Huron River Watershed Council

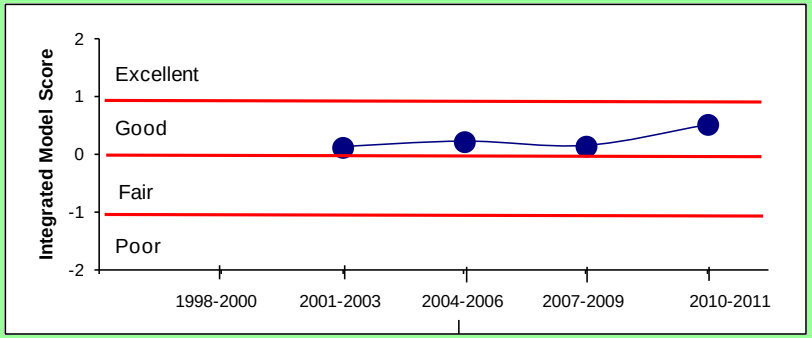
Protecting the river since 1965

Woodruff Creek at Buno Road

Adopt-a-Stream Site Report, updated January 2012

Overall Condition: ***Good***

At this site there is an impressive diversity of insect, some of which are considered sensitive. The stream banks, streambed, and streamside vegetation are healthy. However, winter stoneflies are only found occasionally. Overall, ,the stream has been given a condition rating of "good" since it supports a rich variety of aquatic life, especially in the fall.



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.

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 26 times, starting in 1994. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Woodruff Creek is 18 feet wide and shallow (less than a foot). In 2009 we found average habitat here with a soft bottom but the rocks in the swift water (riffles) were free of silt. The water has a low concentration of unidentified pollutants and gets warm (seldom over 79°F) in the summer.

There is good diversity of bugs here for such a small stream. In the spring we typically find 12 or 13 different families and two are sensitive families that require a good quality stream. In the fall an average of 18 or 19 families are typically found, again with 2 sensitive ones. This is an excellent diversity of insects in the fall.

Stoneflies are very sensitive insects that are only found in clean water. However, we find only one of the two kinds of "winter stoneflies" that grow only in winter (being dormant the rest of the year) and half the time we don't find any stoneflies here in January.

Photo credit: Max Bromley

Huron River Watershed Council, 1100 N. Main Street, Ann Arbor, MI, 48104, (734) 769-5123 x 601.
Please contact psteen@hrwc.org or go to www.hrwc.org for more information.

Woodruff Creek at Buno Road

Background Information

Site History

A mile downstream from this site, Woodruff Creek is joined by Mann Creek and then continues another 2.4 miles to the Huron River. Woodruff Creeks drops 80 feet in elevation from the headwaters to that confluence with the Huron. This site is in a much more developed watershed compared to our upstream site on Woodruff Creek at Maxfield Road.

How is the Creek affected by land use here?

Water drains to this site from nine square miles of land, mostly residential.

According to data from 2000,one-half of this Woodruff Creek sub-watershed is developed while less than one-tenth is used for agriculture. At that time, 14% of the land was covered by impervious surface.

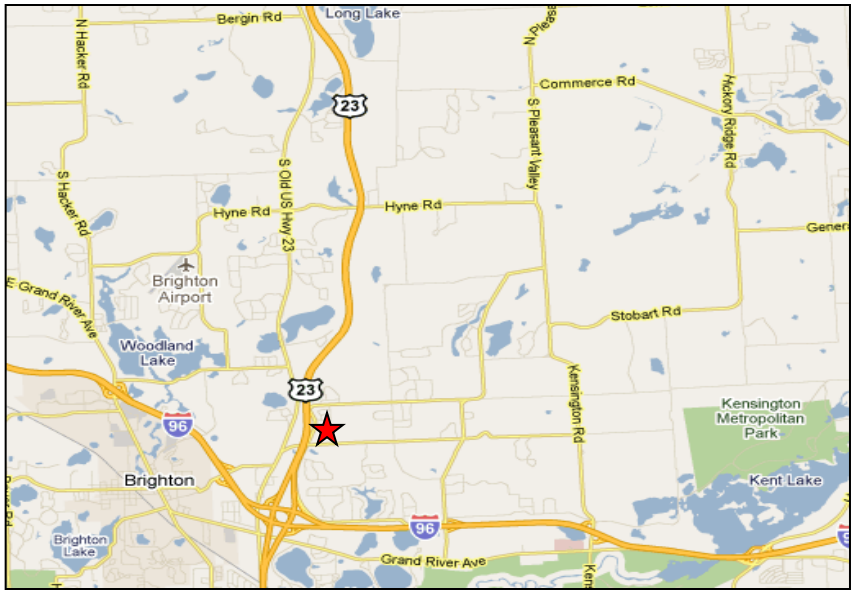
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 7% Agriculture, 49% Urban, 6% Forest, 17% Open, 20% Wetland.

What You Can Do

Help us improve Woodruff 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.



Google 2011

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

*Leptophlebiidae — pronggill mayfly
Baetidae — small minnow mayfly
Belostomatidae — giant water bug
Caenidae — square-gilled mayfly
Calopterygidae — broad-winged damselfly
Chironomidae — midge
Coenagrionidae — narrow-winged damselfly
Dytiscidae — predacious diving beetle
Gerridae — water strider
Heptageniidae — flathead mayfly
Hydropsychidae — common net-spinner caddisfly
Limnephilidae — northern caddisfly
Scirtidae — marsh beetle
Simuliidae — black fly
Tabanidae — deer fly
Tipulidae — crane fly
Uenoidae — Uenoid caddisfly
Veliidae — short-legged striders

**Sensitive Family*