

# Traver Creek at Dhu Varren

Adopt-a-Stream Site Report, updated January 2012

## Overall Condition: **Good**

At this site there are many kinds of bugs but few of them are sensitive. The water is clean and cool. The stream banks, bed and streamside vegetation are in very good condition. Overall the stream has good quality. If sensitive insects, including winter stoneflies, were found here more consistently, this stream would be upgraded to "excellent".

### 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.

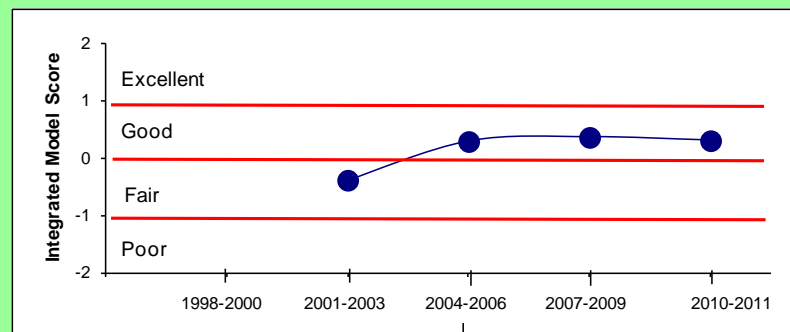
### Monitoring Data

These data come from HRWC volunteers who have monitored this site 40 times, starting in 1992. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Traver Creek is almost nine feet wide and shallow (less than half a foot). In 2009 we found very good habitat here with a stable bottom, the rocks in the swift water (riffles) were somewhat clogged with silt although the banks were nice and stable. It has clean, cool water (seldom over 75°F).

There is good diversity of bugs here for such a small stream. In the spring we typically find 15 different families with one sensitive family. In the fall an average of twelve 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. Stoneflies are often but not always found at this site, which indicates occasional water quality problems.



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

# Traver Creek at Dhu Varren Road

## Background Information

### Site History

Traver Creek flows through the northern Ann Arbor area, starting in the agricultural lands north of the US-23 M-14 interchange, flowing south near several residential sub-divisions, underneath Plymouth Road, and through the Island Drive apartment complex. It joins the Huron River a little upstream of Island Park.

Like many urban streams, Traver Creek suffers from too much impervious surface in its watershed. Fortunately, the problems caused by this (see below) do not start accumulating until lower in Traver Creek's watershed. At the Dhu Varren site, collectors are still able to find a diverse insect community, although the lack of sensitive insects is troubling and may be the result of so much agricultural land (possibly excess fertilizer runoff) in the watershed.

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

The area of land draining to this site is small, receiving water from only 4 square miles of land, mostly farms.

Although situated on the edge of Ann Arbor, this is still a rural area in the Huron watershed, according to data from 2000. Only one-fifth of the Traver Creek watershed is developed while nearly two-thirds is used for agriculture. 8% of the land is covered by impervious surface.

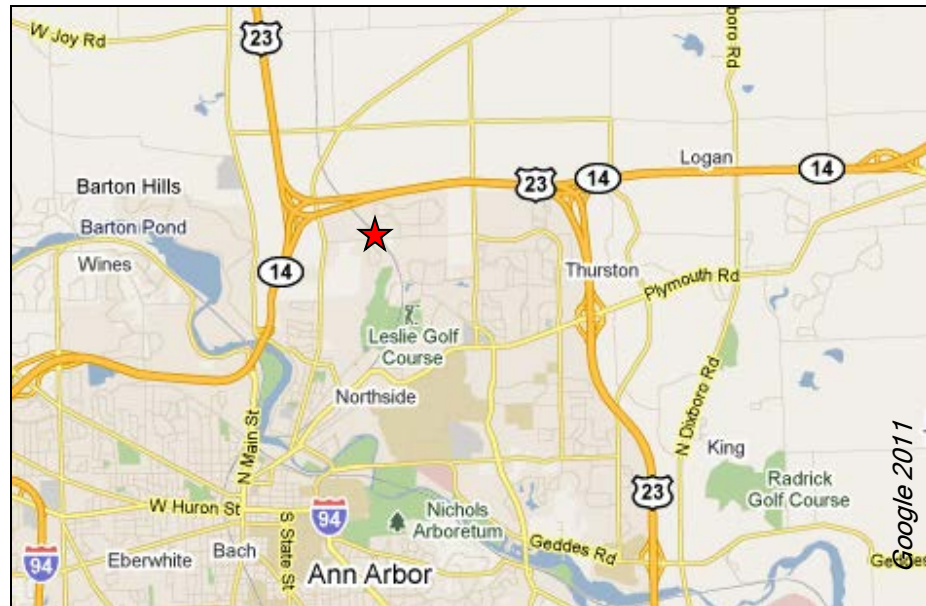
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 60% Agriculture, 19% Urban, 9% Forest, 5% Open, 7% Wetland.*

### What You Can Do

Help us improve Traver 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:

|   |                                       |
|---|---------------------------------------|
| *Capniidae — slender winter stonefly          | Philopotamidae — finger-net caddisfly |
| Aeshnidae — damner dragonfly                  | Simuliidae — black fly                |
| Baetidae — small minnow mayfly                | Tipulidae — crane fly                 |
| Calopterygidae — broad-winged damselfly       | Veliidae — short-legged striders      |
| Chironomidae — midge                          |                                       |
| Elmidae — riffle beetle                       |                                       |
| Heptageniidae — flathead mayfly               | *Sensitive Family                     |
| Hydropsychidae — common net-spinner caddisfly |                                       |