

## Overall Condition: **Good**

At this site there are many kinds of bugs and some of them are sensitive. The water is clean and cool, and the stream banks, streambed, and streamside vegetation are healthy. The stream is rated as "good", meaning that it is above average when compared to other streams of the size in the Huron River Watershed. This is a beautiful stream at a beautiful location and is a fun place to visit and sample.

### 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.

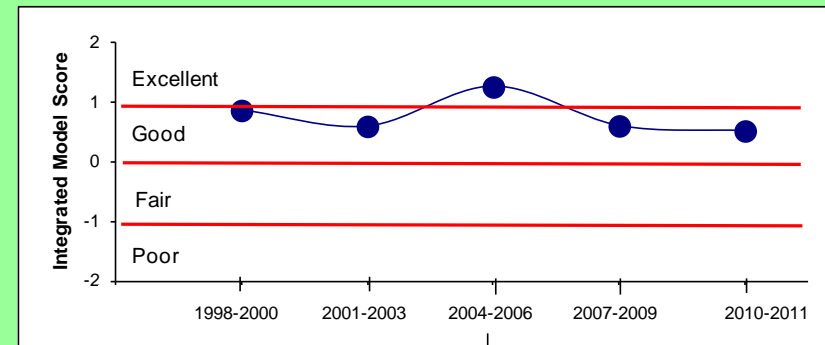
### Monitoring Data

These data come from HRWC volunteers who have monitored this site 33 times, starting in 1996. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Portage Creek is 36 feet wide and deeper (nearly 2 feet) than most of our sites. In 2010 we found excellent habitat here with a stable bottom, stable, vegetated banks and the rocks in the swift water (riffles) were clean. It has clean, cool water (seldom over 75°F) and little urban runoff.

There is a good diversity of bugs here. In the spring we typically find 15 different families and 2 are sensitive families that require a good quality stream. In the fall an average of 14 families are typically found, at this time with 2-3 sensitive ones.

Stoneflies are very sensitive insects that are only found in clean water. Two kinds of stoneflies grow here, one in the winter, another sign of good conditions.



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.

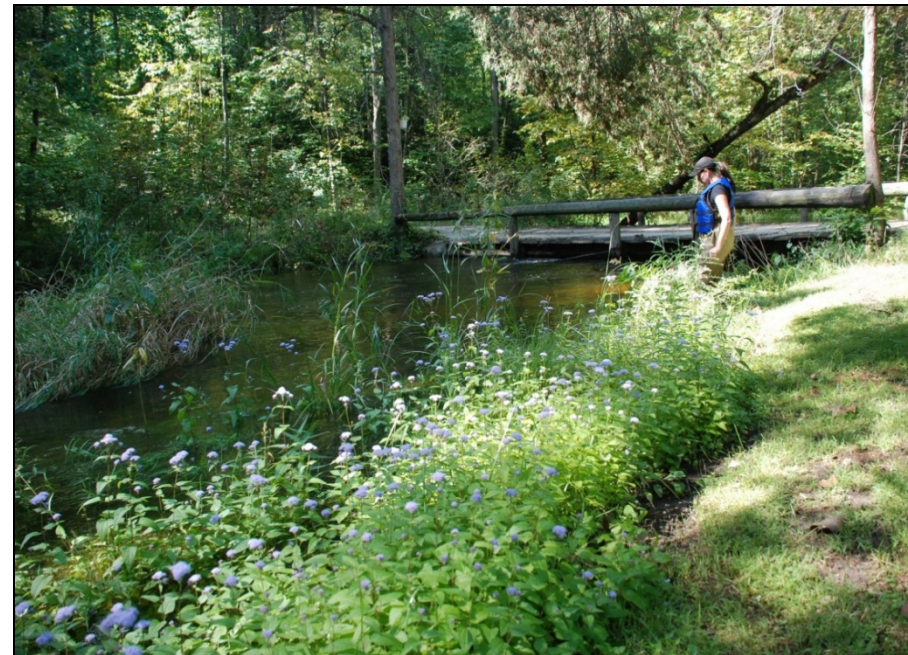


Photo credit: John Lloyd

# Portage Creek at Dexter-Townhall Road

## Background Information

### Site History

The Portage Creek watershed, which is large (80 square miles) remains relatively undeveloped and has many areas with excellent biodiversity. This Creek could retain its good quality if the residents and decision-makers take care of it by implementing the recently-completed watershed management plan.

The different tribes of the Native American Potawatomi lived in what is now southern Michigan and traveled via the Huron River. The tribes would paddle upstream from Lake Erie to a tributary that became known as Portage Creek. It was possible for large canoes to reach within 0.8 miles of a tributary of the Grand River, now called Portage River, that eventually flows into Lake Michigan. Therefore it was possible to cross the entire southern portion of what is now Michigan with only one land portage of less than one mile.

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

The area of land draining to this site is large, receiving water from 79 square miles of land, mostly farms and wetlands.

This is one of the more rural areas in the Huron watershed, according to data from 2000. Only 10% of the Portage Creek watershed is developed while 30% is used for agriculture and 30% is full of lakes and wetlands. Only 5% of the land is covered by impervious surface.

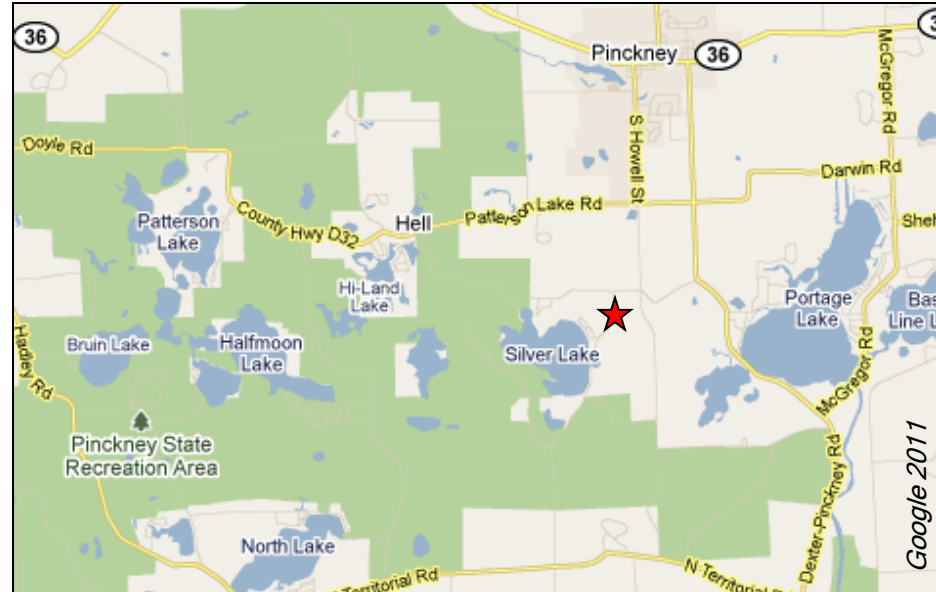
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 30% Agriculture, 10% Urban, 17% Forest, 14% Open, 28% Wetland.*

### What You Can Do

Help us improve Portage 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:

- |  |   |
|--|---|
| *Corydalidae — dobson fly                      | Gyrinidae — whirligig beetle                  |
| *Gomphidae — clubtail dragonfly                | Heptageniidae — flathead mayfly               |
| *Perlidae — Perlid stonefly                    | Hydropsychidae — common net-spinner caddisfly |
| *Taeniopterygidae — broad-back winter stonefly | Philopotamidae — finger-net caddisfly         |
| Baetidae — small minnow mayfly                 | Psephenidae — water penny                     |
| Calopterygidae — broad-winged damselfly        | Simuliidae — black fly                        |
| Chironomidae — midge                           | Uenoidae — Uenoid caddisfly                   |
| Elmidae — riffle beetle                        |   |

\*Sensitive Family