

# Huron River at Commerce Road

Adopt-a-Stream Site Report, updated January 2012

## Overall Condition: *Fair*

At this site there are an average amount of bugs and none of them are sensitive. The water is clean and warm. The stream banks, streambed, and streamside vegetation provide poor habitat here. Overall the stream has been rated as "fair" due to the combination of the poor habitat and average insect diversity.

### 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.

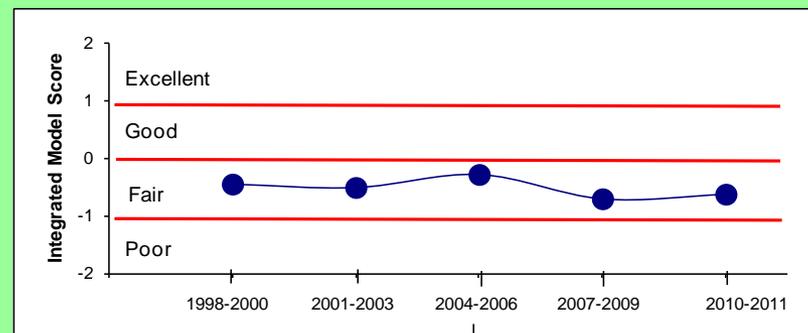
### Monitoring Data

These data come from HRWC volunteers who have monitored this site 29 times, starting in 1997. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Huron River is 25 feet wide and shallow (less than a foot). In 2008 we found poor habitat here with large areas of bare banks and the rocks in the swift water (riffles) were somewhat clogged with silt. It has clean water that gets warm (seldom over 80°F) in the summer.

There is only fair diversity of bugs here for such a large stream. In the spring we typically find 15 or 16 different families and one is a sensitive family that requires a good quality stream. In the fall an average of 9 families are typically found, but none are sensitive.

Stoneflies are very sensitive insects that are only found in clean water. The stoneflies at this site are not the two kinds of "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.

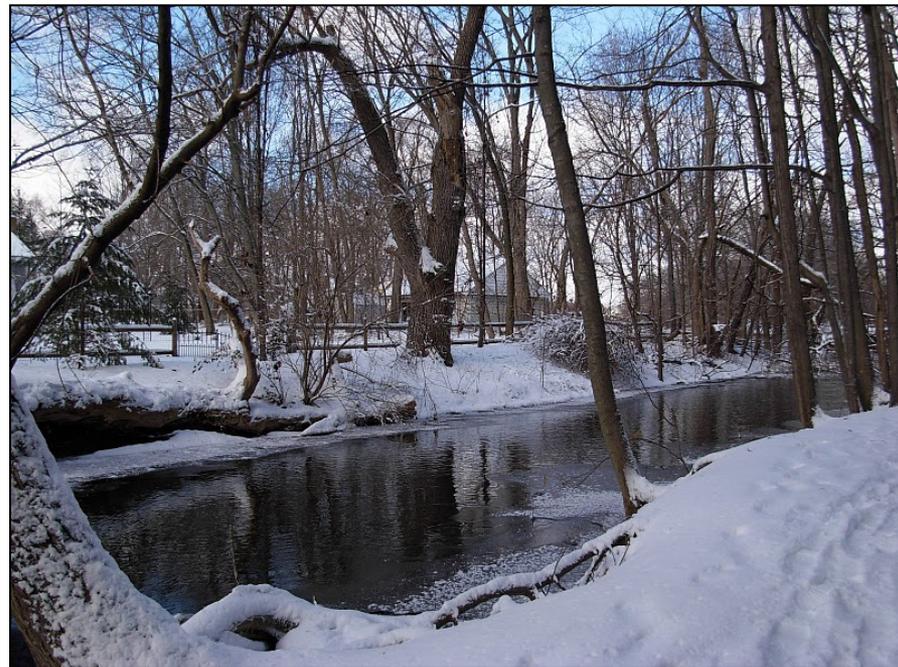


Photo credit: Mary Baciz

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## Background Information

**Site History**

The Huron River drains 908 square miles of land. This is an area the size of about 581,000 football fields. Where you are located, the Huron River is still close to its headwaters and drains 48 square miles, a mere 31,000 football fields! This area of the watershed has numerous lakes and several large state recreation areas, like Pontiac Lake Rec Area, Proud Lake Rec Area, and Highland Rec Area. This makes for beautiful surroundings in the southwest portion of Oakland County.

However, at this site there is still enough urbanized land to compromise the quality of the river. With impervious surface covering 16% of the land draining to this point, rain events can cause unstable water flows which damage the insect community. In addition, this area is full of dams and impoundments, which negatively affect the quality of water and the stream habitat.

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

The area of land draining to this site is large, receiving water from 48 square miles of land, mostly residential.

According to data from 2000, two-fifths of the Huron River watershed is developed while less than one-tenth is used for agriculture. At that time, 16% of the land was covered by impervious surface.

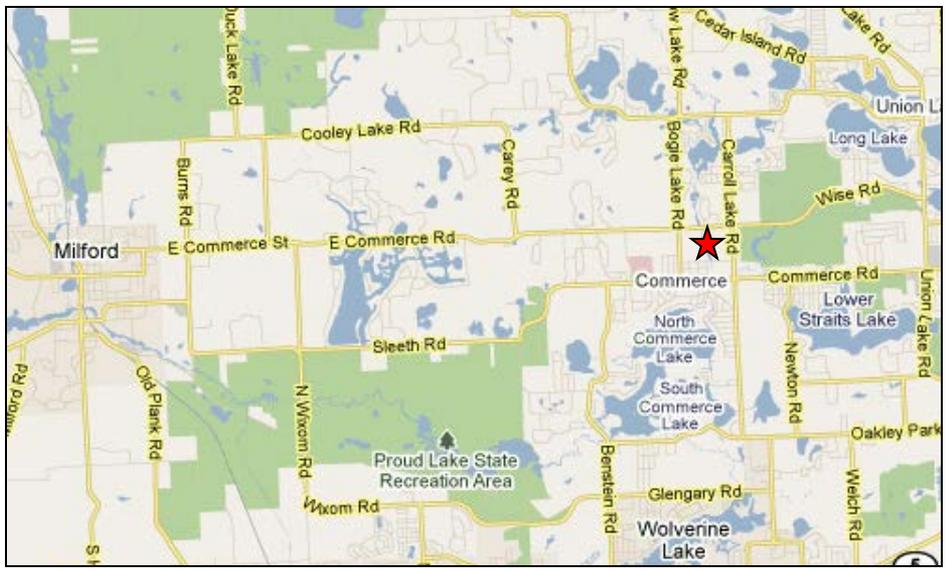
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 7% Agriculture, 39% Urban, 12% Forest, 15% Open, 27% Wetland.*

**What You Can Do**

Help us improve Huron River! 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:**
- \*Perlodidae — Perlodid stonefly
  - Aeshnidae — damner dragonfly
  - Baetidae — small minnow mayfly
  - Caenidae — square-gilled mayfly
  - Chironomidae — midge
  - Coenagrionidae — narrow-winged damselfly
  - Elmidae — riffle beetle
  - Heptageniidae — flathead mayfly
  - Hydropsychidae — common net-spinner caddisfly
  - Limnephilidae — northern caddisfly
  - Philopotamidae — finger-net caddisfly
  - Polycentropodidae — spotted head caddisfly
  - Psephenidae — water penny
  - Sialidae — alderfly
  - Simuliidae — black fly
- \*Sensitive Family*