. For the lake user it is useful to navigate your boat or perhaps find a new spot to try and land that "big one" you caught a glimpse of.

Like many things, the art and science of measuring water depth has advanced with time and technology. Historically, lake soundings were done with a weight and calibrated line. In New Hampshire this may

Bathymetry, *continued on page 5*

Exotic Aquatic Plant Update

By Amy P. Smagula, Limnologist/ Exotic Species Program Coordinator

The rate of invasive aquatic plant infestations has certainly slowed over the last few years, but the summer of 2010 brought with it three new infestations of these plants in New Hampshire's waterbodies, including two new Eurasian watermilfoil (*Myriophyllum spicatum*) infestations and one new variable milfoil (*Myriophyllum heterophyllum*) infestation.

One of the infestations occurred in an already infested waterbody. The Nashua River already supported five different invasive aquatic plants prior to 2010, but the documentation of Eurasian watermilfoil in this waterbody in 2010 brings the tally up to six invasives in just this segment of the river. That is a record for the number of infestations in a single waterbody in the state--a record that most would folks would not be vying for.

The other infestations were to previously uninfested waterbodies. Eurasian watermilfoil was documented in Post Pond in the town of Lyme. It is thought that the Eurasian milfoil was intro-

Exotics, *continued on page 4*

Connor's Corner

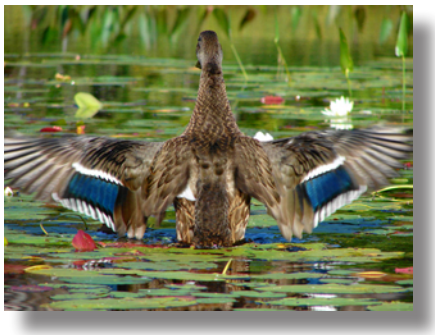
by Jody Connor
DES Limnology Center Director

Greetings volunteer monitors and welcome to our 26th year of VLAP! We've come a long way since the 1970s and 1980s; from the days when sewage entered our lakes and rivers causing severe cyanobacteria blooms and sickening swimmers. Vast progress has been made to slow down the lake eutrophication process. Much of the credit for this progress is placed upon our volunteer monitoring programs in helping to preserve and protect our beautiful lakes.

I sincerely hope that we can continue to progress volunteer water quality monitoring activities in New Hampshire. The time to protect our environment has never been greater. State and federal environmental funding sources are dwindling as natural disasters and severe storms become increasingly prevalent. As you all know, the recent economic downturn has put a large burden on both the public and private sectors. Federal and state environmental programs will likely suffer significant financial cuts resulting in reductions in employees and programs. Over the past year, the Limnology Center has lost two full time positions and three summer positions. These cuts have resulted in the loss of the popular Boat Discharge Program, the Lake Assessment Program and the freshwater Beach Program placing our public swimming areas at risk for health and safety. These programs have successfully operated for 30-plus years, protecting our waters from boat sewage discharges and protecting water users from contracting waterborne diseases and cyanobacteria toxins. The important Lake Assessment Program closely monitored lake quality and biological health and provided New Hampshire with historical lake information and trophic classifications on over 800 public waterbodies.

New cuts were recently made to the Biology Section through the House budget. While the Governor's budget does not impact the Limnology Center, the House budget cuts several more people and would greatly reduce our volunteer program. By June we should have some idea what the Senate budget will look like. We need to continue to work together to monitor lake and river water quality to protect these vulnerable resources. The past 25 years of your dedication and hard work proves that we can accomplish this task.

2010 marked another significant year of growth for VLAP, especially in the North Country. Twelve new lakes including seven in the North Country joined the program. I hope we can continue this growth despite the current challenges VLAP faces. One of those challenges includes managing additional lakes while continuing to provide the same services. As you know, with only one dedicated coordinator, it is difficult to accommodate growth without additional staff resources. As a result, we may alter specific program functions with the least impact on current services. VLAP strives to put your monitoring needs first. If you have ideas that may benefit volunteer programs, please feel free to share them with us.



"Mallard" by Nancy Stetson. 2010 Photo Contest Winner.

One recent program addition that VLAP hopes will encourage networking and communication amongst everyone is the Lake Reflections Blog. Lake Reflections provides weekly posts updating you on current activities in New Hampshire and around the world regarding lake and watershed management and protection. A monthly "Volunteer Spotlight" highlights one of our dedicated volunteers

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Blog with Me!

Check out VLAP's new blog, "Lake Reflections." The blog was created as a communication tool amongst VLAP and volunteer monitors regarding lake and watershed management issues. Subscribe to the blog and receive email updates when new posts are added. We're also highlighting one volunteer a month; you could be next! http://xml2.des.state.nh.us/blogs/lake_reflections/.

Connor's Corner,

continued from previous page

and allows you to get to know each other and what motivates each individual to take action and monitor water quality. Please take the time to check out Lake Reflections at http://xml2.des.state.nh.us/blogs/lake_reflections/. You can subscribe to receive notification of new posts and comments. We hope this will be a valuable tool for volunteer monitors!

Another new program is the VLAP Photo Contest. Initiated in 2010 as a highlight for VLAP's 25th Anniversary year, we received many magnificent photos and decided to hold an annual photo contest. The 2010 winners are highlighted in this issue of *The Sampler*. The 2011 winners will be revealed at the annual VLAP Workshop on May 21. We hope you can attend this important educational workshop.

Lake and watershed management protection efforts rely on the cooperation of many stakeholders. As VLAP volunteers, you understand this challenge and are proactive in learning of the latest monitoring and watershed management activities that may help protect the waterbodies you live on. Please read the observations and recommendations in your biennial VLAP report and try to incorporate these into your monitoring plans. The recommendations are the result of water quality trends and issues detected through your diligent monitoring efforts.

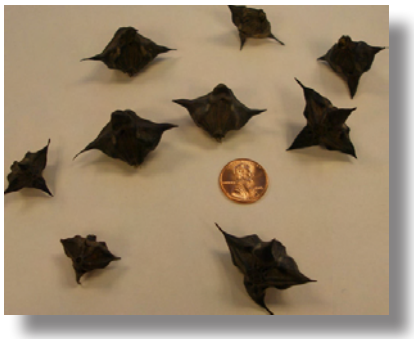
The only way to circumvent current water quality threats is to make sure that your lake association and volunteer monitors continue to educate watershed residents, shoreline property owners and key municipal leaders. Provide local government committees and boards a VLAP report copy to keep them in the loop regarding water quality trends in local waterbodies. Make it your responsibility to keep them well informed and active in solving water quality issues influenced by municipal activities. Town and state roadways have an extreme impact in the amount of water and pollutants that enter waterbodies. Innovative watershed and road runoff treatment technologies are available to remove pollutants before they enter waterbodies. Lake protection and watershed management can only be achieved if we all work together.

As always, you are welcome to contact us if you have questions and concerns regarding water quality, or watershed activities that may potentially impact water quality. VLAP plays an integral role in DES's mission to protect and report on the quality of New Hampshire lakes. Volunteers like you carry out this mission. I appreciate your hard work and extreme dedication to keeping our lakes clean. And let's all keep VLAP in the state budget so we can continue this great cooperative effort of keeping our lakes healthy, safe and beautiful.

Exotics,

continued from page 1

duced to the pond either very early in the 2010 growing season or late in the 2009 growing season by a transient boater. (Many ponds across the Connecticut River in Vermont support growths of this plant, so it is nearby.) The infestation was found by a biologist with the VLAP Program during her annual visit to the pond. Upon a full survey of the pond by the DES Exotic Species Program, the Eurasian watermilfoil was found primarily at the boat launch site and at one other small site across the pond. State divers spent two days diving on the sites and greatly reduced the infestation. Later in the fall, the lake association brought in additional divers to continue with the physical removal of the plants. Luckily this was an early detection scenario and hopefully continued monitoring and diving will suffice to eradicate the plant. In case it is not, DES is seeking to secure a permit for an herbicide treatment in fall 2011, should one be needed.



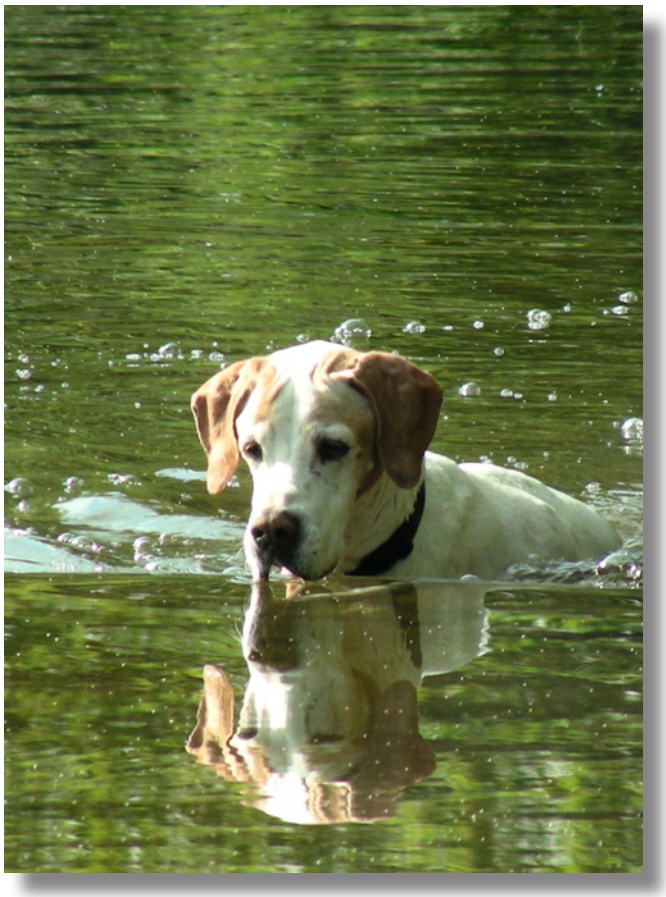
Water chestnuts.

The variable milfoil infestation was identified in Willand Pond in Dover by a DES biologist. The plant was likely introduced to the pond in 2007 or 2008 based on the distribution of the plant found at the time of the first survey. This was not an early detection scenario. There is no lake association or Weed Watcher Program on the pond, so milfoil growths have been undetected and exponential over the last couple of years. The milfoil is too widespread to simply hand remove, so a permit for a spring 2011 herbicide treatment is being sought.

As to other exotic plants, I continue to worry about water chestnut and fanwort. We have a good fanwort foothold in southeastern New Hampshire that could spread due to transient boaters. For the water chestnut, it has only been documented in the Nashua River, but the seeds of the plant have been transported around the state on the carpeted bunks of boat trailers so these plants could start to crop up in more waterbodies. So, in addition to the ever-present variable milfoil, fanwort and water chestnut should be plants to look out for as well.

I urge everyone to be active on a number of fronts when it comes to exotic aquatic plants. It is a good idea to have an active Weed Watcher Program on your waterbody to monitor once a month from May through September. I am also encouraging towns to establish an exotic plant committee. Many towns have formed milfoil or fanwort (or other exotic plant) committees in association with local conservation commissions to focus on topics related to invasive plants in or near town. They meet on a monthly or bi-monthly, and work with local groups and the state to set up programs to help protect local waterbodies. These committees work with local lake, pond or river associations to promote local awareness about exotic aquatic plants, and help to secure funding if control efforts are needed to address an infestation.

Finally, if your group would like Weed Watcher training, or if your group needs a refresher or has new volunteers who would like training, please feel free to contact me. Or, if you are an individual interested in Weed Watching or forming a local exotic aquatic plant committee, or if think you may have found an exotic aquatic plant, please do not hesitate to contact me at amy.smagula@des.nh.gov or (603) 271-2248.



Dog Days of Summer by Jean Martin, second place winner of the 2010 Photo Contest.

Bathymetry,

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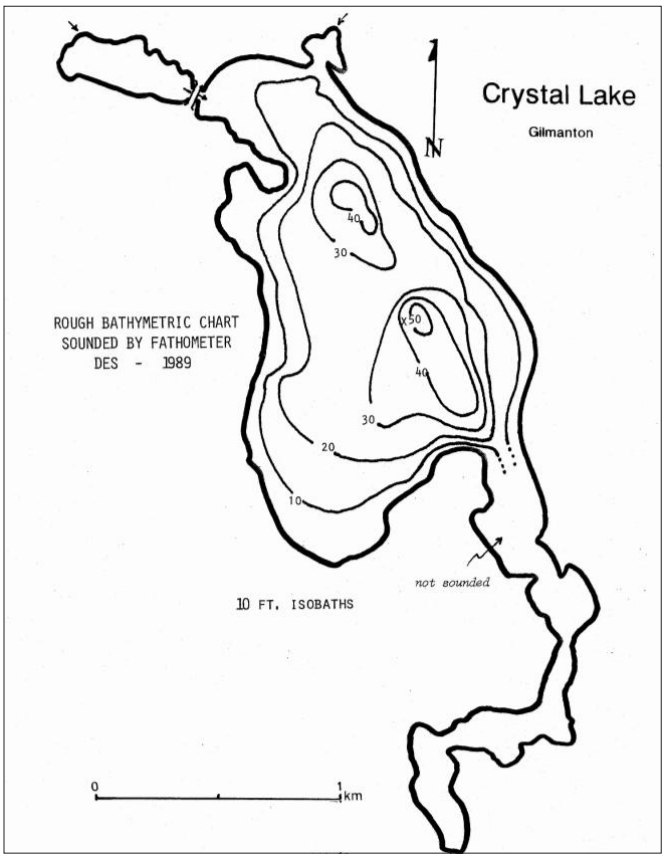
have been done in the winter on the ice, which allowed for a stable platform to collect soundings, but only if the ice was safe! Working on the ice also provided a stable platform for surveying equipment that was used to provide accurate location information for the soundings. The down side of this process was the labor involved in gathering the data.

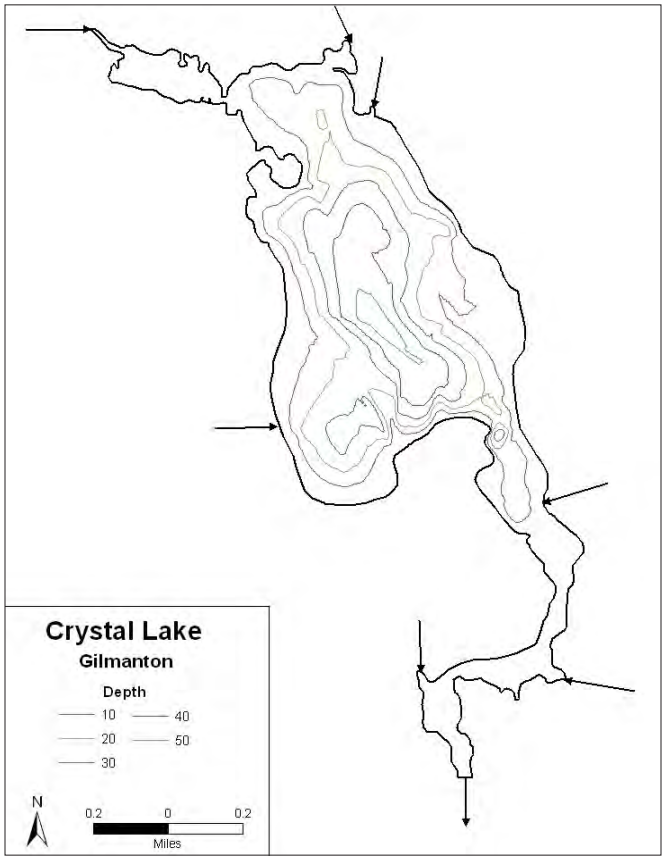
The development of inexpensive sonar equipment made taking depth soundings from a boat quick, easy and relatively accurate. What was missing from that equation was an accurate location of each specific depth measurement. For over 20 years DES used sonar to collect depth information yet relied on a biologist to use dead reckoning to place those readings on an outline map. Back in the office, depth contours were hand drawn on the map, which certainly was much more of an art than a science.

For the past ten years, DES has used a combination of sonar and GPS technology (the same technology used in car navigation systems) to gather accurate depth soundings and the location of those soundings to create bathymetric maps. The combination of electronic data storage in the field equipment, powerful desktop computers, and emerging software programs has made bathymetric map production efficient and accurate. The figures beloware examples of old and new bathymetric maps.

Over the last decade, DES has built a database of updated bathymetric information referred to as map coverage; there are currently over 300 lakes in this map coverage. Only half of the VLAP lakes are currently represented in the updated map coverage. DES would like to provide volunteers with the opportunity to update their bathymetric map coverage. DES will loan out the sonar equipment with detailed operating instructions to interested volunteers. On most lakes, data collection can be completed in an hour or two. If you're interested in borrowing the equipment, please don't hesitate to contact me at (603) 271-2968 or scott.ashley@des.nh.gov or VLAP coordinator, Sara Steiner, at (603) 271-2658 or sara.steiner@des.nh.gov. We look forward to hearing from you!



Old Bathymetric Map of Crystal Lake



New Bathymetric Map of Crystal Lake

The map on the left was produced in 1989 using a fathometer, dead reckoning and hand-drawn contours. The map on the right was produced in 2003 with GPS fathometer soundings.

Protecting a Lake: It takes a community

by Brett Hillman, Former NH LAKES Programs Coordinator

If you want to see what it looks like when a community bands together with the common goal of protecting their lake, then take a trip to the Eastman Community Association's South Cove Activity Center in Grantham, N.H.

Built in August of 2009, the activity center, located on the shore of beautiful Eastman Lake, is a marvel of environmentally-friendly construction. It features geothermal heat pumps and recycled materials. It also features a driveway that is constructed of lake-friendly pervious pavement. This pervious pavement allows stormwater runoff to trickle through and soak into the ground, unlike traditional impervious pavement

The NH LAKES Lake Conservation Corps Crew.

(like the asphalt we are all accustomed to) that does not allow water to pass through. Stormwater runoff is rainwater and snow-melt that is not absorbed into the soil—instead, it flows rapidly off roof tops, driveways, roadways, and parking lots, picking up sediment and pollutants as it races towards the nearest body of water. Because of all of these environmentally-conscious features, the South Cove Activity Center at Eastman was elected as a Green Building of America Award-winning project.

However, members of the community quickly realized that the new building posed some threats to the health of the lake. The impervious roof area of the large structure increased the magnitude of stormwater runoff, and the grounds, which were mulched and mostly devoid of vegetation, were unable to soak up the increased runoff water. During rain events, mulch and soil were being washed away towards the lake, bringing pollutants along for the ride. This not only compromised the health of the lake, it left behind rills and gullies that were both unattractive and hazardous to people on foot. The Eastman Lakes & Streams Committee and Recreation Director knew something had to be done, so they looked to NH LAKES and its Lake Conservation Corps (LCC) program for help.

NH LAKES fixes stormwater runoff problems on the landscape through its LCC program—a program designed to actively involve youth in hands-on shoreline and watershed restoration projects to improve the quality of New Hampshire's surface waters. Students from local communities are given the unique opportunity to gain some valuable, resume-building experience while learning about lake ecology and how to keep lakes healthy and clean. The goal of all LCC projects, in addition to reducing the amount of stormwater runoff, is to foster the next generation of wise lake stewards.

During spring 2010, NH LAKES staff and members of the Eastman Community Association (ECA) met at the Activity Center to take a look at the situation. A number of priority areas were identified. Then, NH LAKES went to work drawing up plans for landscaping best management practices (BMPs) that the LCC crew could put into action. In the meantime, the ECA recruited six teenagers to serve as LCC crew members. A grant from the Eastman Charitable Foundation made possible the purchase of the materials required for these projects and supported some of NH LAKES' staff time.

These projects required a substantial amount of physical effort. Holes had to be dug, rocks had to be moved, and plants had to be planted. In August, a tireless cadre of student volunteers serving as LCC crew members worked hard to make sure these lake-saving projects became a reality. The students, on their summer vacations from schools throughout New Hampshire, installed crushed stone dripline trenches at the base of the building to capture roof runoff and allow it to infiltrate into the ground. To further decrease the

amount of stormwater reaching the lake, they planted a very attractive rain garden. Besides being a beautiful addition to the landscape, this rain garden also works to collect runoff, allowing it to soak into the ground while plants remove pollutants. The students also installed a series of crushed stone water bars reinforced with timbers to reduce the amount of runoff from a well-used walking path. In addition, a rain barrel was purchased and installed on the project site to collect runoff from the roof. This store of water, instead of polluting the lake, will be used to water nearby flower gardens.

To showcase these efforts, a community open house was held in September. NH LAKES staff and ECA Lakes & Streams Committee members provided visiting property owners with a guided tour of the stormwater runoff improvement project and with information on simple lake-friendly landscaping techniques, which they could construct on their own property. Many members of the community attended this event and some even volunteered to plant more shrubs at the activity center to further help stabilize the soil. All told, volunteers from ECA contributed more than 225 hours to the project.

Before (above) and after (below) photos of the Eastman Community Association's South Cove Activity Center. *The NH LAKES Lake Conservation Corps Crew installed a vegetated buffer and crushed stone water bars at the Eastman Community Association's South Cove Activity Center to reduce the amount of stormwater runoff into Eastman Lake.*

It is also worth mentioning that the ECA participates in NH LAKES' Lake Host program, which is a courtesy boat inspection program designed to prevent the introduction and spread of exotic aquatic plants, like variable milfoil, from lake to lake. These nuisance plants can quickly take over waterbodies, making recreation unpleasant and dangerous, while negatively affecting the plants and animals that are naturally found in the waterbody. ECA volunteers logged over 700 hours serving as Lake Hosts this summer conducting courtesy boat inspections at the public ramp next to the Activity Center. Lake Hosting is just one more selfless acts being done by community members to protect Eastman Lake.

Clearly, the Eastman Community recognizes not only how much the lake means to them, but also how important it is to preserve its integrity for future generations. The dedication of the Eastman Lakes & Streams Committee and Recreation Director to keeping the lake healthy is truly admirable and critical!

To learn more about the NH LAKES Lake Conservation Corps Program, and how it might benefit your lake community, visit www.nhlakes.org/lake-conservation-corps.htm.

The New Hampshire Lakes Association (NH LAKES) is a member-supported, non-profit organization dedicated to protecting New Hampshire's lakes and their watersheds. For more information, visit www.nhlakes.org or call (603) 226-0299. Find NH LAKES on Facebook by searching for "NH LAKES (NH Lakes Association)" at www.facebook.com and become a fan of their page. To receive NH LAKES' free, monthly e-news blast, "Shorelines," sign up on their website.

2010 Volunteer Limnologist and Secchi Disk Award

Since 2004, DES has recognized at least one volunteer for his or her dedication and commitment for volunteer lake monitoring. This award has been appropriately named the Volunteer Limnologist Award because each time a volunteer monitor collects a water sample from a lake or pond or conducts a Weed Watcher survey, the volunteer is performing the role of a true limnologist. In addition, the Secchi Disk Award is given to the overall Volunteer Limnologist award winner of the year. That volunteer which truly stands out on the "cutting edge" of volunteer monitoring.

At the VLAP 25th Anniversary Celebration last year, the Eastman Lakes and Streams Committee representing Eastman Pond in Grantham, received the Volunteer Limnologist Award and the Secchi Disk Award. The Eastman Lakes and Streams Committee has been instrumental in watershed management activities. They have extensively monitored conductivity and chloride levels along the shoreline and in the watershed, have participated in Weed Watchers and Lake Host programs, organized a Lakes Appreciation Week, reduced beach erosion, and developed a watershed management plan to guide future activities.

Jody Connor, right, presents the 2010 Secchi Disk Award to Eastman Lake and Stream Committee, Eastman Pond, Grantham.

If you would like to nominate someone for these prestigious awards, please send or email a letter explaining who you have nominated and why to the VLAP Coordinator before May 2011.

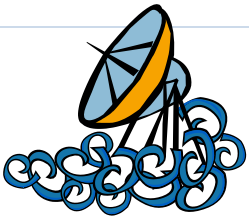
News from our Satellite Laboratory

By Bonnie Lewis, CSC/LSPA Satellite Lab Manager

In 2010, three lakes that were new to us started using the Colby Sawyer College/Lake Sunapee Protective Association satellite laboratory. They are Bradley Lake, Gardner Lake and Spectacle Pond. Adding them to our roster brought the number of area lakes tested to 27, including our "home" lake, Sunapee, on which we perform extensive testing. The laboratory generated a total of 738 sample results this year!

Scott Ashley, the DES Limnology Center QA manager, assisted the laboratory to bring a new instrument on-line this summer used for chlorophyll-a and total phosphorus tests. The new equipment has computer interface capabilities that allow for the direct transfer of data from analyzer to database allowing the laboratory to minimize transcription errors.

Interns Meghan Steele, from Colby-Sawyer College, and James Smith, from UNH, made a great team. They gained proficiency in laboratory methods and learned techniques that will help them in future pursuits. They were also very enthusiastic about mastering the new instrument and remained so throughout the requisite period of trial-and-error, parallel testing and procedure writing!



The dry summer made for some beautiful deep-site testing days on Lake Sunapee this year! I spoke briefly with Sara Steiner about my desire to visit our other area lakes at least once, just to get a feel for each ecosystem and an appreciation for the unique conditions that affect the water quality of each lake. Scheduling these visits will be a challenge, due to my own busy summer schedule of analyzing samples and training interns. I feel it is a worthy, albeit long-term goal, and I will do my best to accomplish it, perhaps visiting one or two lakes a year, as time allows.

I continue to rely on and appreciate the support I receive from all of you at DES. From answering simple questions to helping us work out thornier issues, your expertise and willingness to help Woody and me is invaluable and I thank you all!

New Hampshire's Stream Crossing Rules

By Sandy Crystall, DESWetlands Bureau

Did you ever think about all the locations where roads cross over streams in New Hampshire? There are approximately 16,000 of those crossings! If those culverts and bridges are not sized and constructed properly or have deteriorated, there can be serious consequences for public safety and impacts on our aquatic resources.

Since 2005, New Hampshire has experienced several significant flood events, resulting in loss of life, homes and damage to road infrastructure. Not surprisingly in that same timeframe, a concentration of extreme precipitation events occurred as well. During the three largest precipitation events in 86 years of record, each dropped more than five inches of rain. These are among additional large storms that represent the increasing frequency of significant rain events in recent years. Scientists have noted that as we experience climate change (for whatever reasons), we will see more extremes in weather -- drought and floods.

Undersized culverts can become blocked by woody material and prevent the passage of larger flows, aggravating flooding and causing the structures to fail. Such structures that are incorrectly sized or installed can cause erosion and degrade surface waters.

In response to these significant issues, in May 2010, DES adopted new rules for the construction, repair and rehabilitation of culverts and bridges that convey stream flows. The stream crossing rules were developed after a stakeholder workgroup began considering and developing draft rules in 2007 and a formal rulemaking process that began in 2009 and included multiple public hearings and significant public comment.

The stream crossing rules address three major issues: public safety, protection of aquatic life and water quality, and consistency with federal requirements.

- The rules enhance public safety by establishing standards for the construction and replacement of structures that convey streams. Such standards lessen the risk of blockages and wash-outs of culverts and bridges, and the associated flooding, which can jeopardize property and human lives upstream and downstream of such crossings and on roadways.
- The rules preserve the functions and values of existing streams, support the restoration of degraded streams, and improve aquatic life passage and sediment transport. For fish populations to survive, they must be able to travel through streams that have no barriers.
- DES operates its state wetlands program consistent with a State Programmatic General Permit (SPGP) issued by the US Army Corps of Engineers, the federal agency responsible for coordinating permitting of wetlands and stream impacts under federal laws. The new rules align the state and federal requirements within the SPGP for eligible projects.

Stream crossing projects (repairs or new) under the new rules fall in one of three general categories:

- Those exempt from requiring a permit (see Env-Wt 303.05(r), crossings that are out of the jurisdiction under RSA 482-A, as an example).
- Those exempt from the Tier System, but require a permit for some type of notification, such as those meeting the amended criteria of forestry and trails notifications, agriculture, single family residential projects, or permit by notification (PBN); forestry has criteria for permanent crossings and temporary crossings. The Notification of Rou-

Nash Stream Forest in Coos County.

Stream Crossing Rules, *continued on next page*

Stream Crossing Rules,

continued from previous page

tine Roadway and Railway Maintenance Activities in effect before the new rules has **not** changed and is exempt from the tier system.

- Those under the Tier System, Env-Wt 900, because they exceed PBN, notification or other criteria.

The Tier System is based primarily on the size of the watershed above the existing or proposed crossing. Additional criteria, such as prime wetlands, designated river, can modify the tier category regardless of watershed size. The Tier System categories are *somewhat* related to the project classification. Tier 1 crossings generally may be classified as minimum impact projects and Tier 3 crossings are typically classified as major projects, etc.

The main sections of stream rules are:

- General Design Considerations (Env-Wt 904.01).
- Specific Design Criteria (by Tier) (Env-Wt 904.02, 904.03, 904.04).
- Repair/Replacement/Rehabilitation Guidelines (Env-Wt 904.06, 904.07, 904.08).
- Alternative Designs (Env-Wt 904.09). This section provides criteria where installing the structure specified in the applicable rule is not practicable.

The *New Hampshire Stream Crossing Guidelines* referenced in the rules and published by the University of New Hampshire were written to assist in the design, construction and permitting of stream crossings in New Hampshire. The *Guidelines* were developed over a two-year period in a science-based multi-stakeholder process before the formal rulemaking process began.

The stream rules may be found primarily in new chapter Env-Wt 900, with related changes in Env-Wt 101 (definitions) and in Env-Wt 300 (including project classification and criteria for trails and forestry -- including different standards for permanent and temporary crossings, etc.), Env-Wt 500 and Env- Wt 800 (mitigation). The adopted rules are available through links from the Wetlands Bureau or Streams and Stream Crossings, and Administrative Rules web pages.

House Bill 621, currently before the legislature, would establish a legislative committee to review the stream crossing rules. This bill is likely to pass so check often to see if the work of the committee results in any changes to the rules.

The Stream Crossing Rules Outreach Presentation given at workshops that DES held in the fall of 2010 may be downloaded from the **Streams and Stream Crossings** web page on the DES website at www.des.nh.gov. Search the A to Z list for "Streams." Links to additional online resources are posted there. The US Geological Survey's "Stream Stats for New Hampshire," a tool used to identify watershed boundaries, calculate watershed size, and in some situations estimate flood flows on ungaged streams is useful in the application of the new stream crossing rules.

With the adoption of the stream crossing rules, disaster assistance provided by the Federal Emergency Management Agency, will fund replacement of structures to the new standard.

In the long term, replacement of undersized crossings with appropriately sized ones will reduce loss of property and life and disaster assistance costs as well as help restore aquatic resources.

Gorham Pond by Ryan Morin, third place winner of the 2010 Photo Contest.

Have you scheduled your annual DES biologist visit yet?

Dial: 603-PUMPOUT
Mobile Pumpout Service offered for Inland Lakes

Sunapee Harbor Dock Pumpout Boat

By Teresa Ptak, Clean Vessel Act Coordinator

DES introduced a new resource in 2010 for New Hampshire's recreational boating population at lakes and ponds. A mobile, sewage pumpout service was made available as part of a pilot program to boating patrons of Newfound Lake, Bristol, and Lake Sunapee, Sunapee. Services were made available to transient, docked or moored recreational vessels with on-board toilet facilities. Boat sewage pumpouts were offered free of charge on advertised dates or by phone at (603) PUMPOUT or (603) 786-7688. This mobile pumpout service supplements existing sewage removal efforts at stationary pumpout stations already located at marinas, through the use of a specially equipped boat with a holding tank to store the sewage. This service provides boaters with a new sewage disposal option for lakes without stationary pumpout facilities.

There are stationary sewage pumpout and dump stations available on some of the largest lakes in the state, including Winnipesaukee, Winnisquam and Sunapee. There are no stationary sewage pumpout facilities available on Newfound Lake and only one dump station within Sunapee Harbor at Lake Sunapee. The pilot program targeted lakes with the potential to attract vessels with on board toilet facilities, or marine sanitation devices (MSD), but that offered limited sewage pumpout resources.

Since the 1960s all New Hampshire inland waters were designated as a "No Discharge Area." Sewage, whether treated or not, *as well as greywater,* is prohibited as an overboard discharge per RSA 487:2-3. Congress passed the Clean Vessel Act in 1992 to reduce pollution from recreational vessel sewage discharges. The New Hampshire Clean Vessel Act program is a result of a cooperative effort between DES and the US Fish and Wildlife Service. Funding is available to construct, maintain and repair boat sewage pumpout facilities, and operate mobile pumpout boat services through competitive grants from the Fish and Wildlife Service under the Act.

The New Hampshire CVA program also currently supports a popular coastal pumpout service. Since 2002 more than 88,000 gallons of sewage have been removed from recreational boats along the state's coast. All waters within three miles of the New Hampshire shoreline and the Isles of Shoals are part of the coastal No Discharge Area. Tidal and estuarine waters, including all bays and rivers to the tidal dams, are incorporated in this area.

For more information, please visit the NH Clean Vessel Act website. Questions and comments may be directed to CVA@des.nh.gov or the coordinator at (603) 271-8803. To request the inland pumpout service during the 2011 season, please call (603) PUMPOUT or (603) 271-8803.

Remember!
The annual Secchi Dip-In is coming up soon!
Please dip-in!

New Hampshire Department of Environmental Services
Watershed Management Bureau, Biology Section
PO Box 95
Concord, NH 03302-0095

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Upcoming Events

May 21, 2011: DES VLAP Annual Workshop. DES, 29 Hazen Drive, Concord. For more information, refer to announcement in this newsletter or visit www.des.nh.gov/organization/divisions/water/wmb/vlap/index.htm

June 24, 2011: NH LAKES' Lakes Congress. Castleton Banquet and Conference Center, Windham. For more information, visit www.nhlakes.org/calendar/htm .

July 29, 2011: NH Lakefest. The Inn at Church Landing, Meredith. For more information, visit www.nhlakes.org/calendar.htm .

August 14, 2011: Love Your Lakes Day and Antique Boat Parade. 10am-2pm, Sunapee Harbor, Sunapee. For more information, visit www.lakesunapee.org/templates/events.html .

Have you scheduled your annual DES biologist visit yet?

If not, please contact Sara Steiner, VLAP Coordinator, at (603) 271-2658 or sara.steiner@des.nh.gov.