The Sampler

December 20, 2012

The Sampler is a monthly e-newsletter produced by the Volunteer Lake Assessment Program.

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Web Highlights

This month's featured lake website is the Lake Winnipesaukee Travel Guide http://www.lake-winnipesaukee-travel-guide.com/.

You'll find some useful tips on safe ice skating on lakes and ponds.

Upcoming Events

Winter 2013 Ice Fishing Classes
Sponsored by NH Fish and Game

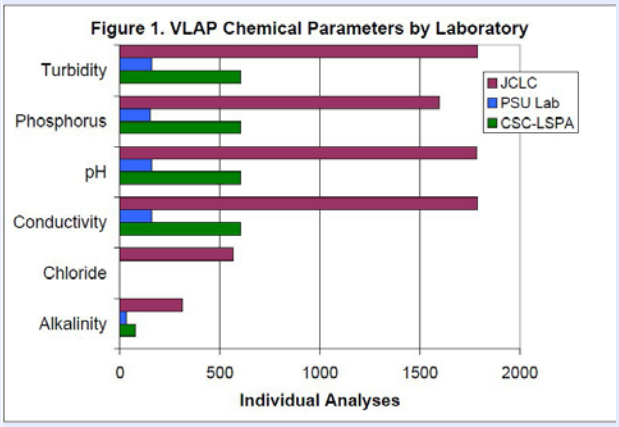
EPA's Watershed Academy Webcast New Recreational Criteria to Better Protect Public Health
January 30, 2013
Register

Limno Lingo

Cyanobacteria: These bacteria have the ability to photosynthesize which is why we often refer to

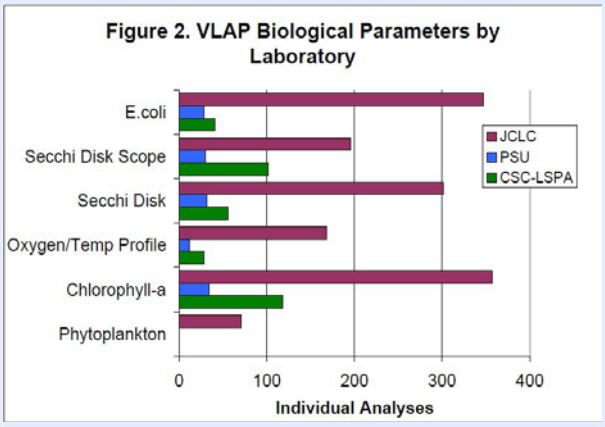
2012 VLAP Season Review

The Volunteer Lake Assessment Program (VLAP) experienced another busy year for volunteers and staff in the Jody Connor Limnology Center (JCLC). Approximately 500 volunteers monitored 171 lakes throughout New Hampshire. A total of 398 individual sampling events were conducted at VLAP lakes. Volunteers conducted a total of 274 individual sampling events, and biologists assisted volunteers for an additional 124 sampling events. Approximately 180 deep spots and 500 river/stream stations were sampled.

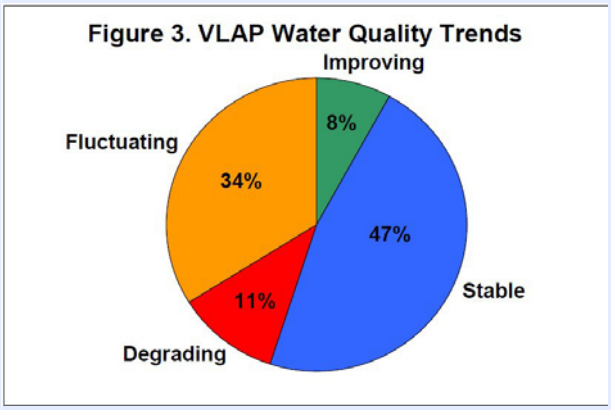


Figures 1 and 2 provide a summary of VLAP sample parameters analyzed by the JCLC, Colby Sawyer College/Lake Sunapee Protective Association (CSC-LSPA) and Plymouth State University (PSU) for the 2012 sampling year. Approximately 12,910 individual sample results were generated by VLAP in 2012, down from 14,000 in 2011 due to a decreased number of biologist visits, phytoplankton analyses, and a relatively dry summer resulting in decreased tributary flow and samples collected.

cyanobacteria as blue-green algae. The blue-green appearance comes from the specific pigments used in photosynthesis. Cyanobacteria are present in virtually all freshwater and marine systems, and can also exist in extreme environements such as hot springs. They are some of the earliest inhabitants of water and other enviroments. When present in relatively low numbers, cyanobacteria are not a concern. However, certain species of cyanobacteria can produce toxins that can be harmful to humans, pets and livestock. When these toxic cyanobacteria species have enough nutrients (food) and other conditions, such as sunlight and water temperature, are favorable, they can grow to large concentrations creating blooms or surface scums. In large concentrations, these toxic species may pose a threat to public health, pets and livestock. DES' Beach Inspection Program inspects public beaches for the presence of cyanobacteria and the Jody Connor Limnology Center evaluates lakes and ponds for the presence of cyanobacteria. If you observe a potential cyanobacteria scum, please call the cyanobacteria hotline at (603) 419-9229.



The 2012 VLAP season was also the first on the new biennial biologist visit schedule. Lake names A-L received a biologist visit in 2012 with the next visit scheduled in 2014. Lake names M-Z will receive a biologist visit in 2013 and then again in 2015. Volunteers are encouraged to continue sampling on their own during the years in which their lake does not receive a biologist visit. Annual data collection is essential in establishing long-term water quality trends. These trends help determine whether water quality is getting better or worse and aid in watershed management decisions to protect and restore waters.



Trend analyses were performed on VLAP lakes with ten or more consecutive years of data collection. In 2012, trend analyses were performed on 125 lakes. Twenty-seven lakes have 25 plus years of data, 42 have 20-24 years of data, 18 have 15-19 years of data, and 38 have 10-14 years of data. Trend analyses were performed on chlorophyll-a, transparency and total phosphorus to determine if water quality is improving, degrading, stable, or fluctuating over time. Approximately 50 percent of lakes indicate stable water quality conditions, meaning water quality has not changed over time. Less than 10 percent of lakes indicate improving conditions, and 11 percent of lakes indicate worsening conditions. Specifically, lake transparency, or clarity, shows the largest worsening trend which is cause for concern as lake clarity is linked to recreational, tourism and property tax revenues.

Stay tuned for more information on lake water quality and trends in the 2012 Regional and Individual Lake Reports to be published in the spring of 2013.

Water Sustainability Commission Releases

Final Report

The Water Sustainability Commission, established by Governor Lynch in 2011, has released its final report on how to ensure the quality and quantity of our water resources is as good or better 25 years from now. The report identifies key actions needed to address concerns such as educating residents, investing in water infrastructure, evaluating future needs, and generating data, through monitoring, to make informed decisions.

EPA Releases National Water Program 2012 Strategy: Response to Climate Change

On the national level, EPA has released the "National Water Program 2012 Strategy: Response to Climate Change," which describes how EPA's water-related programs plan to address the impacts of climate change and provides long-term visions, goals and strategic actions for the management of sustainable water resources for future generations.

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