

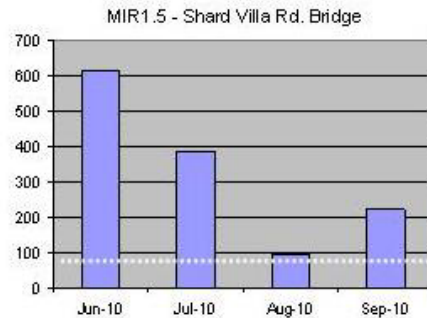
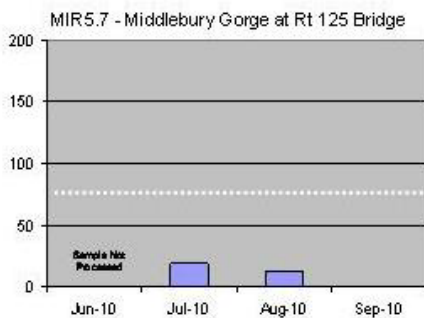
Addison County Riverwatch Collaborative Middlebury River - 2010 Water Quality Summary

The Addison County Riverwatch Collaborative has been monitoring water quality in the Middlebury River since 1993. For years 2010 through 2013, this watershed has been identified for a reduced frequency of monitoring at two sentinel stations, MIR1.5 and MIR5.7. During 2010, these sites were tested for phosphorus and turbidity on the first Wednesday in April and May (Spring sampling dates) and in June, July, August and September (Summer sampling dates). E.coli was tested only on the Summer dates. Flow in the river during Summer sampling was relatively low, representing baseflow to small storm conditions (based on gaging records for nearby rivers). Flows on the April and May dates were moderate, due to snow melt and spring rains.

Site	Location	Town
MIR1.5	Shard Villa Rd. Bridge	Middlebury
MIR5.7	Midd. Gorge @ Rte 125 Bridge	Middlebury

E.coli concentrations at the Middlebury Gorge near the Route 125 bridge (MIR5.7) were well below the state standard of 77 MPN / 100 mL on three sample dates: July 7, August 4, and September 1. The June 2 sample was unable to be processed at the lab. E.coli concentrations at the downstream station at Shard Villa Road bridge (MIR1.5) were well above the state standard on all four summer sampling dates. These results are generally consistent with historic Summer sampling results, which have shown an increase in E.coli levels downstream of the Route 7 bridge.

E.Coli Vermont State Standard = 77 MPN / 100 mL



Turbidity levels in the Middlebury River were generally low and below the Vermont state standard of 10 NTUs (for Class B cold-water fisheries). Values ranged from < 0.2 to 3.4 NTUs, with an average level of 2.1 NTUs for the four summer sample dates at the two sites. An average of 1.6 NTUs is calculated if all six sample dates are considered, including the two spring sampling dates on April 6 and May 5. Results are consistent with historic trends, which indicate an increasing level of turbidity with distance downstream of the Route 7 bridge during baseflow to low-flow conditions. Based on past years' sampling results, Turbidity can increase well above the state standard at times of high flow – during a Summer thunderstorm, or during Spring runoff conditions – particularly in the lower section of the river below the Route 7 bridge.

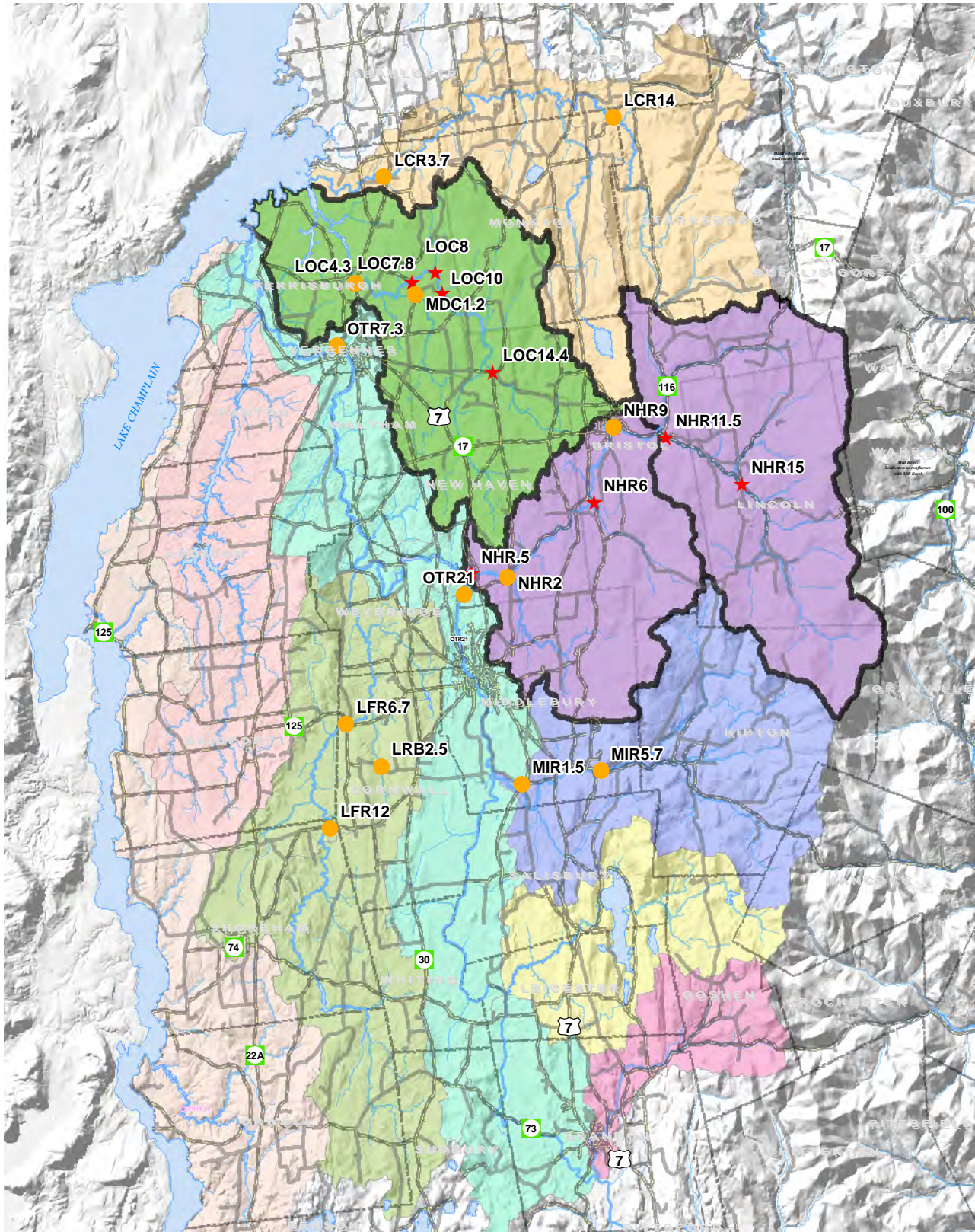
Phosphorus levels were detected at relatively low concentrations during the six Spring and Summer sampling dates. Concentrations ranged from 7 to 29 ug/L, with an average of 16 ug/L. Moderately high concentrations of Total Phosphorus have been recorded in past years at times of high flow and runoff. Historically, Total Phosphorus concentrations have increased between the Munger Street bridge in New Haven (NHR 5) and the confluence of Muddy Branch (NHR 2).

2011: The Addison County Riverwatch Collaborative will continue to monitor for E.coli, phosphorus and turbidity at these two sentinel sites in 2011. An increased number of parameters and additional monitoring sites will be evaluated when a more intensive monitoring focus rotates back to the Middlebury River for a two-year period beginning in the year 2014.

For more information, contact the Middlebury River sampling coordinator:
Heidi Willis, 352-4327, redsprings@nbnworks.net

Addison County Riverwatch Collaborative

Water Quality Monitoring Sites by Watershed, 2010



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| ★ Rotation Basin Site 2010 | ● Sentinel Site | ■ Little Otter Creek | ■ New Haven River | ■ Lake Champlain direct | ■ Lewis Creek | ■ Little Otter Creek | ■ Otter Creek | ■ New Haven River | ■ Dead Creek | ■ Lemon Fair River | ■ Leicester River | ■ Middlebury River | ■ Neshobe River | Roads |
| | | | | | | | | | | | | | | — Pavement |
| | | | | | | | | | | | | | | — Gravel |

The Addison County Riverwatch Collaborative is a citizen organization whose mission is to collect and assess the water quality of Vermont surface waters, and to facilitate water quality and stream corridor improvement measures on a watershed scale.

