

# Honey Creek at Pratt Road

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

## Overall Condition: **Poor**

At this site there are very few kinds of bugs and only one that is sensitive, which is seen only in the spring. Winter stoneflies do not survive here. The water remains cool in the summer but it has a high concentration of unknown pollutants. The streamside vegetation is healthy but the streambed is extremely mucky and the stream usually smells bad. This is the only site HRWC monitors that has a streambed of 100% muck.

### Measuring Stream Quality

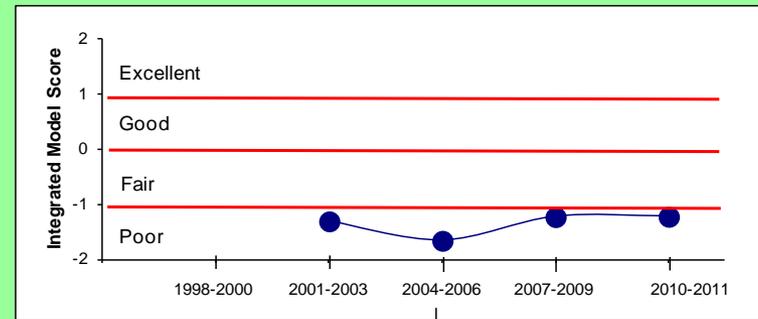
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream 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 32 times, starting in 1993. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Honey Creek is 19 feet wide and shallow (about a foot deep). In 2010 we found disappointing habitat here with a very mucky bottom obliterating habitat spaces between the rocks, even in the fast flowing riffles. The stream banks seemed pretty stable. It has cool water (seldom over 70°F) that smells bad and is chronically contaminated with unknown pollutants (as determined by conductivity tests). The upstream watershed was already 15% impervious in 2000 and this area has been developing.

There is poor diversity of bugs here. In the spring we typically find 8 different families and only one is a sensitive family that requires a good quality stream. In the fall an average of 11 families are typically found, with no 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. Winter stoneflies have not been found at this site in the past 5 years, although they were usually here before that.



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: Chris Benedict

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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. Honey Creek flows into the Huron River upstream of the Barton impoundment, which is the main source of drinking water for Ann Arbor. However, the city continues to test for dioxane and reports that the water source is safe.

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

The area of land draining to this site receives water from 19 square miles of land, mostly farms and urban development.

This is an area of rapid residential development, according to data from 2000. One-third of the Honey Creek watershed is developed while another third is used for agriculture. At that time, 15% of the land was covered by impervious surface.

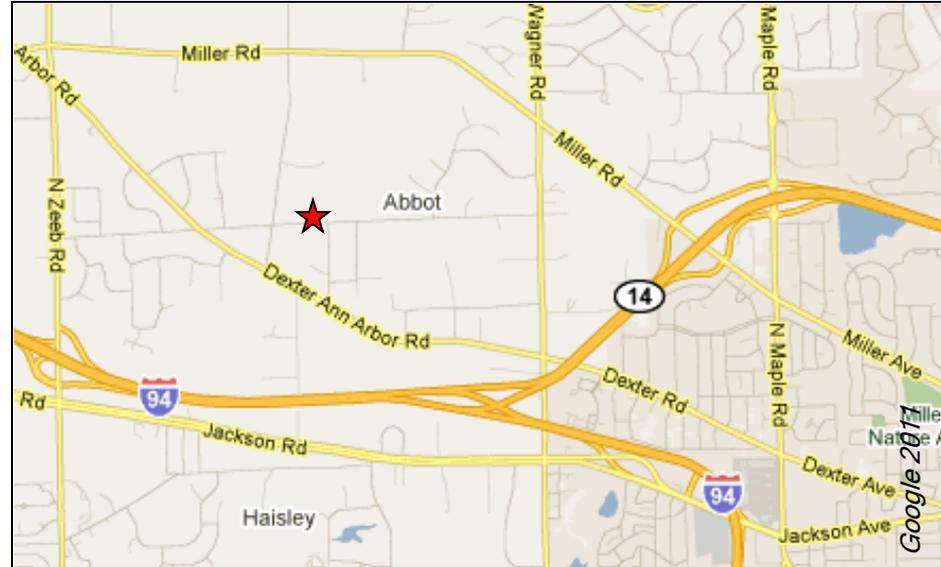
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 36% Agriculture, 35% Urban, 8% Forest, 15% Open, 9% 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:

*Perlodidae — Perlodid stonefly	Limnephilidae — northern caddisfly
Baetidae — small minnow mayfly	Simuliidae — black fly
Calopterygidae — broad-winged damselfly	Tipulidae — crane fly
Corixidae — water boatman	Veliidae — short-legged striders
Culicidae — mosquito	
Elmidae — riffle beetle	*Sensitive Family
Hydrophilidae — water scavenger beetle	
Hydropsychidae — common net-spinner caddisfly	