

# Honey Creek at Jackson Road

*Adopt-a-Stream Site Report, updated January 2012*

## Overall Condition: *Fair*

At this site there is a lower than average diversity of bugs and almost none of them are sensitive. Occasionally we find a sensitive family in the spring or the winter. The water always has a high concentration of unknown pollutants. The stream banks, streambed, and streamside vegetation are in fair condition. Given the combination of the average habitat and mediocre insect community, this site has an overall rating of low-end "fair".

### 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.

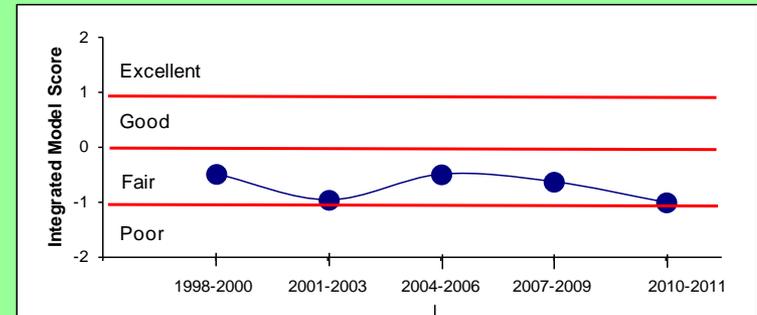
### Monitoring Data

These data come from HRWC volunteers who have monitored this site 34 times, starting in 1993. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Honey Creek is 10 feet wide and shallow (less than a foot). In 2010 we found disappointing habitat here with a somewhat mucky bottom and the rocks in the swift water (riffles) were somewhat clogged with sand and silt although the banks were pretty stable. It has cool water (seldom over 73°F) that contains unknown pollutants. (determined through conductivity measurements).

There is a below average diversity of bugs here for a stream of this size. In the spring and fall we typically find 9 insect families, and rarely find a sensitive insect. Sensitive insects have been found, but this is unusual.

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. Stoneflies are rarely found at this site, further indicating a water quality problem.



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

There are two Honey Creeks in the Huron River Watershed. One is in Livingston County and is a very healthy stream. The Honey Creek in Washtenaw County (this site) is in an more urbanized setting and is more impacted.

In the mid-1980's, dioxane, a carcinogen, was found in lakes and wells around the Honey Creek watershed. Gelman Sciences had been discharging their chemical wastewater into unlined lagoons and spraying it on lawns around the plant. Pall Life Science, which bought Gelman in 1997, has since been cleaning the dioxane from the groundwater. The Michigan Dept. of Environmental Quality has allowed Pall to discharge the wastewater from its cleanup process into Honey Creek.

However, this site is upstream of the dioxane contamination in the Honey Creek watershed. It is impacted by the residential and urban developments in its watershed and not by the chemical.

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

The area of land draining to this site is small, receiving water from only 6 square miles of land, mostly homes, stores and other urban development.

This is a highly developed area in the Huron watershed, according to data from 2000. Less than one-quarter of the Honey Creek watershed is in agriculture while nearly half is developed. At that time, 15% of the land was covered by impervious surface.

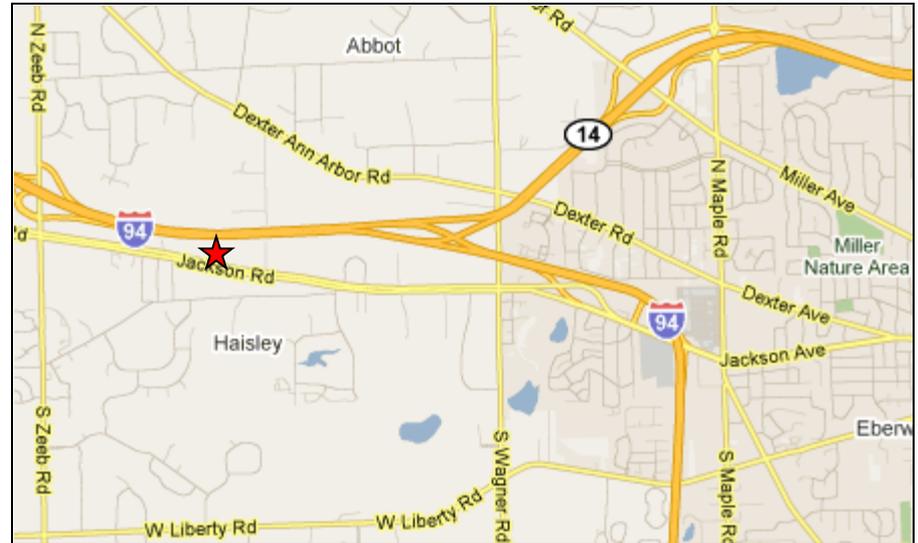
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 22% Agriculture, 43% Urban, 11% Forest, 18% Open, 6% Wetland.*

### What You Can Do

Help us improve Honey 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.



Google 2011

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

- Calopterygidae — broad-winged damselfly
- Chironomidae — midge
- Elmidae — riffle beetle
- Hydropsychidae — common net-spinner caddisfly
- Philopotamidae — finger-net caddisfly
- Simuliidae — black fly
- Tipulidae — crane fly
- Uenoidae — Uenoid caddisfly