

Woods Creek at Martinsville Road

Adopt-a-Stream Site Report, updated January 2012

Overall Condition: *Fair*

At this site there are an average amount of bugs with a few sensitive families. The streambed is silty but the banks are stable. Streams in the lower Huron watershed tend to have more silt than upper watershed rivers since these streams are less steep than upper Huron streams. Also, the underlying geology is old lake plain, which is composed of silt and sand.

Measuring Stream Quality

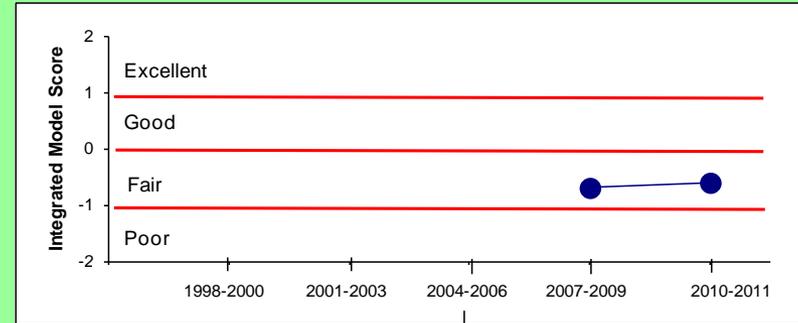
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream 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 7 times, starting in 2008. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Woods Creek is five feet wide and shallow (less than half a foot). In 2008 we found poor habitat here with a mucky bottom and the rocks in the swift water (riffles) were clogged with silt although the banks were stable. It has clean, cool water (seldom over 71°F).

There is a fair diversity of bugs here for such a small stream. In the spring we typically find 13 different families and one or two are sensitive families that require a good quality stream. In the fall an average of 13 families are typically found, again with one or two sensitive ones. Stoneflies are very sensitive insects that are only found in clean water. In the winter we have never found the two kinds of "winter stoneflies" that grow only in winter and are dormant the rest of the year. This suggests that the site lacks stonefly habitat or there might be a pollution problem here since streams that are not polluted should have sensitive families in the winter.



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

Wood Creek at Martinsville Road

Background Information

Site History

This stream was originally named after a family of early settlers. The first township meeting was held near Woods Creek at the home of Matthew Wood in 1827. In more recent times, the name was changed to Griggs Drain to reflect its designation as a County Drain. Members of Woods Creek Friends, a local citizens' watershed advocacy group, worked with the Wayne Co. Dept. of Environment to return the original name, Woods Creek, in 2008.

This site is located just west of Martinsville Rd; it has been monitored since 2008. The Woods Creek watershed lies in the southern third of Van Buren Twp in Wayne Co, and includes a total of 27 miles of streams.

This reach of the stream has a mud bottom that collects boots; the lack of rocks, riffles, and woody debris limits the variety of critters found compared to sites having more diverse habitats. Still, we usually find damselfly and dragonfly nymphs in the overhanging vegetation in the stream along its edges. At this point the stream has not yet started to cut its way down to the elevation of the Huron River, into which it discharges.

How is the Creek affected by land use here?

The area of land draining to this site is small, receiving water from only seven square miles of land.

This sub-watershed is a mix of farms and residential development, according to data from 2000. One-third of the Woods Creek watershed is developed while more than half is used for agriculture. At that time, 10% of the land was covered by impervious surface.

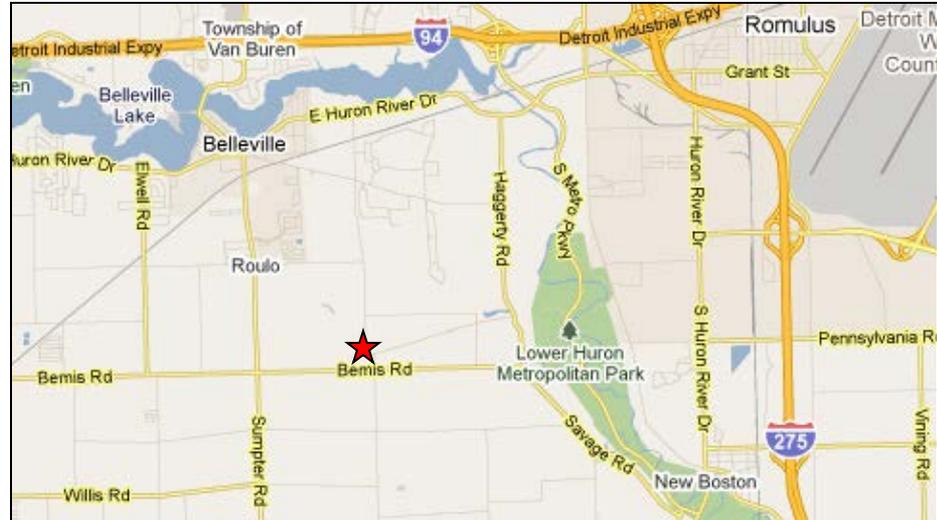
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 54% Agriculture, 32% Urban, 3% Forest, 12% Open, 0% Wetland

What You Can Do

Help us improve Woods 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 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:

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| *Leptophlebiidae — pronggill mayfly | Hydrophilidae — water scavenger beetle |
| *Perlodidae — Perlodid stonefly | Hydropsychidae — common net-spinner caddisfly |
| Aeshnidae — damner dragonfly | Limnephilidae — northern caddisfly |
| Baetidae — small minnow mayfly | Notonectidae — back-swimmers |
| Belostomatidae — giant water bug | Phryganeidae — giant case-maker caddisfly |
| Calopterygidae — broad-winged damselfly | Sialidae — alderfly |
| Chironomidae — midge | Simuliidae — black fly |
| Corixidae — water boatman | Siphonuridae — primitive minnow mayfly |
| Dytiscidae — predacious diving beetle | Veliidae — short-legged striders |
| Elmidae — riffle beetle | |
| Gerridae — water strider | |
| Haliplidae — crawling beetle | <i>*Sensitive Family</i> |