

Fleming Creek at Geddes

Adopt-a-Stream Site Report, updated January 2012

Overall Condition: *Fair*

At this site there are a slightly lower than average amount of bugs for such a stream of this size. This is surprising since the another site HRWC monitors is nearby upstream (having only two square miles less land) and it has much better diversity. The water here is clean and cool and the stream banks, streambed, and streamside vegetation are in good condition. This site has slightly declined over the years, but the decline is not yet statistically significant.

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.

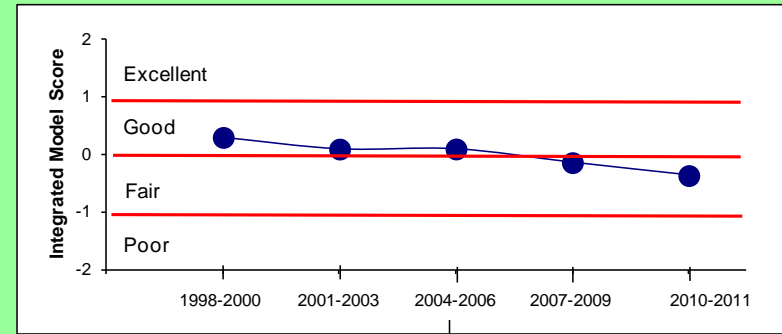
Monitoring Data

These data come from HRWC volunteers who have monitored this site 39 times, starting in 1992. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site near the mouth of Fleming Creek is 27 feet wide and shallow (a little over a foot) here, with at least one 4-foot deep pool. In 2010 we found good habitat here, a sturdy bottom, stable banks and the rocks in the riffles were free of silt. It has clean, cool water (seldom over 71°F) although the creek is probably impacted by urban runoff since the watershed is already 11% impervious. (See next page.)

The diversity of bugs is disappointing. We typically find an average of 10 different families with an occasional sensitive family. This is lower than the other Fleming Creek sites.

In the winter we find one of the two kinds of stoneflies that grow only in winter and are dormant the rest of the year. They can potentially be found here in very high numbers.



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.

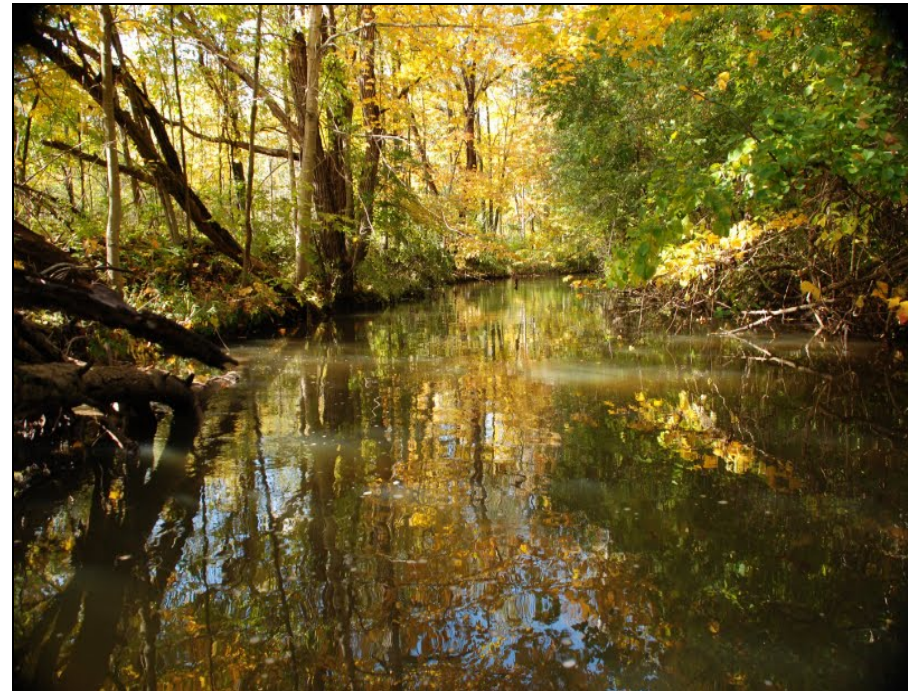


Photo credit: John Lloyd

Fleming Creek at Geddes Road

Background Information

Site History

Fleming Creek is a clear, cool, and powerful stream. It was important source of power for the first European settlement in this area. In 1824, Mr. Fleming built one of the first mills on the Huron River system. It was located on Fleming Creek very close to the current Botanical Gardens. The Botanical Gardens are located about 3 miles upstream from this site.

Parker Mill County Park, on Geddes Road, is a 26 acre tract of mostly wooded land that encompasses the tail end of Fleming Creek, including the mouth of the creek, where it joins the Huron River. Parker Mill County Park is the site of another mill on Fleming Creek. Built in 1873, the Parker Mill is one of the historic treasures in our Washtenaw County area. The mill is operable and contains original milling machinery, left in the mill when the Parker family ceased operation in 1958.

How is the Creek affected by land use here?

This site receives water from 31 square miles of land that is a mix of residential development and farms.

The few remaining wetlands are protected locally in most of the Fleming Creek watershed. According to data from 2000, nearly one-third of this watershed is developed while one-fourth of the land is used for agriculture. At that time, 11% of the land was covered by impervious surface.

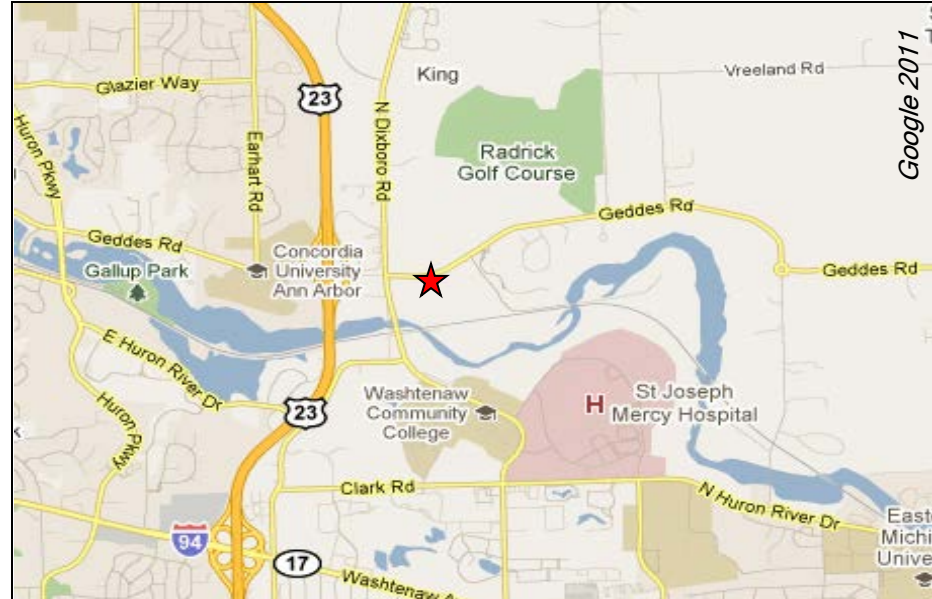
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 23% Agriculture, 31% Urban, 12% Forest, 26% Open, 8% Wetland.

What You Can Do

Help us improve Fleming 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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| *Athericidae — watersnipe fly | Hydropsychidae — common net-spinner caddisfly |
| *Capniidae — slender winter stonefly | Philopotamidae — finger-net caddisfly |
| Baetidae — small minnow mayfly | Simuliidae — black fly |
| Calopterygidae — broad-winged damselfly | Tabanidae — deer fly, horse fly |
| Chironomidae — midge | Veliidae — short-legged striders |
| Elmidae — riffle beetle | |
| Heptageniidae — flathead mayfly | |

**Sensitive Family*