

South Ore Creek at Bauer Road

Adopt-a-Stream Site Report, updated January 2012

Overall Condition: **Fair**

At this site in the spring there is an above average diversity of bugs with several sensitive families, but the fall samples are mediocre. The water is clean and gets warm in the summer. The stream banks and streamside vegetation are healthy. Overall the stream has been given a mid-range “fair” quality rating because of the lack of sensitive insects in fall samples.

Measuring Stream Quality

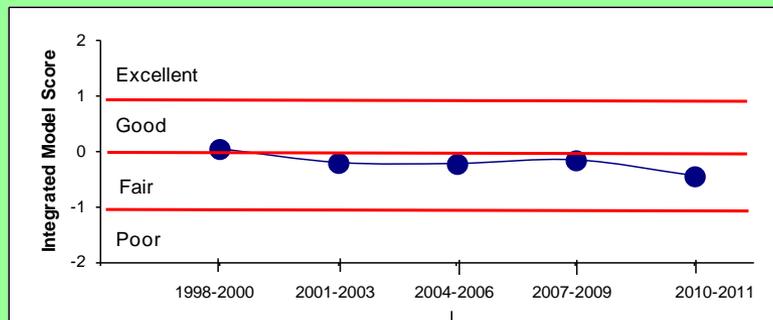
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream with sensitive families has the clean water and good habitat required by those bugs to survive.

Monitoring Data

These data come from HRWC volunteers who have monitored this site 32 times, starting in 1998. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on South Ore Creek is 18 feet wide and shallow (about a foot) with an occasional two-foot deep pool. In 2009 we found nice habitat here. While the rocks in the swift water (riffles) are somewhat clogged with silt, the banks are quite stable. It has clean but warm water (often 79°F in the summer).

There is a good diversity of bugs here in the spring when we typically find 16 different families and three of those are sensitive families that require a good quality stream. In the fall, however, the average is only 10 families, with no sensitive ones. Stoneflies are very sensitive insects that are only found in clean water and we find them here in both the spring and the winter (including one of the “winter stoneflies” that grow only in winter and are dormant the rest of the year).



To determine the overall condition rating, HRWC uses an integrative model that compares this site to all of HRWC's other monitoring sites in the Huron watershed. The model uses insect, habitat, temperature, and stream size data.



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Background Information

Site History

South Ore Creek meanders through many miles of an unspoiled natural area with few houses in sight, in spite of being in a developed watershed. Due to its small size, parts of it may dry up in the summer. Some areas have thick cattails, but it is navigable if the water is above average height.

How is the Creek affected by land use here?

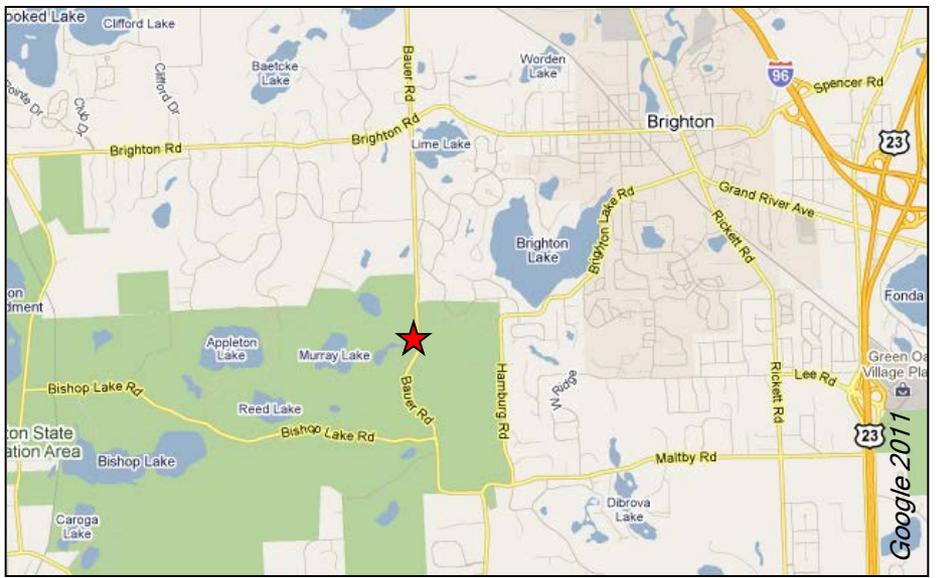
This site receives water from 32 square miles of land, mostly residential. According to data from 2000, nearly half of this sub-watershed is developed while only a tenth is still used for agriculture. At that time, only 15% of the land was covered by impervious surface. Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

Creeks tend to start degrading once the watershed is more than 8% impervious and become badly degraded by 25%. [The most urbanized Huron River watershed that we study (draining into Millers Creek at Baxter Road) is 51% impervious.]

Watershed land use in 2000: 11% Agriculture, 44% Urban, 8% Forest, 17% Open, 21% Wetland.

What You Can Do

Help us improve South Ore Creek! Plant trees and deep-rooted plants in low areas on your property to help the rain infiltrate into the earth so it can be cleansed and cooled. Go to www.hrwc.org/take-action for ways to keep the rain at home so that it doesn't wash pollutants into the stream and cause flooding from the sudden increase in flow volume.



Insects found in at least two sampling events from 2009-2011:

- *Taeniopterygidae — broad-back winter stonefly
- Aeshnidae — damner dragonfly
- Baetidae — small minnow mayfly
- Belostomatidae — giant water bug
- Calopterygidae — broad-winged damselfly
- Chironomidae — midge
- Coenagrionidae — narrow-winged damselfly
- Elmidae — riffle beetle
- Heptageniidae — flathead mayfly
- Hydropsychidae — common net-spinner caddisfly
- Pylalidae — aquatic Pylalid moths
- Simuliidae — black fly

**Sensitive Family*