

# Honey Creek at Darwin Road

Adopt-a-Stream Site Report, updated January 2012

## Overall Condition: **Good**

At this site there are many kinds of bugs and there is a higher number of sensitive insects than are found at most of our study sites. The water is clean but can get warm in the summer. The stream banks are healthy here streambed has a lot of sand, which holds the overall score back a bit. However, the overall site rating for this site is "good", and very close to "excellent", since the stream supports such a rich variety of aquatic life.

### 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.

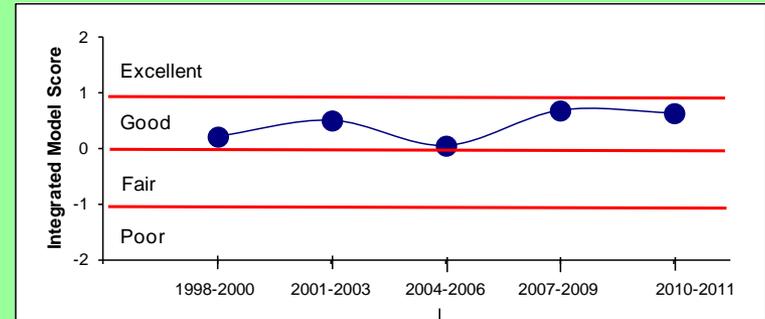
### Monitoring Data

These data come from HRWC volunteers who have monitored this site 34 times, starting in 1996. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Honey Creek is 17 feet wide and shallow (less than a foot). In 2007 we found average habitat here with some of the rocks in the swift water (riffles) clogged with sand although the banks were nice and stable. It has clean water that gets pretty warm (often 78°F) in the summer. The watershed already has 10% of its surface impervious, causing an amount of urban runoff that is not good for the creek.

There is good diversity of bugs here. In the spring we typically find 11 different families and 4 or 5 are sensitive families that require a good quality stream. In the fall an average of 17 families are typically found, with 3 sensitive ones. These are very high numbers of sensitive families, compared to most of our sampling sites.

Stoneflies are very sensitive insects that are only found in clean water. Both kinds of "winter stoneflies" that grow only in winter and are dormant the rest of the year live at this site.



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: HRWC

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## Background Information

### Site History

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

This site is near the mouth of Honey Creek where, one mile further on, it empties into Portage Lake. About a mile upstream from here, the creek flows through the town of Pinckney.

William Kirtland, founder of the village, bought land surrounding the creek from first settler, Solomon Peterson, in 1835. In 1836 Kirtland built a flour mill and a dam to power the mill. The mill continued to operate until 1918. In 1920 Henry Ford, of the Motor Company, purchased the mill and waterway to add to his collection of mills and streams. For reasons not clearly known, he razed the mill in 1920 instead of restoring it as he did other properties in southeast Michigan.

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

While not large, the area of land draining to this site is larger than many of our sites, receiving water from 27 square miles of land, about one-fourth in farms and mostly rural, with only 17% developed, according to data from 2000. At that time, 10% of the land was covered in 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: 23% Agriculture, 17% Urban, 15% Forest, 22% Open, 22% 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.



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

*Brachycentridae — humplless case maker caddisfly	Elmidae — riffle beetle
*Capniidae — slender winter stonefly	Helicopsychidae — snail-case caddisfly
*Gomphidae — clubtail dragonfly	Heptageniidae — flathead mayfly
*Isonychiidae — brush-legged mayfly	Hydropsychidae — common net-spinner caddisfly
*Taeniopterygidae — broad-back winter stonefly	Philopotamidae — finger-net caddisfly
Aeshnidae — darner dragonfly	Psephenidae — water penny
Baetidae — small minnow mayfly	Simuliidae — black fly
Calopterygidae — broad-winged damselfly	Tipulidae — crane fly
Chironomidae — midge	
*Sensitive Family	