

# Huron River at Cross Street

Adopt-a-Stream Site Report, updated January 2012

## Overall Condition: *Fair*

At this site there is a modest variety of bugs but sensitive families are only found occasionally. Overall the stream has fair quality since, while it does support aquatic life, it lacks the diversity a river this large should have, such as the diversity at the next site upstream at Island Park in Ann Arbor. The main problem of this site is that the habitat is very similar throughout- flat riffles, the water is the same depth, little vegetation or overhanging banks. The actual quality of the water seems fine. The recent score increase reflects slightly better insect collections than have been seen in the past 10 years.

### Measuring Stream Quality

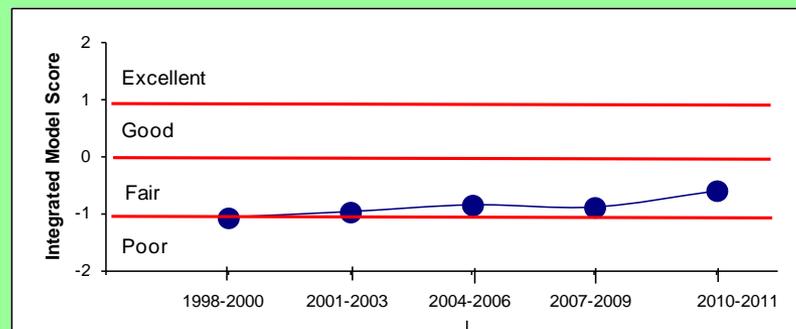
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream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

### Monitoring Data

This data comes from HRWC volunteers who have monitored this site 30 times, starting in 1997. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This large site on Huron River is 104 feet wide and shallow (about 1½ feet) with an occasional 5-foot deep pool. In 2009 we found average habitat here with a uniformly rocky bottom and the rocks in the swift water (riffles) were somewhat clogged with silt although the banks were nice and stable. It has clean but warm water (often reaching 83°F in the summer). Although the overall watershed impervious cover is low (11%), the immediate surroundings include so many areas of urban runoff that we expect the creek to be in worse than it is.

There is a less than average diversity of bugs here for such a river of this size. In the spring and fall we typically find 12 different families with only occasional findings of a "sensitive" insect family. 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 when most kinds of pollution occur. Since winter stoneflies are found at this site, problems in this site seem to be seasonal, occurring during the warm parts of the year and there does not seem to be a year-round pollution problem here.



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: Katie Baker

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## Background Information

### Site History

Frog Island Park is a popular park in Ypsilanti next to the Huron River and adjacent to historic Depot Town and Riverside Park. In the summertime it is host to many events including the Michigan Beer Festival and the Ypsilanti Heritage Festival. The watershed of this particular location is huge, including all of the land draining to the Huron River to this point, so we look at land uses nearby to find the likely impacts on the quality of this site.

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

The area of land draining to this site on Huron River is huge, receiving water from 807 square miles of land. Most of the land near this site is developed.

According to data from 2000, one-third of the Huron River watershed to this site is developed while one-quarter is used for agriculture. At that time, 11% 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: 24% Agriculture, 32% Urban, 11% Forest, 14% Open, 19% Wetland.

### What You Can Do

Help us improve the 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:

- |  |   |
|--|---|
| *Capniidae — slender winter stonefly           | Heptageniidae — flathead mayfly               |
| *Taeniopterygidae — broad-back winter stonefly | Hydropsychidae — common net-spinner caddisfly |
| Baetidae — small minnow mayfly                 | Limnephilidae — northern caddisfly            |
| Calopterygidae — broad-winged damselfly        | Philopotamidae — finger-net caddisfly         |
| Chironomidae — midge                           | Polycentropodidae — spotted head              |
| Coenagrionidae — narrow-winged damselfly       | Psephenidae — water penny                     |
| Curculionidae — weevil                         | Simuliidae — black fly                        |
| Elmidae — riffle beetle (larvae + adults)      |   |

*\*Sensitive Family*