

Chilson Creek at Chilson Road

Adopt-a-Stream Site Report, updated January 2012

Overall Condition: **Good**

In terms of overall water and habitat quality, this site has had good quality since 2001 and in 2010 and 2011 both the diversity and sensitive families improved, raising the ranking to near excellent. There are many kinds of bugs here and several of them are sensitive. The water is clean and cool and the stream banks, streambed, and streamside vegetation are healthy.

Measuring Stream Quality

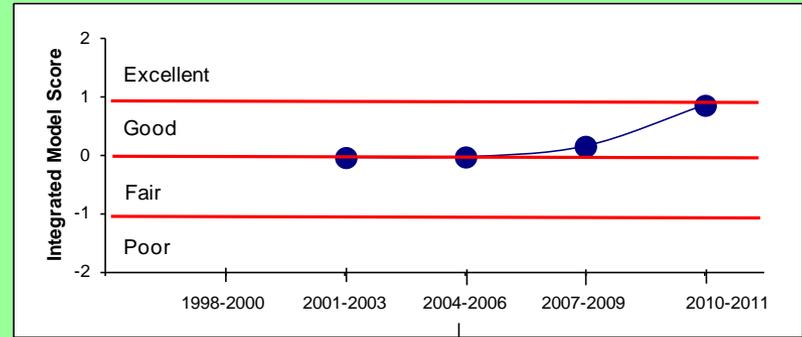
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream 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 35 times, starting in 1995. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This small site on Chilson Creek is only 11 feet wide and shallow (usually only a half-foot and never more than a foot deep, except for one sink hole). In 2011 we found good habitat here, with excellent banks and riparian zone. One potential problem is that 55% of the streambed is composed of sand, which might limit aquatic life. It has clean, cool water (seldom over 74°F).

There is very good diversity of bugs here for such a small stream. In the spring we typically find 14 different families and 3 are sensitive families that require a good quality stream. In the fall an average of 11 families are typically found, with one or two sensitive ones. Finding 3 sensitive families in a single visit indicates that this stream is very healthy. 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. One kind of winter stonefly has always been found here, giving another indication of clean water.



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

Chilson Creek at Chilson Road

Background Information

Site History

Chilson is one of five major Huron River creeks in lower Livingston County; this one is in Hamburg Township. Mink are plentiful in Chilson Creek and the creek also provides great fishing. Chilson meanders south four miles to this site from the headwaters and goes through a major impoundment (constructed in 1961) to get to this site, and then it travels a little over three miles through residential land to Oneida Lake, then to Zukey Lake, then to Strawberry Lake, which is a lake on the Huron River.

How is the Creek affected by land use here?

The area of land draining to this site on Chilson Creek is small, receiving water from only 10 square miles of land, and is a mix of agriculture, residential, forest, wetland, and open land.

According to data from 2000, only one-tenth of the watershed for this site is still used for agriculture while more than one-third is developed. 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.

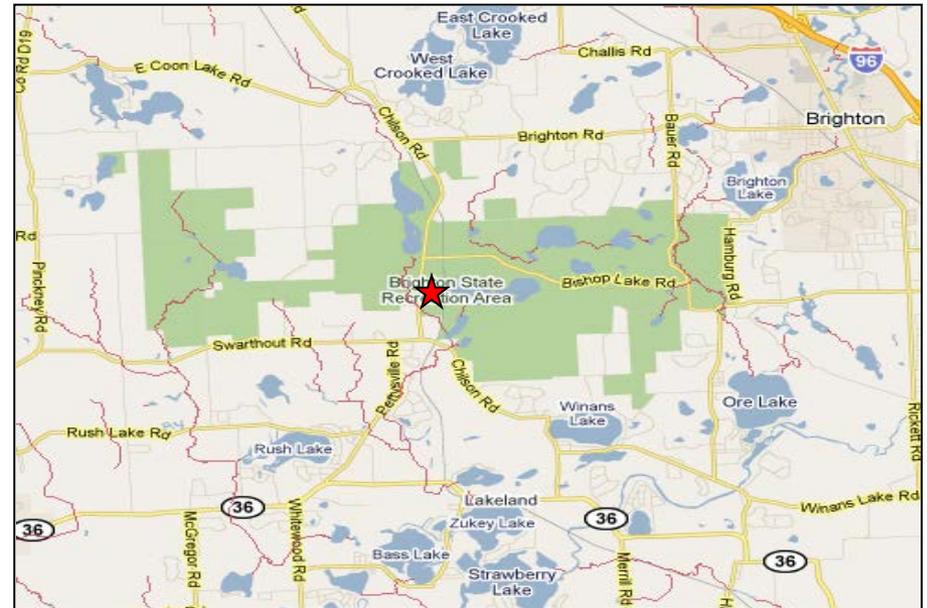
Creeks tend to start degrading once the watershed is more than 8% impervious and become badly degraded by 25%. [The most urbanized Huron River watershed that we study (draining into Millers Creek at Baxter Road) is 51% impervious.]

Watershed land use in 2000: 11% Agriculture, 36% Urban, 10% Forest, 24% Open, 19% Wetland

What You Can Do

Help us improve Chilson Creek! Residents that live in Chilson Creekshed have septic systems, which are often maintained poorly. Leaking septic systems can contribute phosphorus and other pollution out to the watershed. Strive to have septic systems checked every five years!

Go to **www.hrwc.org/take-action** for other ways to give Chilson Creek a helping hand!



Google 2011

Insects found in at least two sampling events from 2009-2011:

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| *Brachycentridae — humplless case makers | Dixidae — dixid midge |
| caddisfly | Elmidae — riffle beetle |
| *Nemouridae — Nemourid broadback | Gerridae — water strider |
| *Perlodidae — Perlodid stonefly | Heptageniidae — flathead mayfly |
| *Taeniopterygidae — broad-back stonefly | Hydropsychidae — common net-spinner caddisfly |
| Aeshnidae — darnar dragonfly | Limnephilidae — northern caddisfly |
| Baetidae — small minnow mayfly | Philopotamidae — finger-net caddisfly |
| Calopterygidae — broad-winged damselfly | Simuliidae — black fly |
| Chironomidae — midge | |

*Sensitive Family