

## **2008 Mad River Watch Report**

### **Summary**

The 2008 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 37 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**

Despite high water conditions on each of the 6 sampling dates, there were generally low phosphorus and turbidity levels in 2008. One sample was very high: on 8/25, the phosphorus level in Welder Brook (site 28.05) was 100ug/L. There was also a high reading in Welder Brook on 7/28 (30ug/l).

An interesting trend observed in 2008 is consistently higher phosphorus levels in Folsom Brook (site 10). On 6/16, 6/30, 7/14, and 8/25 levels in Folsom are higher than at other sites (see charts in FMR Data Submission workbook). Folsom Brook runs through an agricultural area, which may contribute to these higher levels. Surprisingly, the turbidity levels in Folsom do not seem to mirror the higher phosphorus levels.

### **Quality Control**

- The average relative percent difference (RPD) of phosphorus field duplicate samples for the six sampling dates was 12%, 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 26%, which is outside the estimated range of precision specified in the QAPP (less than or equal to 15% RPD).
- Data completeness for the 2008 season is 100%

### **Event-Based Sampling**

Due to difficulty in finding appropriate sub-watershed sites and establishing accurate discharge data within the sampling season, we did not complete the event based sampling portion of the project this year.