



# Merrimack River Watershed Council, Inc.

*The Voice of the Merrimack*

## **Merrimack River Water Quality Monitoring, Analyzing, Protecting and Promoting (MAPP) Project *2007 Executive Summary***

The 2007 MAPP project is a volunteer water quality monitoring program designed to collect baseline water quality information in the 50-mile mainstem of the Merrimack River in Massachusetts. Twenty-five members of the Merrimack community volunteered with the Merrimack River Watershed Council (MRWC) to collect weekly or monthly data at 24 sites of 31 identified sites along the length of the river. Teams of three people monitored seven or eight sites in one of four river sections, traveling from one site to another via motor boat. The four river sections are: 1) the estuary in Newburyport to the Haverhill/Groveland town line, 2) Groveland to the Essex Dam in Lawrence 3) the Essex Dam to the Pawtucket Dam in Lowell, and 4) the Pawtucket Dam to the New Hampshire state border. Monitoring occurred on a total of 22 days throughout the summer and fall of 2007. Due to the draw down of water above the Essex Dam in 2007, sites in this section were not monitored.

Physical water quality data was collected using YSI 556 water quality meters and includes water temperature, pH, dissolved oxygen, conductivity, total dissolved solids and salinity. With few exceptions, physical water quality parameters met Massachusetts state standards. Bacteria samples were collected once per month and analyzed at the EPA lab. During 2007 dry weather monitoring events, the Merrimack River met state bacteria water quality standards for swimming 98 percent of the time and 100 percent of the time for boating. During 2007 wet weather monitoring events, the river met state water quality standards 63 percent of the time for swimming and 79 percent of the time for boating.

The MAPP project is a long-term monitoring program, and as such MRWC expects to continue collecting data on the Merrimack River in the future. Plans have already been made to monitor and sample from May through October 2008, collecting the same physical water quality and bacteria parameters that were collected in 2007. In addition to continuing to collect data at our regular monitoring stations and increasing the length of the monitoring season, MRWC intends to focus on the following items in 2008:

- *Section 1* – Investigate high pH measurements collected near mouths of the Artichoke and Indian Rivers.
- *Section 2* – Conduct bacteria hot spot monitoring at the mouth of the Spickett River in Lawrence and monitor the Greater Lawrence Waste Water Treatment Plant outfall for high conductivity, total dissolved solids and salinity.
- Section 3 - Monitor between the Essex Dam in Lawrence and the Pawtucket Dam in Lowell
- Section 4 – Examine Limon Brook in Tyngsborough as a potential source of bacteria pollution and add more extensive dissolved oxygen and pH monitoring above the Pawtucket Dam in Lowell.



For more information, the complete 2007 MAPP Annual Report can be found on our website at <http://www.merrimack.org/publications/watershedreports.html> or contact Tracie Sales, Water Resources Manager at [tsales@merrimack.org](mailto:tsales@merrimack.org) or 978-275-0120 x13.