

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

**Short-term Monitoring Program
2009 Quality Assurance Project Plan (QAPP)
Executive Summary**

The primary purpose of the two-year Monitoring Program is to increase knowledge of tributary nutrient loads in the Missisquoi Bay Basin and support modeling of pollution sources. The increased sampling in the Basin will address the need for more detailed spatial data of tributary nutrient loads and related meteorological (precipitation) data. The monitoring program expands the current Lake Champlain Basin Long-term Monitoring Program (LTMP) network using similar collection and analysis techniques at the following five tributaries: Hungerford Brook, Black Creek, Tyler Branch, Trout River, and Mud Creek. Additionally, installation of a flow gage on the Sutton River in North Troy, VT will improve the accuracy of current monitoring. Water quality sampling will include measurements of total and dissolved phosphorus, nitrogen, suspended solids, chloride, metals, temperature, pH, conductivity, and alkalinity, following the protocols of the LTMP QAPP. The LCBP has established four meteorological stations in the Basin to collect continuous precipitation and air temperature data. Three stations are co-located with stream gages; the fourth station is in Fairfield, VT. Stream gage and meteorological measurements began in late summer 2009. Water quality sampling will begin in 2010, with a target of 20 high-flow and 4 low-flow total phosphorus samples per year. Water quality data collected will be incorporated into the LTMP electronic database and other monitoring data will be published online by the USGS.