

# South Ore Creek at Hamburg Road

Adopt-a-Stream Site Report, updated January 2011

## Overall Condition: **Good**

At this site there are several kinds of bugs and a few of them are sensitive. The water is clean and the stream banks, streambed, and streamside vegetation are healthy here. Overall the stream has a "good" rating since it supports a moderately good variety of aquatic life with some sensitive families year-round. The overall quality is slightly above the average across the Huron River Watershed for streams of this size.

### Measuring Stream Quality

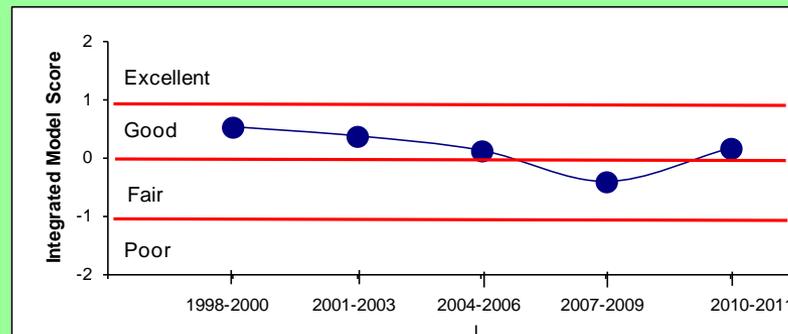
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream 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 36 times, starting in 1994. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on South Ore Creek is 23 feet wide and shallow (about a foot) with an occasional two-foot pool. In 2010 we found average habitat here with nice, clean rocks in the swift water (riffles) and stable banks. It has clean but warm water (often 78°F in the summer). While the immediate area around the stream looks quite natural, the upstream watershed is already fairly extensively developed and this is likely to impact the stream quality.

The diversity of bugs here is average for a stream of this size. In the spring we typically find nine different families and one is a sensitive family that requires a good quality stream. In the fall an average of 13 families are typically found, with one or two sensitive ones. Stoneflies are very sensitive insects that are only found in clean water. Two kinds of "winter stoneflies" grow only in winter and are dormant the rest of the year. We usually find one kind of winter stonefly at this site, which is further indication of good quality.



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.



Photo credit: Max Bromley

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## Background Information

### Site History

Below Brighton, South Ore Creek offers a beautiful and slow kayak trip through unspoiled natural area with few houses in sight. Some areas have thick cattails, but it is navigable if the water is above average height.

Water flowing to this site starts in Maxfield Lake, and flows through a series of lakes, the last being Brighton Lake. Our three study sites are just downstream of Brighton Lake, further downstream at Bauer Road, and this one. When the Road Commission replaced the bridge over the Creek here in 2001, our monitoring results persuaded them to install a more expensive free-span bridge to better protect the Creek since it was in such good condition.

### How is the Creek affected by land use here?

This site receives water from 34 square miles of land, mostly residential and urban (Brighton).

According to data from 2000, nearly half of the South Ore Creek watershed is developed while only one-tenth is used for agriculture. At that time, 16% of the land was covered by impervious surface.

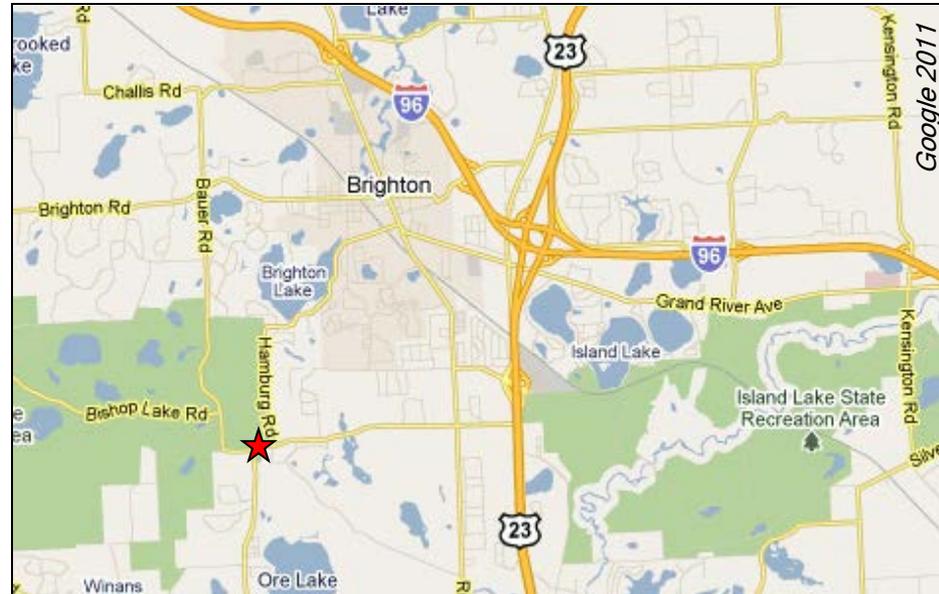
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 10% Agriculture, 45% Urban, 8% Forest, 17% Open, 20% Wetland.

### What You Can Do

Help us improve S. 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](http://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:

- |  |   |
|--|---|
| *Brachycentridae — humpleless case maker caddisfly | Elmidae — riffle beetle                       |
| *Taeniopterygidae — broad-back winter stonefly     | Hydrophilidae — water scavenger beetle        |
| Baetidae — small minnow mayfly                     | Hydropsychidae — common net-spinner caddisfly |
| Calopterygidae — broad-winged damselfly            | Philopotamidae — finger-net caddisfly         |
| Chironomidae — midge                               | Veliidae — short-legged striders              |
| Coenagrionidae — narrow-winged damselfly           |   |

*\*Sensitive Family*