

# OUR TOWN

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## *Dusty Davies is devoted to protecting Mirror Lake's water quality*

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TUFTONBORO — This is a “pivotal year” for Mirror Lake, says Dusty Davies, the person who has devoted herself to protecting the quality of its water for nearly four years. In her capacity as President of the Mirror Lake Protective Association (MLPA), Davies has led the rallying cry to alert the residents of the lake to the insidious danger of excess phosphorus (P) in the water.

She was energized by the appearance in 2008 of blue-green algae, a type of cyanobacteria, which acts as a nerve toxin. Residents were advised not to swim in the water, a recreational activity synonymous with the long-anticipated pleasure of a New Hampshire summer.

Davies sought and received a grant for a watershed management study on behalf of the MLPA from the New Hampshire Department of Environmental Services (NHDES) with funding from the U.S. Environmental Protective Agency under Section 319 of the Clean Water Act. As a consequence, the MLPA received a lengthy report describing the watershed, the contributing factors to the excess nutrient levels that encouraged the appearance of the toxic bacteria, and a list of remediation steps.

The watershed area, as defined in the report, encom-

passes approximately 2,160 acres and includes properties from Poor Farm Hill to the south and Bennett Hill to the north, and the approximate 324 properties are located almost equally in the towns of Tuftonboro and Wolfeboro.

Put simply, phosphorus, a plant nutrient, attaches to particles in the soil, which are eventually carried along by water down hill into the lake. An excess of nutrients leads to increased plant growth, which in turns reduces available oxygen and water clarity and provides conditions beneficial to bacteria that are deleterious to humans.

An analysis by Geosytech Consultants, which Davies shared with the public last December in the Kingswood Arts Center, identified the sources of phosphorus in Mirror Lake. Their study revealed that the highest percentage (25) comes from the air, something that lake residents have no direct control over, but they – and here’s where the MLPA is getting involved – can reduce residential lawn and storm water runoff (25), and the runoff from forests, open land/pasture/recreation, roads and septic systems, which represent a combined percentage of 61 percent.

The Wolfeboro spray fields and wetlands, found to contribute 1.1 percent combined, no longer have any irrigation

pipes operating in the Mirror Lake watershed, to Davies’ relief, for she says that over many years, that external source doubled the effect of the population on the lake.

About 15 percent of the total P is internal. The lake has turned over and the quality of the water, at 10.4 Ig/L (micrograms per litre, which means one millionth of a gram per liter) places Mirror Lake on the cusp of the “Ideal” and “Average”; however, says Davies, without remediation, modeling shows that residents could face another threat in the future as development continues.

She points out that in the fall, there is less oxygen in the water. The P level has been known to rise as high as 14, providing favorable conditions for cyanobacterial growth.

Davies looks down over the sparkling blue lake from her back deck and points out the large gaps between trees along her shoreline. The previous owners didn’t have to take down so many trees, she says ruefully. “With careful pruning of a limb here and a limb there, you can still have a good view.”

“If the Shoreland Protection Act was in effect years ago, we wouldn’t have all this remediation to do,” she muses. What’s the point of living on the lake, she asks, if people can’t swim in it? The eco-

nomie harm of ignoring the need to let vegetation grow along the shoreline to buffer the run off and landscaping with erosion control in mind is already apparent. When water quality goes down, property values go down with it.

Not one to remain idle, Davies admittedly devotes “an inordinate amount of time” on raising awareness about the need to improve and maintain Mirror Lake’s water quality. She’s quick to offer appreciation for the growth of the membership in the MLPA and the cooperation from residents.

And now, with the diagnostic phase complete, the next phase is remediation. The organization has a \$68,000 grant in hand and needs to raise an additional \$43,000 to meet the 40 percent match requirement.

She invites all interested parties to attend the MLPA’s annual meeting, set for Saturday, June 30, at 9 a.m. at the Tuftonboro Town House when she will share details on this year’s projects.

Already Wolfeboro and Tuftonboro joined together on a ditch stabilization project along Lang Pond Road, which was completed recently. Next, the MLPA will concentrate on roadside work in the most dense neighborhoods, including Mirror Lake Drive, Church Lane, Steeple Lane, Oak Hill Road and



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**DUSTY DAVIES, President of the Mirror Lake Protective Association, stands on her deck overlooking the lake whose water quality she is working hard to protect. She invites all interested parties to attend the MLPA’s annual meeting, set for Saturday, June 30, at 9 a.m. at the Tuftonboro Town House.**

Chipmunk Lane.

Residents can volunteer to be selected to have one of the five anticipated rain gardens constructed on their property. Others interested in learning the various landscaping techniques that simultaneously beautify property while

protecting the lake, will find Davies and others can offer a wealth of information from personal experience.

Visit the [www.mirrorlakenh.org](http://www.mirrorlakenh.org) Web site for immediate membership information and to find ways to get involved.