

**Missisquoi Bay Basin Project:
Identifying Critical Source Areas of Pollution**

**Short-term Tributary Monitoring Program: Interim Report
IJC Deliverable for Task 3, Subtask 2: 22 December 2009
Executive Summary**

The first full season of short-term tributary water quality monitoring conducted by the Lake Champlain Basin Program (LCBP) will begin in early spring 2010. LCBP staff will begin sampling five tributaries in the Missisquoi Bay Basin at the onset of spring runoff and continue until early winter of 2010, when the tributaries freeze. During this season, a target of 20 high-flow (storm event) and 4 low-flow (base flow) samples will be collected at each site and analyzed for: temperature, pH, conductivity, alkalinity, total and dissolved phosphorus, total nitrogen, total suspended solids, chloride, and earth metals. Additionally, a target of 40 samples will be collected from an automated sampler installed at Hungerford Brook and analyzed for total phosphorus and suspended solids.

To date, LCBP staff members have toured the short-term sampling sites, reviewed field sampling and laboratory protocols, and acquired equipment necessary for sample collection. A Memorandum of Understanding was established between the State of Vermont DEC LaRosa Environmental Laboratory (“DEC Laboratory”) in Waterbury, VT and the LCBP for analysis of the chemistry samples. On December 18th, the LCBP field-sampling team gathered the first set of samples at all five tributaries. These samples have been submitted for analysis to the DEC Laboratory for each of the tributaries (Hungerford Brook, Black Creek, Tyler Branch, Trout River, and Mud Creek) for total and dissolved phosphorus, total nitrogen, chloride, alkalinity, total suspended solids and earth metals (calcium, magnesium, sodium, potassium). The results of these analyses will be reported from the DEC Laboratory after the time of writing of this report and will be provided in the next subsequent Interim Report. Temperature, specific conductance, and pH were all measured at the DEC Laboratory at the time of sample submission. All sampling protocols were conducted in accordance with the approved Missisquoi Bay Basin Project: Short-Term Monitoring Program 2009 Quality Assurance Project Plan Version 4, EPA RFA Number: 09152.