Six Ponds 2015 Annual Meeting Reports

Water Quality Report

Six Ponds water quality results for 2014 are included in a recently released report prepared for the Town of Plymouth by the School for Marine Science and Technology, University of Massachusetts Dartmouth. The report provides a snapshot view of water quality in 39 of the nearly 450 ponds in Plymouth. An informational meeting on the report is scheduled for June 25 at 6:00 pm in the Mayflower Room of Town Hall. See http://www.plymouth-ma.gov/natural-resources/pages/pond-and-river-information for a link to the full report and other pond information.

The 2014 collection of water samples was organized by the Plymouth Department of Marine and Environmental Affairs and conducted by members of several pond associations. The study was funded by the Massachusetts Environmental Trust and the Town of Plymouth.

The study was designed to sample water during the likely worst water quality period of time. Data was collected at various depths from a single deep location within each of the 39 ponds included in this snapshot study. Results from past studies of these ponds by Six Ponds were considered when characterizing each pond included in this study, and revisions to be included in the report prior to the June 25th meeting will give additional consideration to past results. It should also be noted that this snapshot study did not attempt to examine possible causes of problems or remediation possibilities.

Based on results for dissolved oxygen, chlorophyll, phosphorus, nitrogen, and clarity, five of the six ponds in the Six Ponds area were characterized as borderline impaired or impaired. Phosphorus was identified as the key to water quality management for all six ponds, and nitrogen was considered important to water quality management for Little Long and Long ponds. While Bloody pond was the only one characterized as not impaired, results obtained over the past dozen years have suggested that this pond does have some water quality problems.

With regard to phosphorus, the current results are consistent with past results, which have sometimes yielded high phosphorus readings for all six ponds and have regularly shown Little Long and Halfway to be highest in phosphorus; however, the rather high reading for phosphorus for Gallows in the current results is not consistent with past results for this pond.

With regard to nitrogen, the current result for Little Long is consistent with past findings that nitrate concentrations were regularly detected in this pond, and the current nitrogen result for Long Pond suggests that occasional detection of nitrate in Long Pond is indicative of nitrogen problems there as well.

Collectively, the 2014 Plymouth results show that a significant number of the 39 ponds surveyed have impaired conditions. Since this snapshot data is only indicative of one year's water quality, additional longer term data and data for more of the ponds is needed to evaluate the general ecological condition of ponds in Plymouth.

- submitted by Leighton Price