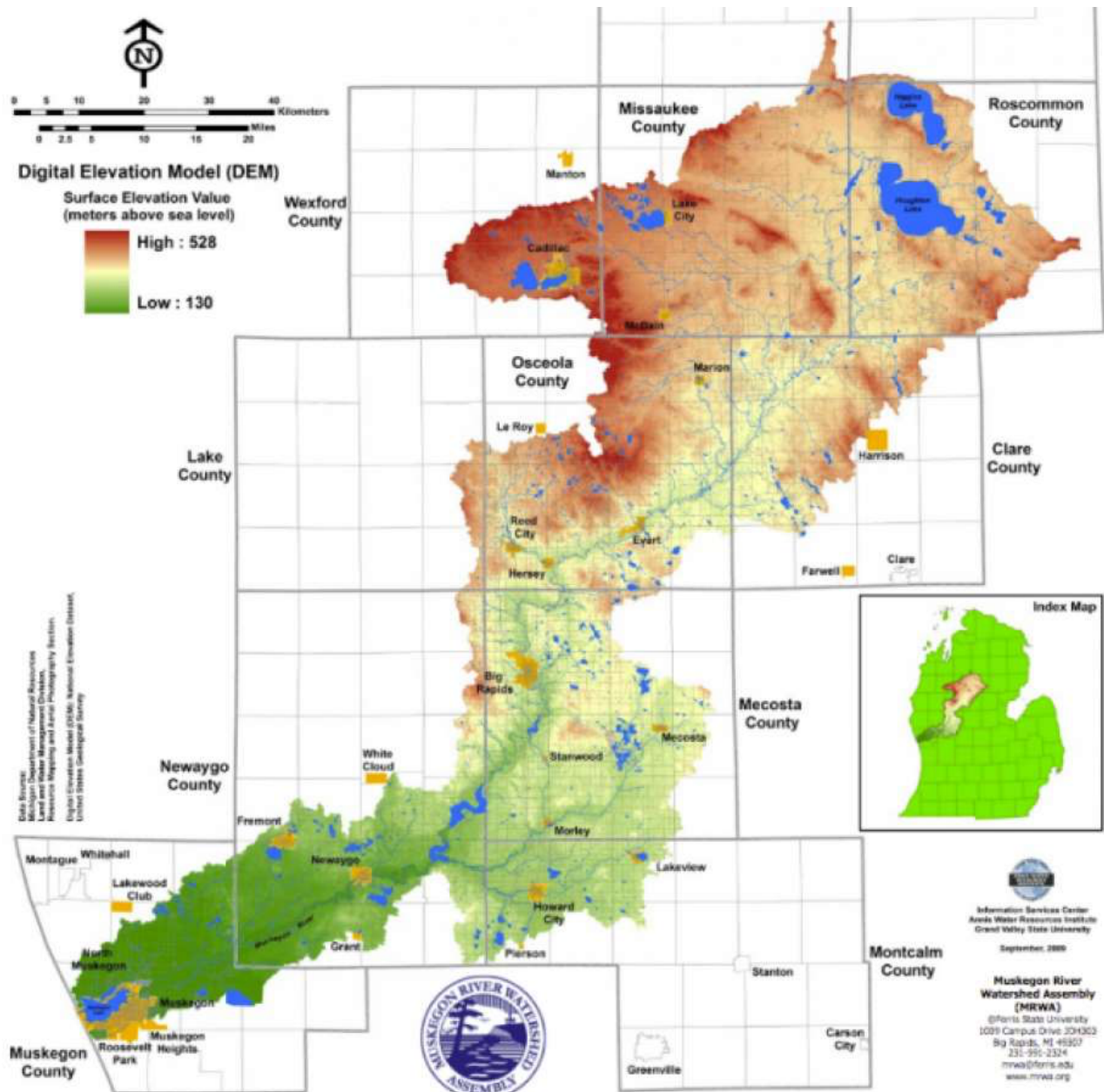


# All Things Creepy Crawly....

Melanie Brown, Environmental Committee Member

We have an exciting monitoring program planned this year for our main surface water inlet and outlet to Higgins Lake. On the north end of the lake, our largest inflow of surface water into the Higgins Lake is from Big Creek. On the southeast corner of the lake, the Cut River discharges water from Higgins Lake into Marl Lake and beyond. Higgins Lake is the headwaters of the Muskegon River watershed so our water eventually flows into Lake Michigan. What we do in Higgins Lake can have an effect on water bodies downstream that are within the Muskegon River watershed so maintaining good water quality is important not only for Higgins Lake users but also for those downstream.



Being part of HLPOA provides the opportunity to also connect with others in the State that have our mutual concern for water quality and good data. Starting this summer, we are working with the Muskegon River Watershed Assembly (MRWA) (<https://mrwa.org/mrwa-home/>) to gather information on invertebrates in Big Creek and the Cut River. Invertebrates are animals without backbones, like insects and snails. The numbers and types of invertebrates in a stream provides information on the water quality as some invertebrates cannot tolerate pollution as well as others. The MRWA is collecting invertebrate data throughout the watershed and are happy to have Higgins Lake added to the effort. Following the methods developed by the Michigan Clean Water Corps (MiCorps) <https://micorps.net/>, a couple of our HLPOA environmental committee members trained with other MRWA volunteers on sampling for stream invertebrates and will be sampling Big Creek and the Cut River in September. If you are interested in poking through stream sediments looking for bugs, please contact the HLPOA office.

In preparation for our September invertebrate sampling, Scott Faulkner, Executive Director of the MRWA and Dr. Marty Holtgren, senior scientist, helped us identify the sections of Big Creek and the Cut River where we will sample for bugs. We developed cross section profiles of the streams along a 300 feet sampling length of stream and developed habitat assessments of each sampling length. We will sample 150 feet above and below the Dewey Road culvert in Big Creek. The 300 feet sampling length in the Cut River is adjacent to the island below the dam and before the County Road 100 culverts.

We will be using a net to sweep the water, along logs, and the leaf litter looking for invertebrates. Insects found will be preserved in alcohol for later species identification and to maintain a historical record of our sampling. Hopefully, we will see a lot of insects and ones that indicate good water quality. Some examples of insects that indicate good water quality include:

Dobson Fly



Clubtailed Dragonfly



Mayfly

Stonefly



Caddisfly



Midge



Maybe you have seen some of these insects around the lake or home. Pollution tolerant invertebrate species include damsel fly, true bug, sowbug, true flies, crayfish, snails, clams, and leaches. Sampling for all of the invertebrates in the stream, we will rank each species by its tolerance to pollution and count the number of each species to provide an overall water quality rating. We are hoping to see a wide variety of species and a large number of the pollution intolerant species. We are grateful for the assistance we have received from the MRWA and look forward to setting up a baseline of invertebrates in our main Higgins Lake streams. We will provide information on our collection effort in the HLPOA Winter Newsletter.