

# Bancroft-Noles Drain at Lebo Park

Adopt-a-Stream Site Report, updated February 2013

## Overall Condition: **Poor**

At this site there are an average amount of bugs with a few sensitive families. The streambed is silty but the banks are stable. Streams in the lower Huron watershed tend to have more silt than upper watershed rivers since these streams are less steep than upper Huron streams. Also, the underlying geology is old lake plain, which is composed of silt and sand.

### 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.

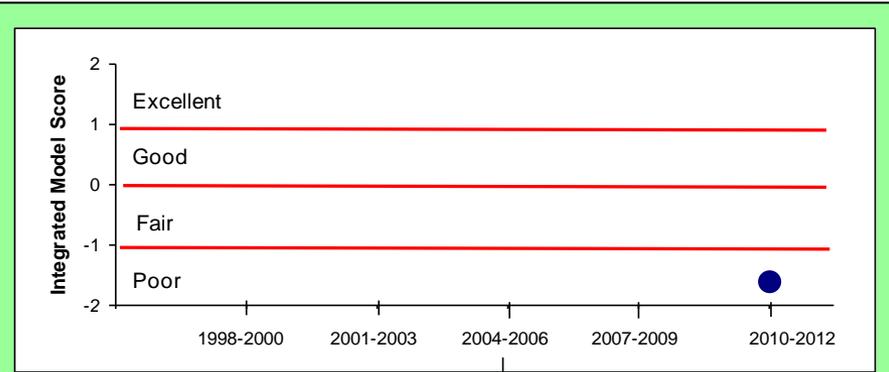
### Monitoring Data

These data come from HRWC volunteers who have monitored this site 9 times, starting in 2008. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site is about 30 feet wide and shallow (about a foot). In 2011 we found poor habitat here with a mucky bottom and little to no habitat diversity- the creek is uniformly the same throughout, which provides little living spaces for different types of creatures.

There is poor diversity of bugs here, even for such a small stream. In the spring we typically find six different families and one or two are sensitive families that require a good quality stream. In the fall an average of four or five families are typically found, with a sensitive one only occasionally.

Stoneflies are very sensitive insects that are only found in clean water. In the winter we have never found the two kinds of "winter stoneflies" that grow only in winter and are dormant the rest of the year. This suggests that the site lacks stonefly habitat or there might be a pollution. Complicating this analysis is the tendency of this stream to be frozen over during the stonefly search.



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: Keith McConnelly

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## Background Information

### Site History

This small creek was recently added as an Adopt-A-Stream site and has only been sampled thoroughly six times (at River-Roundups) and once for Winter Stoneflies. (The site was frozen in 2009 and 2012 preventing more Winter Stonefly study.) We have also measured the habitat here once and have tested the temperature throughout the summer of 2010.

Of all the sites that HRWC monitors, this one is located closest to Lake Erie. Thank you to all our volunteers that make the trek down to this site!

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

The area of land draining to this site is small, receiving water from only 1.6 square miles of land.

This is a fairly well developed area for the Huron watershed, according to data from 2000. Nine-tenths of the Bancroft Noles Drain watershed is developed while less than a tenth is used for agriculture. At that time, 12% of the land was covered by impervious surface.

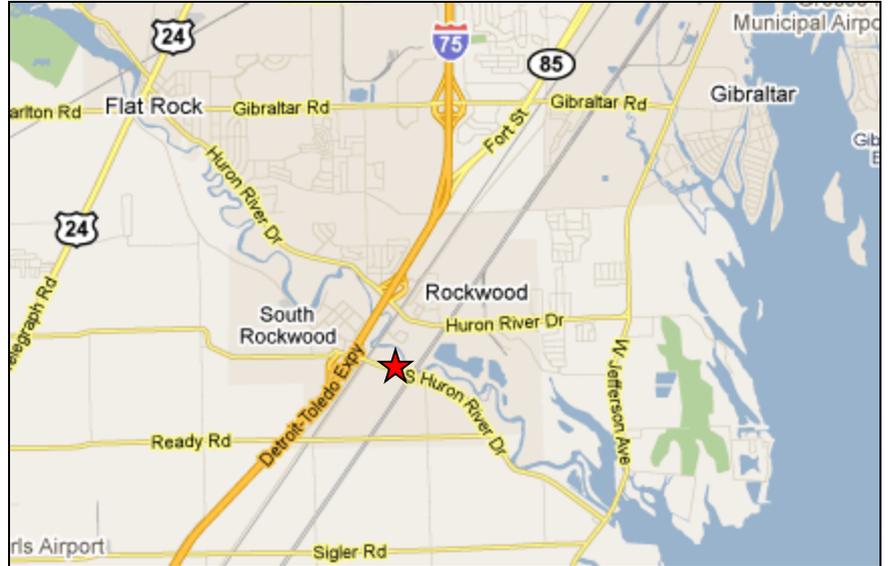
Impervious surface is hard on streams because it prevents rain from being filtered and cleaned through the soil and, instead, delivers it quickly to the stream, carrying pollutants and causing surging flows that damage the stream habitat and biotic community.

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: 9% Agriculture, 89% Urban, 2% Forest, 1% Open, 0% Wetland.

### What You Can Do

Help us improve Bancroft-Noles! 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.



Google 2011

### Insects found in at least two sampling events from 2010-2012:

- Caenidae — small, square gilled mayfly (often in silt)
- Coenagrionidae — narrow-winged damselfly
- Corixidae — water boatman
- Sialidae — alderfly

*\*Sensitive Family*