

Hummocky Lick at M-36

Adopt-a-Stream Site Report, updated January 2012

Overall Condition: **Good**

Hummock Lick is a small headwater creek that flows through a high quality fen system. At this site there are many kinds of bugs and several of them are sensitive. The streambed contains much sediment but there is ample streamside vegetation providing for stable stream banks. Given the unique setting of this creek, it is not clear if applying our rating system is appropriate in this circumstance.

Measuring Stream Quality

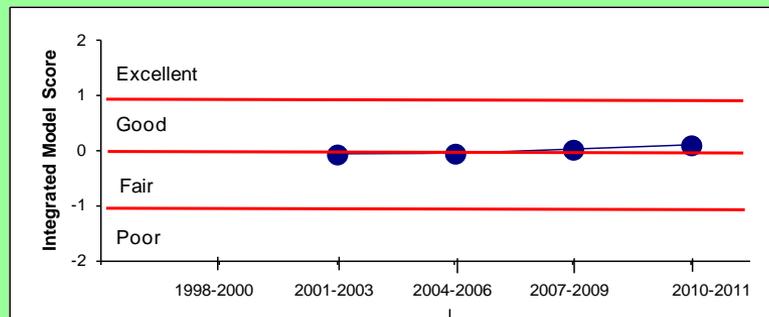
We use the bugs living in the creek to measure stream quality for two reasons. When the stream is rich in habitat variety it will have many diverse kinds of bugs (called families). Also, some bugs (called sensitive) can live only in good quality streams; they die in a poor quality stream. Any stream 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 31 times, starting in 2000. This includes Stonefly Search, River Roundup, Habitat, and Temperature events.

This site on Hummocky Lick Creek is 4 feet wide and shallow (less than half a foot). In 2010 we found average habitat here with a mucky bottom and the rocks in the swift water (riffles) were somewhat clogged with silt although the banks are stable. It has clean water that seldom rises above 77°F in the summer.

There is very good diversity of bugs here for such a small stream. In the spring we typically find 15 different families and three are sensitive families that require a good quality stream. In the fall an average of 13 families are typically found, with one sensitive one. 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. Stoneflies are only occasionally found at this site, which might be a product of the fen conditions upstream or might indicate pollution.



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: Max Bromley

Hummocky Lick at M-36

Background Information

Site History

Hummock Lick is a small headwater creek that flows through a high quality fen system. (Fens are wetlands that receive nutrients from surrounding mineral soils and much of their water is groundwater). Plentiful groundwater inputs and plenty of coarse organic matter allow many sensitive organisms to survive in such small stream. HRWC volunteers informally renamed this stream "Hummocky Lick" (reminiscent of streams in Kentucky named "Licks") to replace the official name, "County Drain #7". The word "Hummocky" comes from the fen vegetation, which is composed of grass and sedge bumps on the ground called hummocks.

How is the Creek affected by land use here?

The area of land draining to this site is very small, receiving water from only 4 square miles of land.

According to data from 2000, two-fifths of the Hummocky Lick Creek watershed is used for agriculture while only one-sixth is developed. At that time, 6% 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: 40% Agriculture, 16% Urban, 6% Forest, 19% Open, 19% Wetland.

What You Can Do

Help us improve Hummocky Lick! 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 | Hydropsychidae — common net-spinner caddisfly |
| *Nemouridae — Nemourid broadback stonefly | Limnephilidae — northern caddisfly |
| *Perlodidae — Perlodid stonefly | Phryganeidae — giant case-maker caddisfly |
| Aeshnidae — damner dragonfly | Simuliidae — black fly |
| Baetidae — small minnow mayfly | Tipulidae — crane fly |
| Calopterygidae — broad-winged damselfly | Uenoidae — Uenoid caddisfly |
| Chironomidae — midge | |
| Dytiscidae — predacious diving beetle | |

**Sensitive Family*