

# Malletts Creek at Scheffler Park

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

## Overall Condition: **Poor**

At this site there are very few kinds of bugs and none of them are sensitive. The water has a high concentration of unknown pollutants (as determined by conductivity measurements). The stream banks, streambed, and streamside vegetation are in fair to poor condition. Overall the stream has been given a “poor” rating because of the mediocre habitat and since it does not support a rich variety of aquatic life.

### Measuring Stream Quality

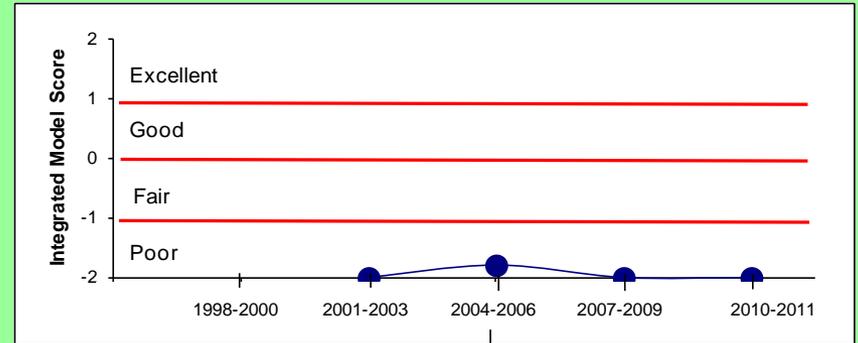
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream 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 30 times, starting in 1992. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Malletts Creek is 22 feet wide and shallow (less than a foot). In 2009 we found poor habitat and streamside vegetation here although the rocks in the swift water (riffles) were clean and the banks were stable. It has warm water (often 75°F in the summer) that has a high concentration of unknown pollutants. The watershed already has paved surface covering 35% of the total area, and extension of impervious surface will further degrade the creek.

There is poor diversity of bugs here for a stream this size. In the spring we typically find only five different families and none are sensitive families that require a good quality stream. In the fall an average of nine 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 have never been found at this site, which further indicates a water quality problem.



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.



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## Background Information

### Site History

Water comes to this site from much of the of land in southern Ann Arbor and Pittsfield Township. Due to the large amount of impervious surface in its watershed, Malletts Creek has a significant number of water quality and hydrology problems. The watershed for this site is full of residential and commercially developed land.

A group of residents formed the Malletts Creek Association with staff support from the Water Resources Commission and HRWC in 1995. They developed a restoration plan (original in 2000 and revised in 2007) that they are helping the City to implement.

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

The area of land draining to this site is small, receiving water from only 11 square miles of land, nearly all developed.

This is one of the most urban areas in the Huron watershed, according to data from 2000. Most of the Malletts Creek watershed (85%) is developed while only 3% is used for agriculture. At that time, 35% of the land was covered by impervious surface.

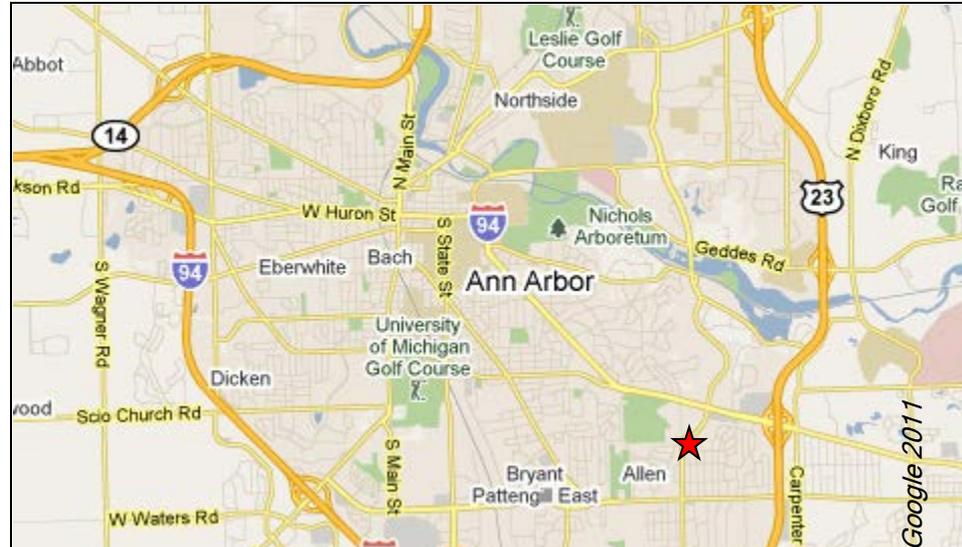
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 3% Agriculture, 85% Urban, 2% Forest, 8% Open, 1% Wetland.*

### What You Can Do

Help us improve Malletts 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:

- Baetidae — small minnow mayfly
- Calopterygidae — broad-winged damselfly
- Chironomidae — midge
- Elmidae — riffle beetle
- Gerridae — water strider
- Hydropsychidae — common net-spinner caddisfly
- Simuliidae — black fly
- Veliidae — short-legged striders