

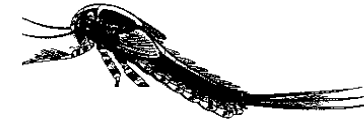


Huron  
River  
Watershed  
Council

Protecting the river since 1965

# Adopt-a-Stream

## River Round April 2015 Data and Trends



The Huron River Watershed Council holds two full benthic macroinvertebrate collections per year, during which volunteers visit rivers and creeks across the watershed and collect a sample of the critters that live in the stream and on the streambed.

“**Benthic macroinvertebrates**” are another word for stream insects, crustaceans, worms, and mollusks. The word “benthic” refers to the bottom of a lake or stream, the word “macro” means they are large enough to see with the naked eye, and “invertebrates” are creatures without backbones.

There are three categories of benthic macroinvertebrates that are particularly interesting. These categories, or “metrics”, are calculated by the number of families in a sample. A “family” is a taxonomic term that indicates a type of macroinvertebrate (for example, it is possible to find about 10 different mayfly families or 5 different stonefly families in our area of Michigan). In general, the more families found, the healthier the stream.

**All insects:** This metric includes all of the insect families in the sample, and serves as a general indicator of the stream health.

**EPT:** Standing for Ephemeroptera-Plecoptera-Trichoptera, this metric includes all of the mayfly, stonefly, and caddisfly families in the sample. These insects are sensitive to water temperature and oxygen availability. Stagnant or warm streams will not have many of these families.

**Sensitive:** There are a small handful of insect families in the Huron River watershed that are particularly sensitive to organic pollution. In other words, this metric is calculated from insects that are not likely to be found in streams polluted with fertilizers or animal and human waste.

**Current Site condition:** To determine the overall condition rating, HRWC uses an integrative model that compares a monitoring site to all of HRWC’s other monitoring sites in the Huron watershed. This involves insect data, habitat data, water temperature, land cover, and stream size. Streams are ranked (from best to worst) as excellent, good, fair, and poor. This is done on 62 sites, picked to be representative of all parts of the watershed

**Trend:** Trends are determined by simple linear regressions of the sample year vs. the three above metrics. If any of the six regressions (3 for fall, 3 for spring) are significant at the alpha level of 0.1, the trend is noted by an up or down arrow. Six data points are required before a trend is calculated.

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**WANT MORE DETAIL?**

All inquiries, email Paul at [psteen@hrwc.org](mailto:psteen@hrwc.org)

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Arms Creek: Walsh Road	1	Fair	16	9	3	10.7	5.3	1.3	This is the best sample taken this location since 1995. This is the third time 3 sensitive families have been found (April 1995, Oct 2014, April 2015). Sensitive families are statistically increasing (1993-2015).	↑
Bancroft-Noles Drain: Lebo Park	89	Fair				5.5	1.5	0.5	No significant changes over time (2008-2014)	-
Boyden Creek: Delhi	2	Good	18	9	4	14.3	7.7	2.0	Spring EPT families have significantly increased over time (1994-2015). This location is one of the best in the watershed for spring caddisflies.	↑
Chilson Creek: Brighton Road	45	Fair	11	5	0	8.0	4.0	0.0	There have been declines in all spring counts over time (1997-2015), but the change is not significant.	-
Chilson Creek: Chilson Road	5	Good	15	7	2	12.7	5.7	2.0	There have been declines in all spring counts over time (1997-2015), but the change is not significant.	-
Davis Creek: 11 Mile Road	81	Fair				No April samples from 2011-2014			No significant changes over time (1993-2014).	-

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Davis Creek: Doane Road	6	Fair				8.0	3.5	1.0	This past fall had the worst sample ever taken at this site, also there are clear significant declines here over time (1994-2014). In the spring, families have been slowly disappearing from this site since monitoring began in 1994. This is a statistically significant change. We used to find 3-4 sensitive families, now it is normal to find 0-1 families. The total insect diversity and EPT diversity has also declined significantly.	↓
Davis Creek: Pontiac Trail	7	Fair				8.5	5.0	1.0	This site is similar to the one above, Davis Creek at Doane Road. Insect families have been slowly disappearing since monitoring began in 1994. This past fall had the worst fall sample ever taken here.	↓
Davis Creek: Silver Lake	49	Good	12	5	1	16.0	8.0	2.5	There has been no significant changes over time in the samples (1998-2015)	-
Fleming Creek: Botanical Gardens	9	Fair				12.3	6.0	0.7	No significant changes over time (1993-2014)	-
Fleming Creek: Galpin Road	84	Good	11	6	1	No April samples from 2011-2014			No significant changes over time (2004-2015)	-

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Fleming Creek: Geddes Road	11	Fair	14	5	2	10.0	4.3	0.8	Slight, but significant increase in sensitive species over time in fall samples. Spring samples are constant. (1992-2015)	↑
Fleming Creek: Warren Road	13	Good	17	9	3	16.0	9.0	4.0	This site remains one of the best that we visit, and since 1994 has improved significantly in fall and spring collections. (1994-2015)	↑
Greenock Creek: Rushton Road	8	Fair				6.0	2.5	0.5	This site that has gotten worse over time (1996-2014). Fall insect diversity and spring EPT diversity has significantly decreased.	↓
Hay Creek: M-36	15	Fair	11	5	1	10.0	5.7	2.0	No significant changes over time (1996-2015)	-
Honey Creek (N): Darwin Road	16	Good	19	13	4	13.8	6.8	1.3	No significant changes over time (1997-2015)	-
Honey Creek: Jackson Road	18	Fair				9.7	3.3	0.0	No significant changes over time (1993-2014)	-
Honey Creek: Wagner Road	20	Fair	8	3	0	8.7	4.0	2.0	This was the first time that sensitive families were not found here since monitoring began in 1993. However, this could be a blip in the data. There have been no significant changes over time (1993-2014).	-

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Horseshoe Creek: Barker Road	98	Fair				5.0	1.5	0.5	This site is too new to observe trends. It has been sampled three times.	?
Horseshoe Creek: Brookside Drive	99	Poor	5	2	0	4.0	0.0	0.0	This is the second time this site has been sampled.	?
Horseshoe Creek: Merrill Road	21	Fair	14	6	0	9.3	3.3	0.3	No significant changes over time (1996-2015)	-
Hummocky Lick: M-36	63	Good				13.5	7.0	2.5	From 2000-2004, about 18 insect families were found in fall samples. Since 2005, it is more usual to find about 13. This is a statistically significant decrease. Last fall, the collection fared better with 16 families. The last spring sample was also quite good, with 4 sensitive families found.	↓
Huron Creek: Dexter-Pinckney Road	22	Good				12.3	6.7	2.7	Spring samples have been consistent here including the 2014 sample. Of special note: The fall 2012 sample here was not only a record for Dexter-Pinkey Rd, but had the highest insect diversity, at 23 families, found at any sample site since 2006! Overall, the site is doing quite well, earning a 'good' rating and showing significant long-term increases in insect and sensitive metrics for fall samples (1996-2014).	↑

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Huron River: Bell Road	62	Good				13.5	5.0	1.0	No significant changes over time (2000-2014).	—
Huron River: Commerce Road	47	Fair				No April samples from 2011-2014			Fall samples have significantly declined over time (1997-2013), with as many as 18 insect families found in the early years of sampling and only about 11 insect families found in recent years. Interestingly, spring samples have statistically improved! The conflict results in the trend being marked as steady.	—
Huron River: Cross Street	24	Fair	7	3	0	11.5	6.0	1.0	Spring samples have significantly improved at this site since 1997 for both total insect diversity, although this particular sample was the worst seen since 2007. Fall samples have remained steady.	↑
Huron River: Flat Rock	23	Fair	5	2	0	8.5	4.0	0.5	This was the worst spring sample at this location since monitoring began. Three metrics are declining significantly; the fall insect diversity and the spring insect diversity and EPT diversity. (1996-2015).	↓

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Huron River: Island Park	61	Fair	9	5	0	12.0	6.0	1.0	There are a variety of things happening in the data at this site. For two spring samples in a row, no sensitive families were found when in the past 2 or 3 were common. However, EPT families have been increasing (though not significantly). In addition, fall samples have improved; trends show statistically increasing number of sensitive families over time for the fall. Previously it was comon to find 1-2 sensitives, now it is more normal to find 2-3. (2000-2015).	↑
Huron River: Proud Lake Rec Area	64	Fair				11.5	6.5	0.5	This sample was worse than usual, but there have been no significant changes over time (2001-2014).	-
Huron River: US-23 (Liv. Co)	51	Fair				11.0	4.5	1.5	No significant changes over time (1998-2014).	-
Huron River: White Lake Road	25	Excellent	16	9	3	17.8	9.3	4.0	This site has the highest average diversity in the watershed despite it being such a small little river. This sample was less diverse than average, but there has still been no significant changes over time (1998-2015).	-

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Huron River: Zeeb Road	26	Good				18.5	9.0	2.5	No significant changes over time (1996-2014)	-
Livermore Creek: Doyle Road	93	Fair				13.0	4.3	1.0	This site has been sampled three time in the spring. By our initial results, it seems to be a healthy location, although sampling it is quite difficult because of plentiful muck.	?
Malletts Creek: Chalmers Drive	27	Poor	7	2	0	7.5	1.5	0.0	Improvements in the insect population in Malletts Creek first noticed in last year's spring sample in Malletts Creek continue to be statistically significant (1994-2015).	↑
Mann Creek: VanAmberg Road	30	Good	12	5	4	13.5	7.0	3.3	Mann Creek continues to impress. Fall samples have increased significantly over time and spring samples have remained steady and high. This site is also the best site to go to during the Stonefly Search as four families of stoneflies are regularly found. (1995-2015)	↑
Mill Creek: Fletcher Road	31	Good	14	4	2	No April samples from 2011-2014			Total insect diversity in fall samples has increased here over time. There have been no significant changes over time for spring samples (1993-2015).	↑
Mill Creek: Ivey Road	32	Good				14.5	7.0	2.5	No significant changes over time (1994-2014).	-



Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Mill Creek: Jackson Road	33	Fair	12	6	0	No April samples from 2011-2014			No significant changes over time (1997-2015)	-
Mill Creek: Klinger Road	57	Fair	8	3	0	No April samples from 2011-2014			While this spring sample was below average compared to past data (earlier than 2010), significantly more EPT families have been found in fall samples here over time. (1999-2015).	↑
Mill Creek: Letts Cr at M-52	34	Fair				16.0	6.0	2.0	The EPT metric has declined here over time; yet the spring samples have slightly yet significantly increased here over time (1993-2014). This conflict means that we will record the site as generally unchanged.	-
Mill Creek: Manchester Road	55	Good	19	9	3	No April samples from 2011-2014			Total insect diversity in spring and Fall samples have increased significantly over time (1999-2015). This particular sample was more diverse than even the typically best location in the Huron headwaters (White Lake Road)	↑
Mill Creek: Parker Road	96	Fair				8.5	4.0	1.0	This site has only been sampled four times (twice fall, twice spring). Initial samples indicate a rather poor insect community, and it is likely that this site will eventually be ranked poor after more data is collected.	?

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Mill Creek: Shield Road	80	Good	14	6	2	13.0	7.0	3.0	Total insect diversity and EPT diversity are statistically increasing both in spring and fall samples over time (2002-2015). This site has made these improvements since the dam downstream came out in 2008.	↑
Mill Creek: Warrior Park	79	Fair	9	7	1	11.5	6.0	1.5	No significant changes over time (2003-2015)	-
Millers Creek: Glazier Way	35	Poor	3	0	0	7.0	0.7	0.0	While this creek was showing improvements since restoration work done in 2009, this sample was particularly bad and has less than 1/2 the diversity from the previous spring sample in 20013. (1993-2015).	-
Norton Creek: West Maple Road	65	Poor	3	1	0	5.3	0.3	0.0	This site shows significant decline in EPT metrics and total insects families (2000-2015). This creek is probably the worst one that we monitor. The last several years have had particularly poor counts.	↓
Pettibone Creek: Commerce Road	67	Good	14	8	2	11.0	5.0	0.0	This was the best spring sample taken at this site, but there have been no significant changes over time. (2001-2015)	-
Pettibone Creek: Livingston Road	68	Good	14	8	3	10.7	4.0	0.3	This was the best spring sample taken here since sampling began in 2001. However, in fall samples there has been a significant decline in total insect families. (2000-2015).	↓

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Port Creek: Armstrong Road	60	Poor	3	0	0	No April samples from 2011-2014			This was the worst spring sample ever taken here; however, there have been no significant changes over time (2000-2015)	-
Portage Creek: Dexter-Townhall Road	37	Good	8	3	0	14.5	8.5	1.5	While fall samples are holding steady, there have been significant declines in the spring total families and sensitive families since 1996 (sensitive families 5-->0). This is odd given that this past fall had one of the best samples ever taken.	↓
Portage Creek: Unadilla	58	Good	16	6	2	No April samples from 2011-2014			This was one of the best samples ever taken here. However, there have been no significant changes over time (1999-2015)	-
Portage Creek: Rockwell Road	94	Good	15	4	0	No April samples from 2011-2014			This site has been sampled twice.	?
Portage Creek: Stockbridge	91	Fair	12	7	2	8.0	4	0	This site has been sampled three times.	?
Portage Creek: Williamsville	92	Fair				9.0	3.7	0.7	This site has been sampled for 3 years. Judging from this small amount of data, fall samples are holding steady, but spring samples do seem to be getting worse. This is tentative pending more data.	↓

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
South Ore Creek: Bauer Road	52	Fair				10.3	5.3	1.5	This site is significantly declining for the EPT metric in fall samples (1998-2013) and in spring sensitive families (4 in 1998 -> 1 in 2014).	↓
South Ore Creek: Hamburg Road	40	Good	16	8	2	14.7	6.3	2.3	This site is significantly declining in fall EPT families (1995-2013), and declining slightly (but non-significantly) in all of the other spring and fall parameters. However, the past year has had slightly better samples, so maybe things are turning around.	↓
South Ore Creek: Lake Ridge	50	Fair				5.5	1.5	0.0	This site has definitely declined over time (1998-2014), but these changes are not yet significant.	-
Swift Run: Shetland Drive	41	Poor	6	0	0	5.0	1.0	0.0	No significant changes over time (1992-2015)	-
Traver Creek: Broadway Avenue	42	Poor	9	3	0	4.7	1.3	0.0	One of the best samples ever taken from this location! However, no significant changes over time (1992-2015)	-
Walker Creek: 8 Mile Road	82	Fair	12	6	0	11.0	6.0	1.0	Total insect families have been steadily and significantly declining since 2003 in fall samples. (22-->12). Spring samples are steady.	↓

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2015 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Woodruff Creek: Buno Road	46	Fair				12.7	5.7	1.0	Recent samples have been quite poor here compared to five-ten years ago. There has been a significant decline in fall EPT over time (6-->3) and spring sensitives (2-->1) (2002-2014).	↓
Woods Creek: L Huron Metropark	14	Good	10	6	2	12.0	6.0	2.0	Long term trends show statistically significant increases in all three metrics for fall samples. Spring samples have remained steady (1997-2015).	↑

These sites are sampled on occasion, sometimes for a specific project, but are not used to determine overall watershed health.

Site Location	Site #	Current Site Condition	April 2015 Samples			April averages since 2011 (not including 2014 sample)			Comments	Trend
			All Insects	EPT	Sensitive	All Insects	EPT	Sensitive		
Boyden Creek: Golf Course	3	Fair				13.7	6.7	2.0	No significant changes over time (1994-2014)	-
Boyden Creek: Huron River Drive	4	Fair				9.0	4.0	0.5	No significant changes over time (1993-2014)	-
Fleming Creek: Radrick Farms	12	Fair				10.0	4.0	1.0	No significant changes over time (1994-2013)	-
Honey Creek: Pratt Road	19	Poor				7.5	2.5	0.5	No significant changes over time (1994-2013)	-
Malletts Creek: Main Street	56	Poor				6.0	1.0	0.0	Significant decreases in insect families (12-->6) since 2000.	↓
Malletts Creek: Near I-94	28	Poor				No April samples from 2010-2014			Spring insect family metrics have statistically improved over time. (1992-2011)	↑
Malletts Creek: Scheffler Road	29	Poor				No April samples from 2010-2014			No significant changes over time (1992-2011).	-

Narrow Gauge Creek: Green Road	75	Unique				4.0	1.0	0.5	No significant changes over time (2002-2013). This site has much different characteristics than the other streams and so is not rated in the same manner.	-
Millers Creek (W Branch): Plymouth Rd	72	Poor				3.0	1.0	0.5	We have been seeing better samples (for this creek) since work was done in the headwaters in spring 2009. The change is not yet significant (2002-2011).	-
Traver Creek: Traver Road	101	Poor				7.5	3.0	0.5	This was the second time this site has been sampled in the spring.	?
Traver Creek: Dhu Varren Road	43	Good	10	6	1	12.0	6.0	1.5	No significant changes over time (1992-2015)	-
Willow Run: VanBuren Park	90	Poor				6.0	1.0	0.0	This site is too new to recognize a trend.	?
Woods Creek: Martinsville Road	87	Fair	11	4	1	7.0	3.0	2.0	No significant changes over time (2008-2015)	-
Woods Creek: Renton Road	88	Fair				12.5	5.0	2.0	This was by far the best sample ever taken here. All three metrics are significantly increasing over time (2008-2014)	-
Woodruff Creek: Maxfield Road	44	Fair				No April samples from 2010-2014			No significant changes over time (1996-2012).	-