

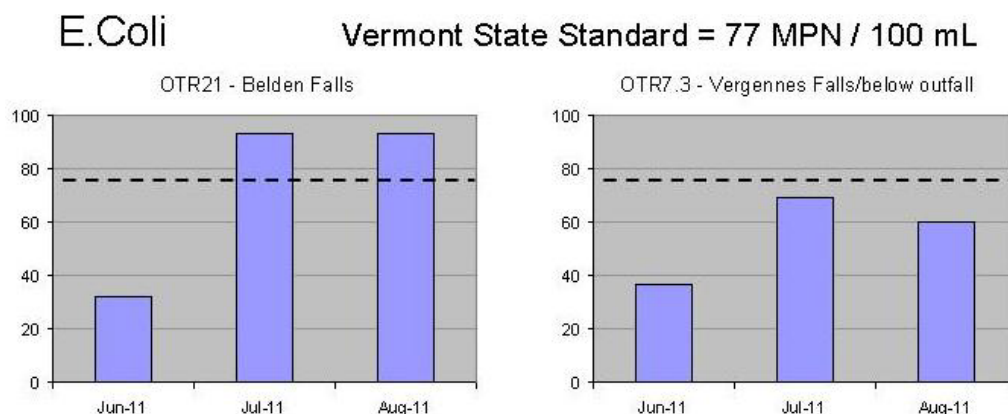
## Addison County Riverwatch Collaborative Otter Creek - 2011 Water Quality Summary

The Addison County Riverwatch Collaborative has been monitoring water quality in the lower Otter Creek since 1992. For years 2010 through 2013, the number of sampling locations in this watershed has been reduced to two sentinel stations, OTR21 and OTR7.3. During 2011, these sites were tested for phosphorus and turbidity on the first Wednesday in April and May (Spring sampling dates) and in June, July, and August (Summer sampling dates).

Site	Location	Town
OTR21	Belden Falls	New Haven
OTR7.3	Vergennes Falls/below outfall	Vergennes

E.coli was tested only on the Summer dates. A scheduled September event was cancelled due to damages sustained at the LaRosa Analytical Laboratory during Tropical Storm Irene. Flow in the river during the July and August sample dates represented low to baseflow conditions (based on records for the USGS gage on Otter Creek at Middlebury). Flows on the April, May and June dates were moderate to high, due to snow melt and spring rains.

**E.coli** concentrations in the Otter Creek at the Belden Falls site (OTR21) were slightly above the state standard of 77 MPN / 100 mL on two of the three sample dates: July 6 and August 3. E.coli counts at the downstream station at Vergennes Falls below the Vergennes wastewater treatment facility outfall (OTR7.3) were below the state standard on the Summer sample dates. E.coli concentrations detected at these sentinel stations during 2011 are relatively consistent with historic monitoring results.



**Turbidity** levels in the Otter Creek at the two sentinel stations were generally low and below the Vermont state standard of 25 NTUs (for Class B warm-water fisheries), except for the April 6 sample at OTR7.3 where a value of 55 NTUs was reported. If the April sample from OTR7.3 is not included, values ranged from 3.1 to 19.5 NTUs, with a mean value of 9.1 NTUs for the five sample dates. Results are consistent with historic data, which indicate that median turbidity values are generally less than 10 NTUs.

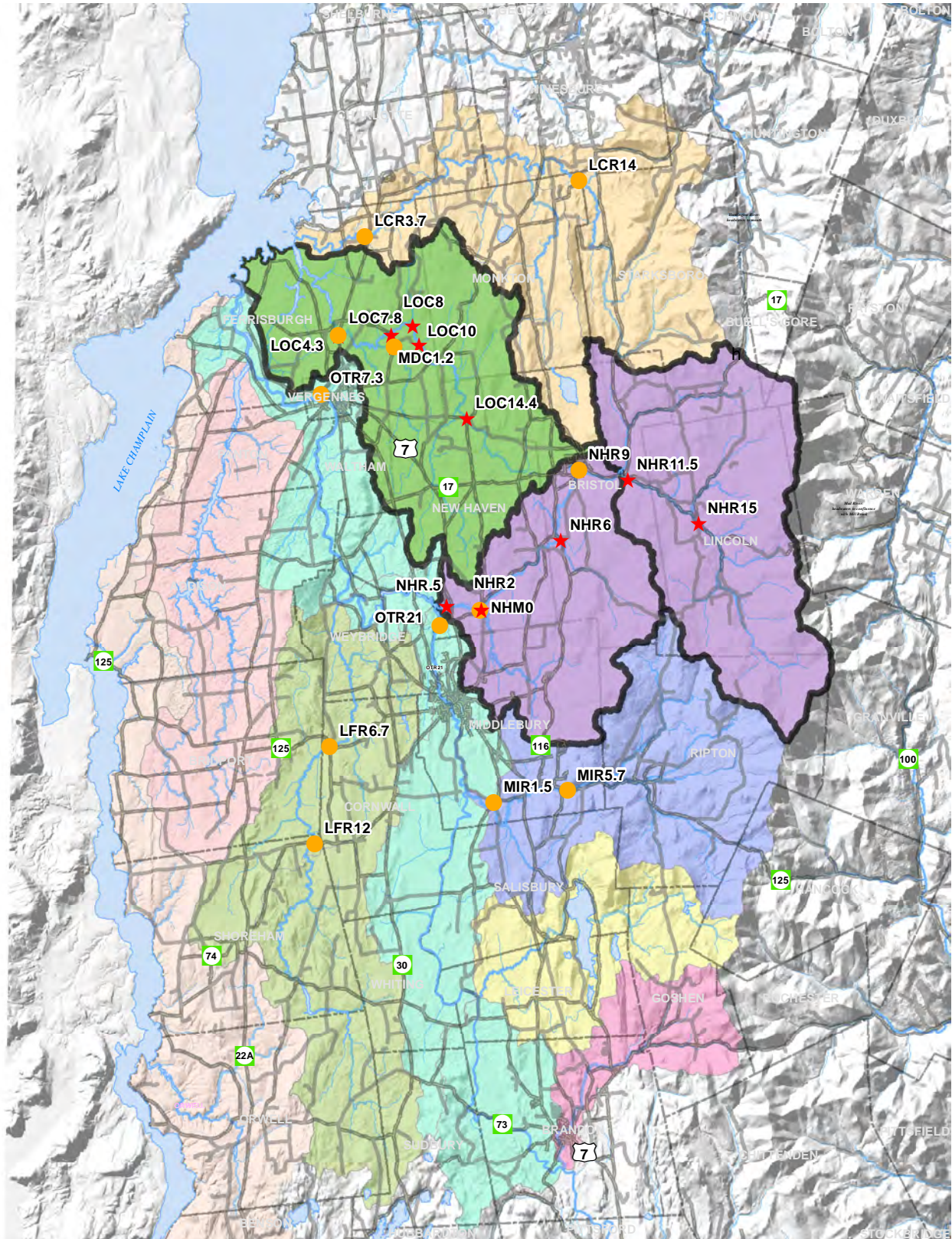
**Phosphorus** levels were detected at relatively low concentrations during the five Spring and Summer sampling dates. Concentrations ranged from 36 to 100 ug/L, with an average of 60 ug/L. Moderately high concentrations of Total Phosphorus have been recorded in past years at times of high flow and runoff. In 2011, the mean concentration of Total Phosphorus at site OTR7.3 for the two available low-flow Summer sample dates (July 6, August 3) was 70 ug/L. This value is slightly higher than the proposed criterion of 44 ug/L for the warm-water medium gradient (WWMG) wadeable stream ecotype in Class B waters. The Otter Creek might instead be classified as in the Slow Winder ecotype, but criteria have not yet been developed for this ecotype.

**2012:** The Addison County Riverwatch Collaborative will continue to monitor for E.coli, phosphorus and turbidity at these two sentinel sites in 2012. An increased number of parameters and additional monitoring sites will be evaluated when a more intensive monitoring focus rotates back to the Otter Creek for a two-year period beginning in the year 2014.

For more information, contact the Otter Creek sampling coordinator:  
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# Addison County Riverwatch Collaborative

## Water Quality Monitoring Sites by Watershed, 2011



★ Rotation Basin Site 2011	● Sentinel Site	<b>Rotational Basins 2011</b>	■ 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	<b>Roads</b>	— Pavement	— Gravel
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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.

