

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 2010

VLAP Celebrates 25 Years!

by Sara Steiner, DES VLAP Coordinator

Two thousand ten marks a historic milestone for the Department of Environmental Services Volunteer Lake Assessment Program. DES and volunteers throughout the state are celebrating 25 years of lake monitoring in New Hampshire. VLAP was initiated in 1985 and is the longest standing volunteer monitoring program within DES. Congratulations, VLAP volunteers!

VLAP has now grown to include approximately 500 volunteer monitors at 180 lakes and ponds. With over 900 lakes and ponds and nine DES biologists, data gathered through VLAP expands the ability of DES and the Environmental Protection Agency in assessing the health of New Hampshire's lakes and ponds.

What has 25 years of Volunteer Monitoring Shown?

Every two years, VLAP lakes with 10 or more consecutive years of data undergo statistical analyses. The data are used to determine water quality parameter trends, and specifically whether trends are improving, degrading, stable or variable. Trends are determined for the following parameters: chlorophyll, transparency, epilimnetic phosphorus, and hypolimnetic phosphorus.

In 2008 and 2009, statistical analyses were performed on approxi-



VLAP's 25th,
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*For 25 years, New Hampshire has benefitted from the efforts of hundreds of volunteer lake stewards to help protect our natural resources.
Photo by Mark Stevens, DES.*

The National Lake Survey: How Do Our Lakes Compare?

By Bob Estabrook, DES Chief Aquatic Biologist

New Hampshire lakes were assessed between 2007 and 2009 on both a national and statewide scale. The assessments utilized a statistical survey design whereby lakes were randomly selected. A nationwide subset of 1028 lakes representing 49,546 lakes in the lower 48 states was sampled in the national survey. Of those 1,028 lakes, 13 were selected in New Hampshire. On a statewide scale, a subset of 50 New Hampshire lakes representing 1,004 lakes were sampled, including the 13 national survey lakes. Much like a political poll where the responses of a small subset of voters are used to estimate the response of the entire electorate, the results from a subset of randomly-selected lakes can be used to describe the condition of all lakes. The results at both state and national scales are briefly summarized in this article.

Lake Survey, continued on page 4

Connor's Corner



by Jody Connor
DES Limnology Center Director

HAPPY ANNIVERSARY volunteer monitors and welcome to our 25th year of VLAP! I have great respect for the wonderful volunteers who provide New Hampshire with quality data that allows DES to track important biological and chemical changes in our waterbodies. Finding positive or negative changes in the watershed and within the lake helps biologists to make important decisions that benefit the ecological balance of the system. Observed land-use or water quality issues need to be acted upon quickly to remediate immediate or potential problems before they significantly impact the natural system. The larger the impact, the more costly remediation efforts become.

It is sincerely my greatest pleasure to work with each dedicated volunteer monitor to maintain the quality of New Hampshire's lakes and ponds. I truly hope you realize that the importance of your work benefits not only those critters that make up the aquatic community but the health of all those who utilize our beautiful waters. Thank you for all you do to protect these wonderful resources!

VLAP continues to grow each year with a record number of participating lakes in 2009. This past year five new lakes joined VLAP bringing the number of participants to 180. Although volunteer participation has increased, our economy has suffered and our state financial

budget has significantly decreased. Certainly DES hopes that this does not impact our volunteer monitoring programs. Our goal is the continued growth of volunteer monitoring programs with the addition of new lakes to VLAP. Please continue to encourage other area lakes to join in the VLAP and Weed Watcher monitoring fun! The Weed Watcher program also continues to grow and has demonstrated its' importance in protecting our lakes from exotic aquatic plant infestations through early detection and quick response protocols. Program Coordinators are always searching for new ways to make your monitoring life a little less complicated. If you have ideas that will benefit volunteer programs, please feel free to share them with us.

DES's Water Monitoring Strategy states that volunteer monitors are key players in collecting water quality data to support good environmental decision making. Our two newest volunteer initiatives are enhancing the North Country Volunteer Monitoring Programs and the Adopt-A-Lake Initiative. The Adopt-a-Lake Initiative aims to re-vitalize and sustain volunteer monitoring programs by providing local businesses an opportunity to donate an annual sponsorship fee to adopt a lake, pond or other waterbody in their community. Businesses receive certain incentives and publicity for adopting a waterbody. In return, volunteer monitoring programs receive essential funding. Please think about possible program participants within your watershed. We will soon be distributing more information concerning this important program.

Enhancing North Country Volunteer Monitoring Programs is a joint effort between DES and Plymouth State University (PSU). The

program goal is to educate North Country municipalities, watershed residents and shoreline property owners of the great importance of monitoring New Hampshire's surface waters. The majority of our volunteer base is from the Lakes Region South. Expanding the North Country volunteer base is essential as population growth and development continue to migrate north. This will better help DES measure the spread of exotic plants, cyanobacteria and algal growth, and track water quality trends throughout the state.

We all need to work together to protect lake quality through watershed protection efforts. DES relies on VLAP volunteers to keep abreast of the latest monitoring and water-

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Connor's Corner,

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shed management programs that may help protect the waterbodies you live on. Please read the observations and recommendations in your 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 problems 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. □

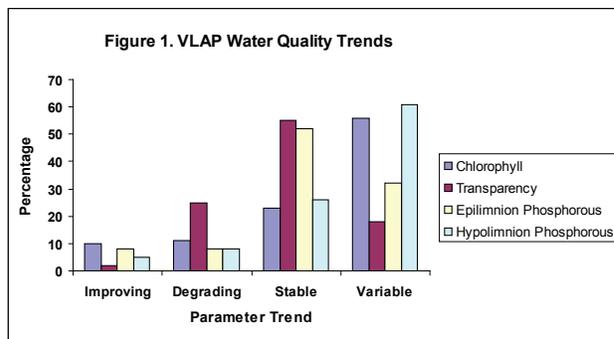
VLAP's 25th,

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imately 100 lakes and ponds (that's over 50 percent of VLAP lakes!). The results, shown in Figure 1, depict a large number of lakes with stable trends. In fact, transparency and epilimnetic phosphorus show stable trends at greater than 50 percent of lakes, and chlorophyll concentrations are stable and/or improving at 33 percent of lakes. However, 25 percent of lakes show a degrading (decreasing) trend in transparency, 14 percent of which cannot be explained by a degrading (increasing) trend in chlorophyll. This could indicate an increase in the amount of suspended sediments entering New Hampshire's lakes through stormwater runoff. Also, a large number of trends are variable in nature. As additional data are collected from individual lakes and ponds, these trends may become more defined. While a good percentage of lakes are showing degrading trends, overall, they are still fairly low in numbers.

How Valuable are Volunteer Monitoring Data?

Data collected through VLAP results in the early detection of water quality changes, allowing DES to trace potential problems to their source before the quality of the lake or pond is severely or permanently impacted. Over time, baseline data are used to determine long-term trends in lake water quality (Figure 1). VLAP volunteers collect quality data by adhering to monitoring protocols in VLAP's Quality Assurance Project Plan (QAPP). These quality data are invaluable in



serving as a community planning resource, in maintaining federal lakes funding, and in DES's mission to protect New Hampshire's lakes and ponds.

How Valuable is Volunteer Time?

This information could not have been compiled without the help of our volunteer monitors. As you know, your hard work and dedication are invaluable to DES. However, we decided to figure out just how valuable your time truly is. In 2009, we estimated volunteers spent approximately 2,670 hours sampling their lakes and ponds (does not include travel time to and from VLAP laboratories). Based on an estimated volunteer hourly wage of \$20.25 (www.independentsector.org), we owe VLAP volunteers approximately \$54,000 for lake sampling! This is a \$25,000 increase from just ten years ago, amazing!

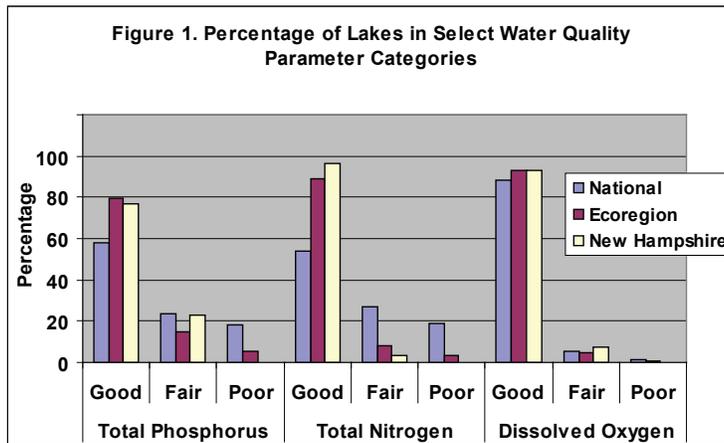
Your time spent collecting water quality data, educating your neighbors, lake associations and watershed residents, and participating in local government and statewide efforts to protect New Hampshire's lakes and ponds, cannot simply be surmised monetarily. We clearly owe a debt of gratitude to each and every volunteer who has faithfully sampled their lake or pond, faulty Kemmerer bottles and all, and contributed to 25 invaluable years. Let's make it 25 more! □

Lake Survey,

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Nation's lakes

A key finding of the national survey was that poor habitat conditions along the lakeshore and high phosphorus and nitrogen levels were the most significant stressors to biological condition. Poor biological health



as measured by deep-spot phytoplankton and zooplankton populations was three times more likely in lakes with poor lakeshore habitat as compared to lakes with good habitat. This finding reinforces the value of maintaining the natural growth of trees, shrubs and groundcover along the shoreline.

More detail on the national survey can be found at <http://www.epa.gov/lakessurvey/>.

New Hampshire's lakes

Survey results from New Hampshire's lakes were used (1) to assess designated use support for the biennial water quality report to EPA (2010 305(b) report), (2) to compare New Hampshire lakes to ecoregional and national lakes and (3) to project conditions in New Hampshire lakes for parameters not addressed in the national study.

(1) Criteria used to assess designated uses are explained in detail at the 2010 CALM website, <http://des.nh.gov/organization/divisions/water/wmb/swqa/documents/2010calm.pdf>. In addition to assessing all New Hampshire lakes with sufficient data, as is done every two years, the probability-based data allowed New Hampshire, for the first time in 2010, to produce what EPA refers to as a "comprehensive assessment" of the state's lakes. In other words the results represent all New Hampshire lakes. The probability-based data

indicated 95 percent of New Hampshire lakes supported primary contact recreation (swimming). The 5 percent of lakes not supporting primary contact recreation were based on chlorophyll levels (4 percent) and cyanobacteria scums (1 percent). All lakes supported primary contact recreation based on *E. coli* bacteria levels. Only 4 percent of New Hampshire lakes fully supported aquatic life use. A non-support designation can be caused by more than one parameter. The major causes of non support for aquatic life use was low pH (84 percent of the lakes) and excess nutrients (chlorophyll and phosphorus, 56 percent).

(2) Using nationally-established thresholds rather than state water quality criteria, selected parameters were compared at national, ecoregional (northern, glaciated nutrient ecoregion) and state scales. The percentages of lakes in good-fair-poor categories for phosphorus, nitrogen and dissolved oxygen are portrayed in Figure 1.

A lake's trophic state, or how "productive" the lake is, can be determined using several parameters. Oligotrophic lakes are considered "unproductive" while Eutrophic lakes are considered "over productive." Nationally, lake trophic states were determined using chlorophyll thresholds portrayed in Table 1 below.

	Oligotrophic (< 2 ug/L)	Mesotrophic (2-7 ug/L)	Eutrophic (> 7-30 ug/L)	Hypereutrophic (> 30 ug/L)	Unassessed
National	12.8%	36.6%	30.1%	20.0%	0.5%
Ecoregional	26.3%	53.8%	17.3%	2.7%	-
New Hampshire	17.5%	62.5%	20.0%	-	-

(3) Increasing chloride levels in lakes is a concern in New Hampshire and other states using deicing materials in winter. Chloride was not assessed in the national survey, but the New Hampshire-specific survey results were used to

project the conditions for all New Hampshire lakes. Note that the value for the "high" category (> 30 mg/L) is in relation to background and expected levels in New Hampshire's lakes and not to water quality (WQ) criteria. The WQ criterion for chloride in New Hampshire lakes is 230 mg/L. □

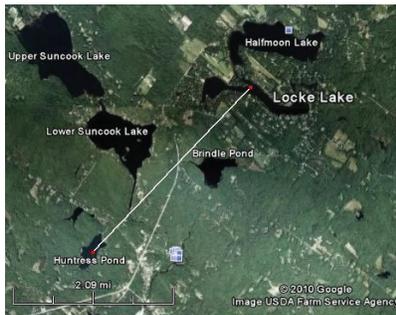
Category	% of Lakes
Low (<5 mg/L)	29.1
Moderate (5-30mg/L)	62.4
High (>30 mg/L)	8.5

Away with Geese

By Megan Cook and Teresa Ptak, DES Beach Inspection Program

For the second season, the DES Beach Program deployed the “awaywithgeese.com” water-based unit to evaluate its effectiveness in goose deterrence. The unit is a solar powered, flashing amber light on a buoy intended to disrupt the sleep of geese and ultimately persuade them to relocate away from the deployment area. Results from the 2008 eight-day trial run on Lake Winnisquam at Bartlett Town Beach were inconclusive. In 2009, the unit was installed on Locke Lake in Barnstead from early June through September. This site was selected upon request from lake residents and maintenance workers at Locke Lake interested in collaborating with the DES to try a new method of goose management.

The effectiveness of “awaywithgeese.com” remains inconclusive to this date. To achieve maximum benefits from this product, the manufacturer suggests use in a lake or pond with no other water bodies within a three-mile radius. If the water body is large and/or has an unusual shape, installing multiple devices is



Locke Lake's surrounding waterbodies.



“Awaywithgeese.com” unit in place on Locke Lake.

recommended. The Beach Program currently owns one device for deployment.

In the case of Locke Lake, there are five significant lakes and ponds within a three-mile radius, which not only makes employing the away-with-geese deterrence method difficult, but increases the challenge of effective goose management. Deployment of the single “awaywithgeese.com” device did not cause a decrease in goose activity at Locke Lake. Successful management at Locke Lake would require multiple water-based units to create an adequate disturbance.

As we have learned, geese management is most effective if a variety of techniques are employed. The US Department of Agriculture Animal and Plant Health Inspection Service Wildlife Services recommends using a variety of

harassment techniques, cessation of waterfowl feeding, habitat management, nesting control, and possible removal of domestic waterfowl. The DES Beach Program is cooperating with the Wildlife Services to conduct a goose/duck management workshop in late

April 2010 at DES headquarters in Concord. For workshop registration information, please check the DES Beach Program website at <http://des.nh.gov/organization/divisions/water/wmb/beaches/index.htm>. Please also visit http://des.nh.gov/organization/divisions/water/wmb/beaches/documents/usda_goose_mgt.pdf for additional information regarding goose management as recommended by the USDA or contact Wildlife Services at (603) 223-6832 for details. □

Mark Your Calendars for VLAP's 25th Anniversary Celebration!

Congratulations volunteers! VLAP celebrates 25 years of volunteer monitoring in 2010. Wow, how time flies! VLAP is one of many long standing volunteer monitoring programs in the Northeast. It's been a long and gratifying journey for VLAP, and we thank each volunteer monitor for their hard work and dedication. It is you, the volunteer, who truly measures VLAP's success.

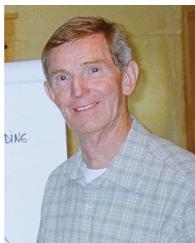


To show our appreciation, we invite you to join us for a 25th Anniversary Celebration to be held following the Annual VLAP Refresher Workshop on Saturday, May 15, 2010. We'll celebrate with a luncheon and awards ceremony. There will be prizes for contest winners and a birthday cake for VLAP!

2009 Volunteer Limnologist 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.

At the 2009 Annual Volunteer Lake Assessment program workshop, Dayton Goudie of Partridge Lake, Littleton, received the Volunteer Limnologist Award and the Secchi Disk Award. Dayton initiated water quality monitoring at Partridge Lake in the 1970s and joined VLAP in 1989. Dayton and his fellow volunteers monitor at least three times each summer. Dayton has been extremely active in the lake association, and educating lake residents and the community about responsible lake stewardship. In particular, Dayton was instrumental in an intense lake diagnostic and feasibility study identifying and allocating pollutant loads in the watershed. Thank you, Dayton, for your continued dedication to protecting and improving the quality of New Hampshire's lakes and ponds! □



*Dayton Goudie,
Secchi Disk
Award Winner.*

Get Your Feet Wet! Participate in Volunteer Monitoring in NH's North Country!

By Aaron Johnson, Plymouth State University Center for the Environment

Get your feet wet and try something new this summer! The DES Volunteer Lake Assessment Program and Plymouth State University's Center for the Environment (CFE) are promoting and expanding volunteer monitoring in New Hampshire's North Country. This initiative is possible through a grant from the National Oceanic and Atmospheric Administration (NOAA).

CFE and VLAP have conducted several outreach initiatives targeting the North Country. In response, several individuals have expressed interest in monitoring their local waterbodies through VLAP, the Volunteer River Assessment Program and Weed Watchers. We hope to attract even more interest this spring and summer by attending local meetings and conducting an informational workshop.

To assist with North Country volunteer monitoring efforts, CFE has hired Aaron Johnson as the new senior lab technician managing the CFE lab. Aaron was hired in October, 2009. He came to CFE from the Wisconsin Department of Natural Resources, where he worked with that state's volunteer lake monitoring program and contributed to other water resources management projects.



Aaron Johnson samples the Israel River in Jefferson.

CFE has served as a satellite laboratory for VLAP and VRAP since 2007, providing a convenient location for volunteers in northern New Hampshire to pick up equipment and drop off samples. Aaron hopes to continue this reliable service, as well as partner with local organizations and towns with specific watershed management projects or goals in mind. More information about CFE's lab capabilities can be found at www.plymouth.edu/cfe/lab.html.

If you're interested in volunteer monitoring opportunities in the North Country, please contact Aaron at (603) 535-3269, and stay tuned for information regarding a workshop in June. Aaron looks forward to meeting and assisting volunteers with their sampling goals. For those lakes and ponds already utilizing CFE's lab, please contact Aaron to schedule your 2010 sampling dates. □

Advance of the Lake Snatchers: Zebra Mussels Moving Ever Closer to New Hampshire

By Amy P. Smagula, Exotic Species Program Coordinator

Zebra mussels are small invasive non-native shellfish marked by alternating light (whitish to tanish) and dark (blackish to brownish) bands that give them a distinctive zebra-like stripe pattern on their shells. They are typically two inches or less in size (roughly the size of a pistachio nut) and have a life span of four to eight years. Zebra mussels have an extremely high reproductive rate of 30,000 to 1,000,000 new mussels per year and are able to reproduce at one year of age.



Zebra patterns. Photo credit: Sea Grant.

The first North American zebra mussel discovery was in Lake St. Clair, Mich., in June 1988. By September 1991, the mussel was found in all five of the Great Lakes, the St. Lawrence River, the Finger Lakes region of New York, and throughout the Mississippi River basin. During the summer of 1993, the zebra mussel was discovered in Lake Champlain, Vt., and has subsequently spread to other waterbodies across Vermont. In 1998, the mussel was found in East Twin Lake, Connecticut. During the summer of 2009, the zebra mussel was identified in Laurel Lake in the Massachusetts Berkshire region. With infestations to the south and west of us, it is anticipated that their arrival in New Hampshire is just a matter of time.

Zebra mussels are native to the drainage basins of the Black, Caspian and Aral seas of Eastern Europe. It is believed that ships originating from European ports carried the mussel in freshwater ballast which was discharged into Great Lake ports. Since their introduction into the Great Lakes in the late 1980s, zebra mussels have spread throughout the United State and infest both river and lake systems.

Adult and juvenile mussels (referred to as veligers) are transported by waterfowl and by transient recreational gear (boats, personal water craft, canoes, kayaks). Larval stage mussels (veligers) can be transported in bait bucket water and boat engine cooling water.

Zebra mussels disrupt aquatic ecology via the food web, by filter feeding tremendous amounts of algae from the water column, and cause problems to humans wherever they have appeared. Zebra mussels are the only freshwater mussel that secrete durable elastic strands, called byssal fibers used to securely attach to nearly any surface, forming barnacle-like crusts several feet thick. Through this mechanism zebra mussels can attach to stone, wood, concrete, iron, steel, aluminum, plastic, fiberglass, PVC, and even crayfish or other mussels. They have also recently been found growing on softer substrates like plants and even mud.

The zebra mussel's ability to rapidly propagate and physically attach to objects creates several problems, including: clogging raw water intakes, such as those at drinking water, electric generation and industrial facilities; littering beaches with washed up shells, which can cut feet and cause foul odors due to decomposing mussel tissue; and encrusting historical and cultural artifacts within infested waterbodies. In addition to impacts on infrastructure within the lake and surrounding communities, there are also impacts on boating and navigation, which can include increased drag on vessels coated with zebra mussel growth, clogging of boat engine cooling systems by larval mussels, and sinking of navigational buoys en-

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Zebra Mussels,

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crusted with zebra mussels.

Zebra mussels can tolerate fairly wide ranges of environmental conditions. One of the factors that may limit their growth and distribution were they to arrive in New Hampshire is our water chemistry. Zebra mussels are found in lakes that are not overly enriched with nutrients, but which have higher calcium levels. Only a few of New Hampshire's waterbodies are at a risk for infestation because many of our lakes are relatively clear, low in nutrients, low in algal density (their food), and very low in calcium (for shell building). Some lakes and rivers along the western border of the state may be more at risk though, especially waterbodies like the Connecticut River, Post Pond in Lyme, and several ponds in that vicinity. Other waterbodies at risk could be the Merrimack and Nashua rivers, Mine Falls Pond, and a few other inland ponds due to their algal content, pH, and their calcium concentrations. A total of 27 New Hampshire waterbodies are listed as having adequate habitat to support zebra mussel populations.

Unfortunately, like with many invasive species, there is no sure-fired "cure" to a zebra mussel infestation, so awareness and prevention activities are critical. Tell your lake, river or watershed association, your local marina, your municipal officials, or anyone with an interest in aquatic resource protection about the zebra mussel. When boating in infested waters, be sure to clean and de-mussel your boat before you leave the area. If you do not have a Lake Host Program on your lake be sure to have informational materials at your boat launch like signage

on how to inspect and clean aquatic recreational gear and fact sheets or pamphlets on invasive species at kiosks.

De-musseling includes performing the following activities **AWAY FROM ANY SURFACE WATER** before and after leaving a waterbody:

- Draining the bilge, live wells and engine cooling system.
- Dumping any bait buckets.
- Inspecting the boat by checking the hull, trim plates, anchors,

and the trailer.

- Washing down the boat with hot water (140°F), if mussels are found, and allowing the boat and trailer to sit for two to five days to dry and/or spraying down gear with a 10 percent bleach solution and letting the solution stand for a few minutes before rinsing clean.

For more information or to report concerns or possible sightings please contact the Exotic Species Program at (603)271-2248. □

Donations and Gifts Received in 2009

In Memoriam Donations

Donald Amirault, Captains Pond, Salem, NH

Donations and Gifts

Stonyfield Farm, Londonderry, NH, Profits for the Planet Fund • \$250 donation

Michele Tremblay and Steve Landry, Volunteers, Walker Pond, Boscawen • GPS Navigator



Protect Your Lake

Choose to be phosphorus-free!

by Andrea LaMoreaux, NH Lakes Education Director

Did you know that no matter where you live, whether you live along the shoreline of a lake, river, or stream, or if you live miles away from the nearest waterbody, what you do in your home and on your property ultimately affects the quality of your favorite lake?

The Number One source of pollution to New Hampshire's freshwater is phosphorus, and most of us, whether we realize it or not, contribute to this source through our daily activities. Phosphorus causes algae blooms and toxic bacteria blooms in New Hampshire's waters. Luckily, there are at least two very simple things you can do in your home and on your property to reduce your contribution to phosphorus pollution.

Choose phosphate-free automatic dishwashing detergents.

Phosphorus, usually in the form of phosphate, was one of the main ingredients in household cleaning detergents. However, in 1994, at the urging of NH Lakes and others, the New Hampshire Legislature passed a law restricting phosphates to trace amounts (less than 0.5 percent by weight) in all household cleaning products *except* automatic dishwashing detergents. At that time, there were only a few phosphate-free automatic dishwashing detergents available on the market that cleaned dishes well.

There are readily available phosphate-free automatic dishwashing detergents on the market for homeowners.

During the 2009 legislative session, NH Lakes, Rep. Sue Gottling of Sunapee, and the Department of Environmental Services worked cooperatively to successfully pass a bill that adds phosphorus-containing automatic dishwashing detergents to the statewide ban on phosphorus products. On July 29, 2009, Gov. John Lynch signed this new lake protection measure into law. Starting in July 2010, household automatic dishwashing detergents sold in New Hampshire must be phosphate-free. This law will help protect our lakes from phosphorus, helping prevent the occurrence of unsightly, foul-smelling algal blooms and toxic bacteria blooms.

Until this important law takes effect in July 2010, please choose to protect our lakes by purchasing auto-



Gov. Lynch signed HB 350 into law in Meredith on July 29, adding phosphate-free automatic dishwashing detergents to the statewide ban on household cleaning products containing phosphorus.

matic dishwashing detergents that do not contain phosphate. Read the product labels closely—if it doesn't claim to be "phosphorus-free" or "phosphate-free," it probably contains phosphorus. Fortunately, there are now many automatic dishwasher detergents available that do not contain phosphates. The August 2009 issue of *Consumer Reports* rated automatic dishwashing detergents and recommended the phosphate-free versions of the brands "Method" and "Simplicity." Please make it your choice to find a phosphate-free dishwashing detergent in your local supermarket and use it in your home!

Choose phosphorus-free lawn fertilizers.

Another easy way to reduce your personal contribution to phosphorus is to avoid lawn fertilizers that contain phosphorus. The typical New Hampshire lawn doesn't even need phosphorus—so why waste money on fertilizer in the first place?

If you must use fertilizer, remember that the New Hampshire Comprehensive Shoreland Protection Act prohibits the use of fertilizer within 25 feet of lakes and rivers, and between 25 and 250 feet from shorelines, allows the use of slow release, low-phosphate fertilizers only.

Please make it your choice to use a fertilizer that is phosphorus-free. On every bag or box of fertilizer, there

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Congrats to Jody Connor! Recipient of two prestigious awards

Since coming to work for DES in 1979, Jody Connor has dedicated his life to the protection and restoration of surface waters in New Hampshire. Jody created programs at DES that continue to protect state lakes and ponds from the impacts of cultural eutrophication, invasive species and toxic pollutants. These programs and the tireless education efforts put forth by Jody have empowered lake and watershed residents to become actively involved and educated in surface water protection. For these reasons and more, DES limnologist Jody Connor was recognized, on two separate occasions, with the Gulf of Maine Visionary Award from the Gulf of Maine Council, and with the David S. Chase Memorial Award for Exceptional Achievements in Science from DES.

Through legislation, education, research, and selfless dedication, Jody Connor has elevated the state of New Hampshire as a national leader in lake and pond protection, empowered and educated thousands about lake ecology, limnology and watershed management, and become the face of New Hampshire's Lakes.

The Gulf of Maine Visionary Awards are made annually to individuals or organizations within each of the five Gulf of Maine jurisdictions of Massachusetts, New Hampshire, Maine, New Brunswick and Nova Scotia. The awards recognize innovation, creativity, and commitment to marine protection by businesses, environmental organizations or individuals who are making a difference to the health of the Gulf of Maine.

The Chase Memorial Award was named in honor of David S. Chase, who served as the state's DES Radon Program Manager for 16 years and who passed away in 2008. The award was created this year to recognize a DES employee whose scientific accomplishments have made a significant impact on our understanding of the environment, of how to improve its condition and prevent future problems.

It is extremely difficult to provide a "brief" background on why Jody Connor was named for these

prestigious awards. Here are but a few of his key accomplishments in New Hampshire and the Gulf of Maine watershed.

He initiated state legislation to create the following programs: the New Hampshire Volunteer Lake Assessment Program at DES in 1985, which has grown to 180 lakes and ponds with over 500 volunteer monitors throughout the state; the Comprehensive Shoreland Protection Program and Comprehensive Shoreland Protection Act managed by DES and enacted into law in 1991; the DES Exotic Species Program created in 1981; the DES Clean Lakes Program; the DES Public Bathing Facility Program; and the DES Beach Inspection Program.

Jody has also written legislation to ban phosphorus from laundry detergents (1990s) and more recently to close the loop and ban phosphorus from dishwashing detergents (2009); he created the Interactive Lake Ecology Program for schools in New Hampshire and around the world; initiated one of the first cyanobacteria monitoring programs at beaches in the country; and assisted New Hampshire towns to create the first watershed district/overlay ordinances in the state. Jody also pioneered the use and acceptance of volunteer generated data by government agencies.

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Jody Connor receives the 2009 Gulf of Maine Award. From left to right: Joseph Farrelly, Stephen Landry, Jody Connor, Andrea LaMoreaux and Michael Walls. Photo Credit: naturesource communications.

Congrats,

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He provides lake residents, associations and towns with education/outreach on water quality issues by speaking at numerous meetings and workshops throughout the year, particularly on weekends and evenings during the summer months. Not only does he present at association meetings, conferences, and workshops, but he also handles thousands of phone calls and emails about lake issues each year.

The list could go on. Jody is a highly skilled environmental leader in our state; but what makes him stand out is his true love for our water resources and his passionate commitment to protecting them for the future. Congratulations, Jody! □



A bald eagle at Round Pond in Lyman. Photo Credit: Alicia Pickett-Hale, former VLAP intern.

Phosphorous Free,

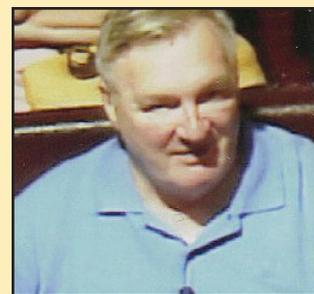
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should be a string of three numbers. Make sure that the middle number, which indicates the phosphorus content, is "0."

More pollution prevention tips

For more pollution prevention tips about how you can reduce the amount of pollution that your household generates, and to do your part in protecting the environment while improving the quality of life for you and your family, visit the DES Pollution Prevention Program's households website at <http://des.nh.gov/organization/commissioner/p2au/pps/pphp/index.htm>.

NH Lakes is a statewide, nonprofit, member-supported organization dedicated to protecting lakes and their watersheds through education and advocacy for current and future generations. For more information about the organization's lake protection efforts across the state and how to help, please visit www.nhlakes.org or contact (603) 226-0299. To receive NH Lakes' free monthly e-news blast, *Shorelines*, full of interesting lake-related information, sign up on the website. □

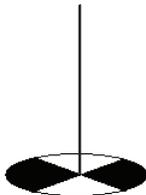


Thank You!

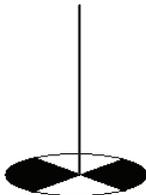
To George "Fitzy" Fitzpatrick. A simple "Thank You!" for the many years you steadfastly volunteered to test the waters at Halfmoon Lake. Your unselfish dedication to the lake has been greatly appreciated by all.

Thanks, Fitzy!

Your Friends at Halfmoon Lake.



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



Upcoming Events

April 30, 2010: DES Drinking Water Source Protection Workshop. Grappone Conference Center, Concord, NH. For more information visit www.agwt.org.

May 15, 2010: DES Volunteer Lake Assessment Program Annual Workshop & 25th Anniversary Celebration! DES, Concord, NH. For more information, see announcements in this newsletter or visit www.des.nh.gov/organization/divisions/water/wmb/vlap/index.htm

June 5, 2010: North Country Volunteer Workshop. White Mountain Community College, Berlin, NH. For more information, refer to www.des.nh.gov/organization/divisions/water/wmb/vlap/index.htm

June 11-12, 2010: Annual Meeting of the New England Chapter of NALMS. Worcester State College, Worcester, Mass. For more information, visit www.uri.edu/ce/wq/ww/nec.htm

June 25, 2010: 2010 Lakes Congress. Squam Lakes Natural Science Center, Holderness, NH. For more information visit www.nhlakes.org/calendar/htm.

July 8, 2010: NH Lakefest. The Inn at Church Landing, Meredith, NH. For more information visit www.nhlakes.org/calendar.htm.



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](mailto:sara.steiner@des.nh.gov).