2010 Mad River Watch Report

Summary

The 2010 Mad River Watch program sampled phosphorus, turbidity and E.coli on six dates as planned. Through the LaRosa partnership, samples from 18 sites were analyzed for phosphorus and turbidity on each of six dates. To compare the variability between the LaRosa lab and the FMR lab, on each sampling date two E.coli samples from each of two sites were analyzed at the LaRosa lab and compared to the results from samples processed in the Friends of the Mad River lab.

The Friends of the Mad River lab analyzed E.coli samples from a total of 36 sites (using the IDEXX QuantiTray method), and collected other information on each sampling date including pH, temperature and flow (data from USGS gauge in Moretown).

Phosphorus and Turbidity

During high and declining water conditions[1] this season, results showed generally low phosphorous and turbidity levels (less than 5 NTU). On 6/28/10, when flow conditions were high and rising, many areas showed high phosphorus and turbidity levels, the highest levels being at Chase Brook in Fayston.

Data collected in 2008 and 2009 showed consistently higher phosphorus levels in Folsom Brook (site 10) and High Bridge Brook (site 20.1) than in other tributaries. This trend continued in 2010. Both brooks run through agricultural areas (Folsom--Dairy, High Bridge--Equine), which may contribute to these higher levels.

Quality Control

- The average relative percent difference (RPD) of phosphorus field duplicate samples for the six sampling dates was 18%, which is within the estimated range of precision specified in the QAPP (less than or equal to 30% RPD).
- The average relative percent difference (RPD) of turbidity field duplicate samples for the six sampling dates was 12%, which is outside the estimated range of precision specified in the QAPP (less than or equal to 15% RPD).
- Data completeness for the 2010 season is 100%

[1]"High and declining" water conditions are such that after a rain event, flow has risen to a peak flow and are declining at the time of sampling