

# Davis Creek at Pontiac Trail

Adopt-a-Stream Site Report, updated January 2012

## Overall Condition: *Fair*

At this site there are several kinds of bugs with a couple of sensitive families. The stream banks, streambed, and streamside vegetation are healthy here although the riffles are somewhat clogged with silt. Overall the stream has fair quality— it is only slightly worse than an average stream of this size.

### 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.

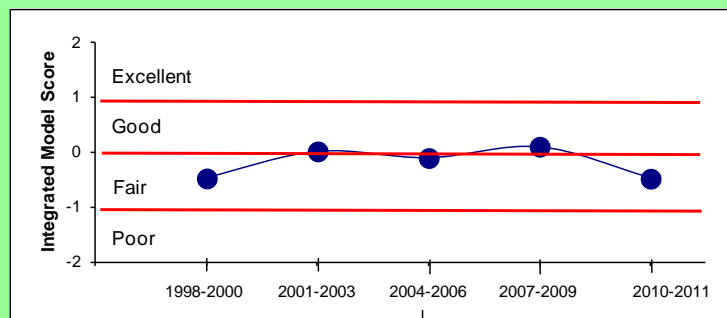
### Monitoring Data

These data come from HRWC volunteers who have monitored this site 35 times, starting in 1994. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Davis Creek is 18 feet wide and shallow (less than a foot). In 2008 we found average habitat here with stable banks although the rocks in the swift water (riffles) were somewhat clogged with silt. It has clean, cool water (seldom over 72°F).

There is moderate diversity of bugs here for a stream of this size. In the spring we typically find 12 or 13 different families and one or two are sensitive families that require a good quality stream. In the fall an average of 14 families are typically found, with two 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. Stoneflies are only rarely found at this site, which indicates a water quality problem, possibly caused by residual upstream pollution.



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

# Davis Creek at Pontiac Trail

## Background Information

### Site History

Davis Creek is one of only three Huron River tributaries that have a portion designated by the State as a Natural River Zone. This designation prevents bank erosion and retains the scenic appearance of the stream banks by restricting the location of new buildings and the clearing of trees and other vegetation. Due to the efforts of Green Oak Township, the length of the stream that receives Natural River Protection was greatly increased from the original designation.

The land draining to this site includes all of the watershed for the site at 11-Mile Road and is only one part of the larger site at Doane Road.

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

The area of land draining to this site is small, receiving water from 18 square miles of land, mostly residential with a few farms.

This is a sprawling rural-residential area, according to data from 2000. Two-fifths of this sites watershed is developed while one-quarter is used for agriculture. At that time, 13% of the land was covered by impervious surface.

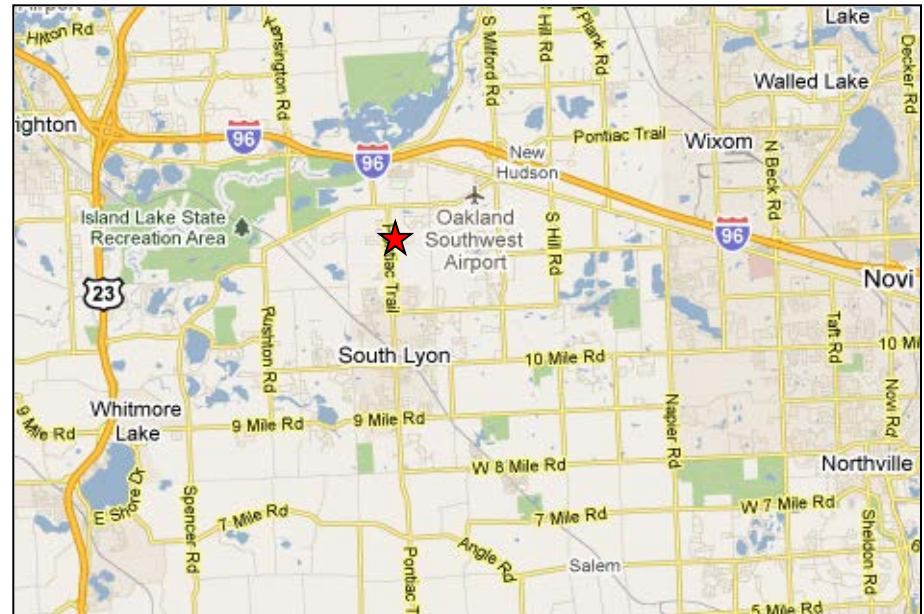
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 28% Agriculture, 42% Urban, 4% Forest, 12% Open, 15% Wetland.*

### What You Can Do

Help us improve Davis 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:

- |   |   |
|---|---|
| *Leptophlebiidae — pronggill mayfly     | Hydropsychidae — common net-spinner caddisfly |
| Baetidae — small minnow mayfly          | Notonectidae — back-swimmers                  |
| Belostomatidae — giant water bug        | Polycentropodidae — spotted head caddisfly    |
| Calopterygidae — broad-winged damselfly | Simuliidae — black fly                        |
| Chironomidae — midge                    | Veliidae — short-legged striders              |
| Heptageniidae — flathead mayfly         |   |

*\*Sensitive Family*