

# Six Ponds News

April 2003

(www.sixponds.org)

An Occasional Publication Of The Six Ponds Improvement Association

## *E. coli* at Long Pond

Since storm-water carries pollutants from the watershed to streams and ponds, the Six Ponds Association decided last summer to do some storm sampling.

During the height of three heavy rainstorms, samples were collected from the outfall pipe which drains Plymouth Estates roads and from the stream running from Little Long Pond to Long Pond.

***E-coli* test results in 2002** (the acceptable limit is 235 colonies/100mls)

<u>Outfall pipe test results</u>	colonies/100mls
6/15/02	6,400
7/29/02	36,000
9/16/02	110,000
<u>Stream test results</u>	colonies/100mls
7/29/02	3,600

### What's being done

When the initial June 2002 results were obtained, Six Ponds members visited the Town's Public Health Director who asked

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## SIX PONDS GROUP RATE ON SEPTIC PUMPING

One of the most important actions that you as a Six Ponds member can take as an individual to preserve and improve the quality of our aquifer, ponds and streams is the proper care and maintenance of existing septic systems. Septic tank pump-outs on either an annual or bi-annual schedule is recommended to both prolong the life of the septic system and as an effective means to prevent septic run-off into surrounding soil and waterways.

Recent evaluations of water quality within the Six Ponds area indicate increased levels of e-coli contamination in addition to a general degradation of overall water quality. Failed or failing septic systems are among several primary causes of these conditions.

Your Six Ponds Board strongly urges all members to pump-out septic tanks on a regular schedule every one or two

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## E. Coli (cont.)

for two more validation tests. The results above show that an even greater *E-coli* level was found in July and a very serious level was found in September. The acceptable recreation level is just a fraction of what was obtained (235 colonies/100mls). Six Ponds Executive Committee members then visited with the Health Director who refused to act because there is no Town owned public land at Long Pond. He said, however, that these levels would have closed the PEA beach immediately if it was a public beach. Six Ponds then appeared at a full Board of Public Health meeting and spoke with the Public Works Director who agreed to clean some of the catchment basins. He also agreed to open catchment grates during a heavy Spring rainstorm to allow us to sample selected basins to isolate the source(s). These high *E-coli* levels could come from overflowing septic systems or from something as simple as the dumping of cat litter into a catchment drain. Six Ponds considers this matter of the utmost priority and will continue to follow it up until we find the culprit and stop the pollution.

### We are investigating these clues:

1. Outfall Pipe: the samples were taken right at the mouth of the stormwater outfall pipe which drains part of the Plymouth Estates subdivision. The pipes feeding to this outfall pipe collect from 2000 feet of roadway with about 50 homes. There are storm grates every 100 to 200 feet along parts of the following roads: Long Pond Road, Oar & Line Road, Thatcher Road and Clark Road.

2. Stream: The 9,600 sample from the stream running from Little Long Pond was taken 30 feet upstream to avoid any influence from the outfall pipe. Note: Earlier this year a high school science project found high *E-coli* levels in the stream.

3. Adjacent areas - Great quantities of stormwater enter the stream directly from West Long Pond Road scuppers and from the two parking lots at the boat ramp.

**In the meantime**, Plymouth Estates residents are cautioned not to swim at the Plymouth Estates beach for a few days after heavy rainstorms.

At the recent Town Meeting the Town DPW tried to get permission (without prior debate) to pave large portions of Wareham Road, Old Sandwich Road, and Ship Pond Road. Several Town Meeting reps. (including the Six Ponds reps.) thought the Town should first thoroughly debate whether these roads *should* be paved before they are brought to Town Meeting, and this position prevailed. Many existing gravel roads like Mast Road and West Long Pond Road give our Six Ponds area its distinctive character. There is sure to be a lot of debate on this issue in the months to come.

## Dues

Year 2003 dues are now due in the amount of \$10 per family.

Please return your payment in the enclosed envelope. Thank you!

## Crisis Conditions at Halfway Pond

By Leighton Price

Halfway Pond, one of Plymouth's Great Ponds, is a large, spring-fed pond surrounded by conservation land, a few homes, and some cranberry bogs. But, despite its size and apparently pristine setting, the health of this pond is fragile.

At the beginning of last summer, Halfway Pond was clear and inviting, but, by the middle of July, elodea pond weed had grown profusely and a major bloom of toxic anabaena algae had turned the water a sickly green.

By early August, heavy masses of pond weed, as much as 3 to 4 feet thick, extended 50 to 100 feet out from the shore around much of the pond. The on-going bloom of algae reduced visibility in the water to just a few inches. The pond smelled like an open sewer for weeks.

Most people stopped coming to Halfway Pond to fish, boat and swim this summer. Pond weed tangled fishing lines, propellers, centerboards, rudders and paddles. Swimmers were disgusted to wade through the thick pond weed where leeches proliferated. People noticed that toxins produced by the algae irritated their eyes, sinuses, and throats.

Although Halfway Pond has an intermittent history of pond weed and

algae problems, it was clear to anyone who comes to the pond on a regular basis that the conditions last summer were exceptionally bad.

A further observation is that freshwater mussels, which have proliferated in Halfway Pond at least since the 1800s, have all but disappeared in recent years. In addition, casual observation suggests that the turtle population has dropped sharply from last year when, for example, red-belly turtles were abundant.

Over the past year, twenty water samples were taken in locations across Halfway Pond, and these were analyzed by EnviroTech Laboratories. The Total Phosphate (TP) level reached or exceeded a threshold eutrophic level of .03 mg/l in every one of these water samples. The TP levels ranged from slightly higher than the threshold level to nearly 5 times that level. The median was nearly 3 times the threshold level. The causes for such high readings need to be uncovered.

Halfway Pond is showing signs of serious trouble. Unless we can determine the causes of these problems, take steps to remediate them, and work to keep new stresses on the environment away from its shores, the situation is likely to become much more serious.

The condition of Halfway Pond should serve as a strong warning about the health of water resources in our immediate area and in Plymouth more generally.

## Septic (continued)

years. In pursuit of this goal, Six Ponds is pleased to announce that we have negotiated a group rate for septic tank pump-out with Bolduc Sanitation of Plymouth. This group rate represents a substantial savings and is available to all Six Ponds Members. This group rate will result in a savings of 30.00 to \$35.00 per 1000 gallons as compared to other suppliers. A 20%+ savings!

We have enclosed an addressed, postage paid, postcard with this newsletter to assist you in taking advantage of this group rate opportunity. Please fill out the required information and you will be contacted by Bolduc Sanitation who will be pleased to either provide you with additional information, or schedule a convenient date for system pump-out. Please be sure to include your name, address and telephone # in the space provided.

The cumulative effect of proper septic system maintenance is important to help reverse the current trends that have been observed in the water quality in the Six Ponds area. Signing up for this program is truly a "Win-Win" proposition. You extend the life of your septic system and save yourself tens of thousands of dollars to replace a failed septic system later, AND you strike a serious blow towards keeping our ponds of pristine water quality.

Thank you for your help in this important matter. Let's all sign up!

## Spring Test Results

On March 28, nine volunteers went out on our Six Ponds to do spring water quality testing. Turnover had recently occurred and the water was fairly well mixed. "Turnover" is when spring weather warms the pond enough to cause a top to bottom mixing of winter stratification. Results were certainly better than last fall's numbers.

**Bloody Pond** results were fairly good this spring. The average Phosphate reading was .0187 with only one sampling station over the 0.03 threshold.

### **Gallows Pond**

As usual, Gallows sampled well. Phosphate numbers were low, averaging .0162, one was .007.

### **Halfway Pond**

Halfway was not as bad this spring as it was last spring but Phosphate numbers continue to exceed eutrophic limits. Only two of eight samples fell below .03, the others averaged a third over eutrophic levels. Hopefully we will not have a reoccurrence of the terrible anabeana algae and elodea weeds that we had last year.

### **Long Pond**

Phosphate levels, averaging .0198, were quite good.

### **Little Long Pond**

Only one of four Phosphate readings

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## Spring Results (continued)

came in at less than an acceptable 0.03 and the average was more than 50% higher than eutrophic levels. This pond is in trouble, and unless steps are soon taken to keep fertilizers and septic systems from leaching into this pond, it will become choked with weeds.

### Round Pond

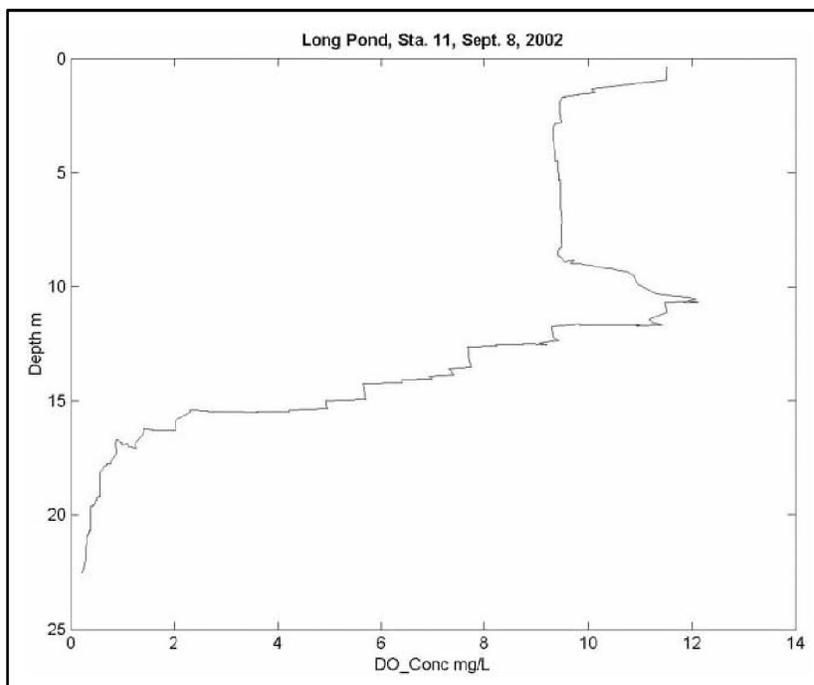
Phosphate averages were quite good at .013.

There is still talk about a Foxwoods-type casino possibly to be located on land in Wareham near the intersection of Route 25 and Route 195. The impact on Plymouth would be devastating – 40,000 daily car trips, enormous pressure for thousands of starter homes, cannibalization of existing restaurants and hotels, well documented negative social effects. Jeff Benedict's book Without Reservation (the story of how Foxwoods devastated the small CT towns around it) is important reading. See also the website set up by a Plymouth committee which includes many Six-Ponders:

[www.citizensagainstcasinos.com](http://www.citizensagainstcasinos.com)

## A Squeeze on the Trout

Last September one of the oxygen profiles we logged in the water column at a particular Long Pond sampling station showed very low oxygen levels from the bottom at 82 feet up to 50 feet, a spike of oxygen at between 30 to 40 feet (that might



reflect algal bloom photosynthesis) and then another oxygen spike five feet from the surface where wind and wave oxygenate the water. This warm weather squeeze is not good news for trout because they can't survive in the oxygen poor deeper waters and they don't do well in the warmer top waters. We wonder how many fishermen have that figured out.

## Water Quality Campaign – Your Help is Needed

A significant amount of water quality testing was done during the past summer and fall. Results indicate that pond water quality in the Six Ponds varies quite a bit. Some of our ponds appear to be in good shape, some show signs of problems, and two, Halfway Pond and Little Long Pond, appear to be in trouble.

To understand why some ponds have problems while others do not, we need to know more than the results of water quality tests. We need a broad picture of factors which contribute to pond health.

Some of these factors are:

- depth of the water and contours of the pond bottom,
- topography of the land and types of vegetation around the pond,
- location of houses and their septic systems, lawns, and driveways,
- proximity of roadways and how
- location of nearby business and agricultural activities.

**We need several people from each of the Six Ponds to volunteer to provide the observations needed.**

A web site has been set up dedicated to Plymouth Ponds water quality ([www.plymouthwaterquality.org](http://www.plymouthwaterquality.org)).

On this web site are examples of problems found in several ponds in Plym-

outh and discussions of some of the water quality results obtained in recent years. In addition, there is described in more detail the types of information being sought for each pond.

Detailed information about ponds should help us uncover patterns and consistencies that explain problems which are occurring.

If you are willing to help with this project, please write, e-mail or call:

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➤ Six Ponders have provided us with e-mail addresses so that they can receive regular “alerts” regarding news of coming meetings or other events important to the area. If you are not on the e-mail list but wish to be, simply include your e-mail address (write clearly, please!) on your membership dues form or email us at [info@sixponds.org](mailto:info@sixponds.org).

➤ More than 400 families with a tie to the Six Ponds area receive our newsletter. Along with all of the local addresses, the newsletter goes to Arizona, Connecticut, California, Washington D.C., Florida, Illinois, Maryland, New Hampshire, New Jersey, New York, North Carolina, Rhode Island, Tennessee and Vermont. (E-mail alerts go as far away as Turkey!)