

Traver Creek at Broadway Ave

Adopt-a-Stream Site Report, updated January 2012

Overall Condition: **Poor**

At this site there are few kinds of bugs and the only sensitive insect families that live here are found in the winter. However, the stream banks, streambed, and streamside vegetation are moderately healthy. While rated "poor", the stream is in better shape than the more urbanized Ann Arbor creeks (Malletts, Swift Run, and Millers).

Measuring Stream Quality

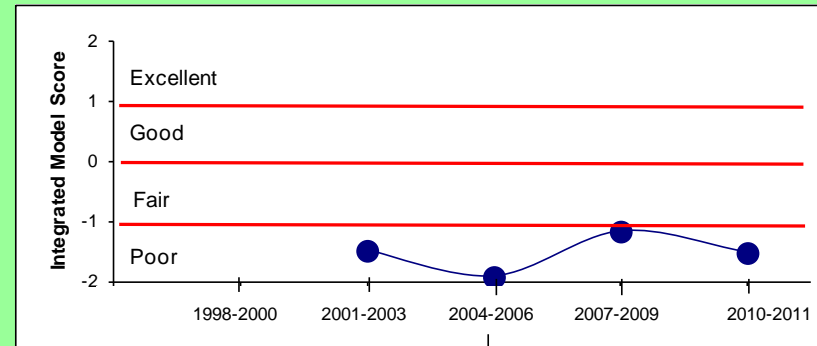
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream 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 1992. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Traver Creek is 14 feet wide and shallow (less than a foot) with an occasional 1½-foot deep pool. In 2010 we found average habitat here with a firm bottom and clean rocks in the swift water (riffles) although the banks were bare in many places, making them unstable. It has cold water (seldom over 71°F) that has a high concentration of unknown pollutants. With storm water runoff from areas of impervious surface that cover 14% of the watershed, the creek is in poor shape.

There is poor diversity of bugs here. In the spring we typically find only six different families and none are sensitive families that require a good quality stream. In the fall an average of ten families are typically found, again 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 occasionally found at this site. The presence of sensitive insects in the winter but no sensitive insects during the rest of the year indicates a warm-weather water quality problem, such as excessive fertilizer running into the stream upstream.



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 Broadway

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, alongside Plymouth Road, and through the Island Drive apartment complex. It joins the Huron River just upstream of Island Park.

Like many urban streams, Traver Creek suffers from too much impervious surface in its watershed. As a result, during rain events water quickly enters into the stream and can cause high flow events. These surging flows degrade the insect community.

How is the Creek affected by land use here?

The area of land draining to this site is small, receiving water from only 7 square miles of land, mostly urban (nearby) and farms (much further upstream).

According to data from 2000, two-fifths of the Traver Creek watershed is developed and an equal amount is used for agriculture. At that time, 14% of the land was covered by impervious surface.

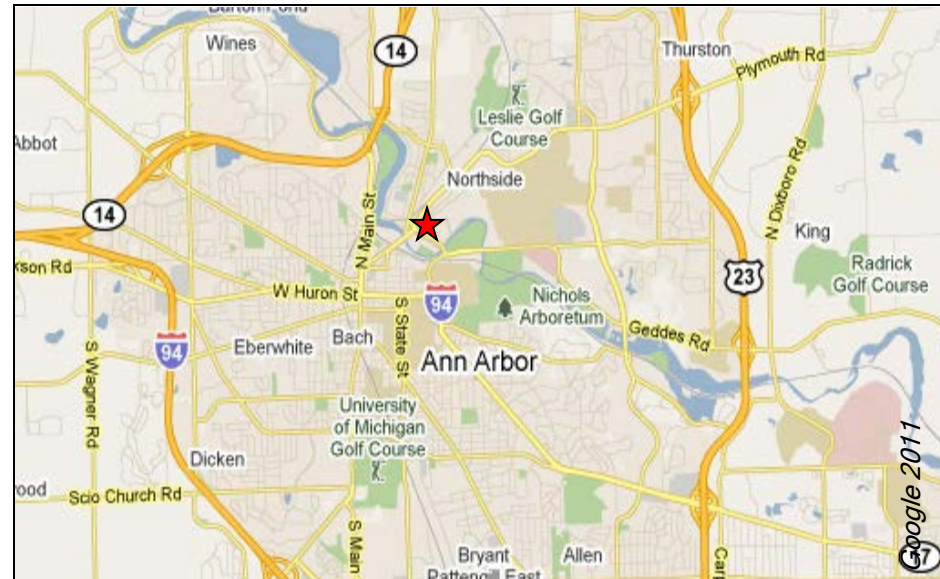
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 39% Agriculture, 39% Urban, 9% Forest, 7% Open, 6% 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 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

Caenidae — square gilled mayfly

Calopterygidae — broad-winged damselfly

Chironomidae — midge

Elmidae — riffle beetle

Heptageniidae — flathead mayfly

Hydropsychidae — common net-spinner caddisfly

Simuliidae — black fly

Veliidae — short-legged striders

**Sensitive Family*