Otter Creek – 2019 Water Quality Summary
Addison County River Watch Collaborative

Site	Location	Town
OTR7.3	Vergennes Falls/below outfall	Vergennes
OTR18	Twin Bridges Picnic Area	Weybridge

The Addison County River Watch Collaborative has been monitoring water quality in the lower Otter Creek since 1992. For years 2016 through 2019, the number of sampling locations in this watershed has been reduced to two sentinel stations monitored for long-term trends: OTR18 and OTR7.3. During 2019, sampling occurred on two spring dates (April 10 and May 1) and four summer dates (June 5, July 10, August 7, and September 4). The year was characterized by slightly above-normal precipitation, overall. Flows in the Otter Creek were above normal for much of the year, but trended below normal for the months of September and October, with discharge at or below the Low Median Monthly (LMM) flow. October rains then brought flow above normal for the remainder of the year. The river reached 2-year flood levels in April following ice-out but did not experience the October flood levels seen in some of its tributaries. April, May, and June sampling events took place during high flow conditions resulting from snowmelt and spring rains. The July event occurred during moderate-flow, baseflow conditions where river stage was not changing appreciably, and groundwater levels were relatively high following spring rains. The August event was the only one this year to coincide with low-flow in this river, but sampling followed scattered thunderstorms high in the watershed that caused water levels to rise during sampling. Enough additional rain fell just before the September event to bring water levels temporarily back up to moderate flow conditions. None of our sampling events coincided with low-flow, baseflow conditions on Otter Creek this year.

Samples were originally scheduled for testing of *E.coli*, total phosphorus and turbidity, with *E.coli* to be tested only in the summer months. Due to a request from the LaRosa Volunteer Monitoring program to reduce analytical costs, *E. coli* and turbidity testing were suspended for 2019. One additional sample of dissolved phosphorus was taken during the August 7 sampling event, at the Vergennes Falls sampling site (OTR 7.3).

Phosphorus levels at Otter Creek stations ranged from 24 to 48 µg/L. The instream phosphorus criterion of 27 µg/L for warm-water medium gradient wadeable stream ecotypes in Class B waters is applicable at LMM flow during the months of June through October. Our August event was the only one to take place in 2019 when flows in the river were below the LMM. Phosphorus concentrations for this sampling date exceeded the instream nutrient standard of 27 µg/L at both sentinel stations (36 µg/L OTR7.3 and 44 µg/L OTR18). At the Vergennes Falls station, 36% of this phosphorus was dissolved.

2020: The Addison County River Watch Collaborative will continue to monitor for *E.coli*, total phosphorus and turbidity at these two sentinel sites on the Otter Creek in 2020. In addition, we will increase the number of parameters and add additional monitoring sites, since this river is due for a more intensive monitoring focus in the 2020-2021 cycle. Because Addison County is low in the watershed of this large river, new monitoring sites will be primarily located on tributaries to better understand how our local sub-watersheds contribute to the overall water quality of Otter Creek.

For more information, the Otter Creek sampling coordinator:
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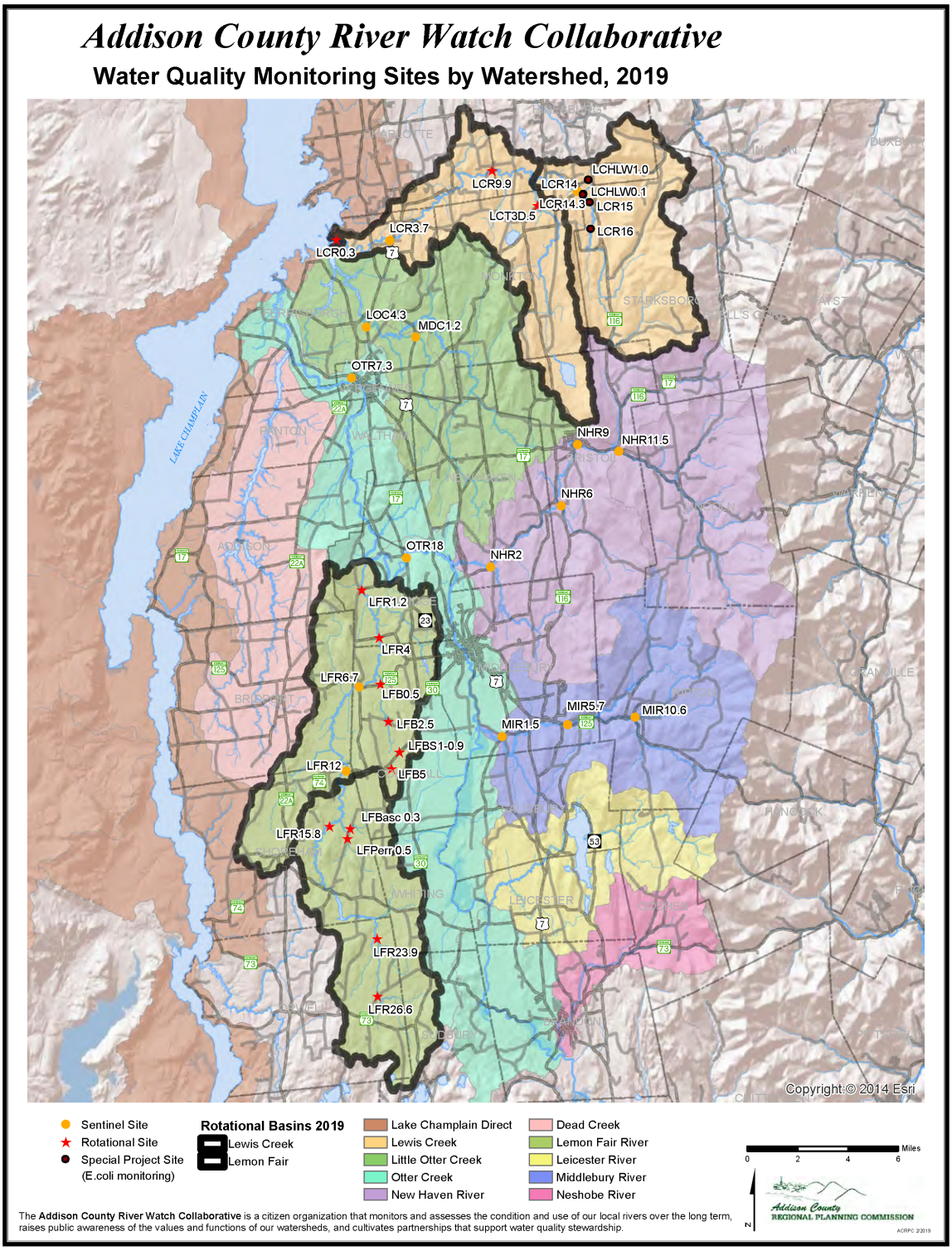

Figure 1. Location of ACRWC monitoring stations for 2018 and 2019.