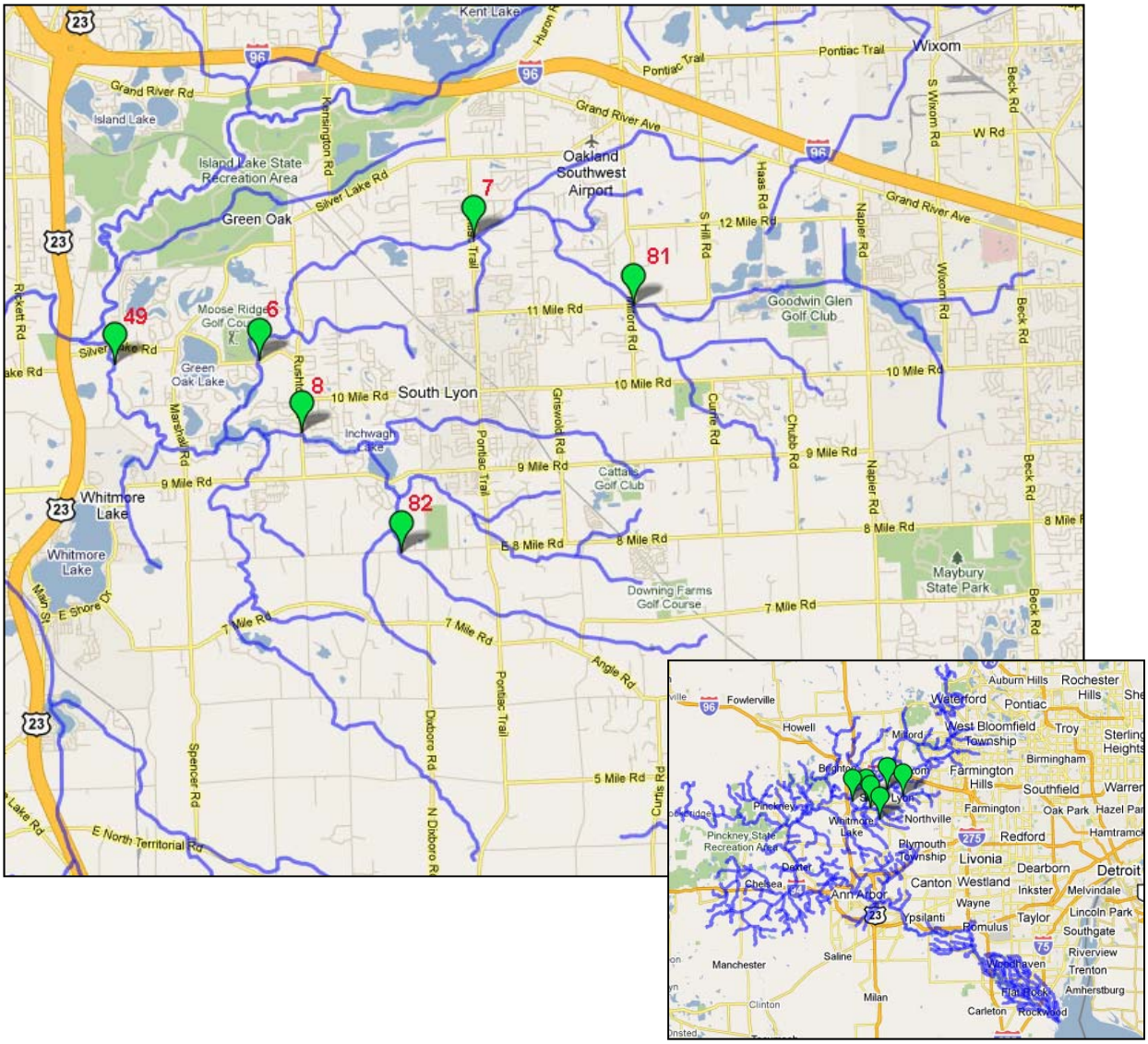
Huron River Watershed Council

Protecting the river since 1965

Adopt-a-Stream

Benthic Macroinvertebrate Monitoring Report

October 2009 data and long term trends for the Davis Creek watershed sample sites



Direct questions to: Paul Steen, 1100 N. Main Street, Ann Arbor, MI 48104, psteen@hrwc.org

What does this data mean?

The Huron River Watershed Council holds three benthic macroinvertebrate collections per year, during which volunteers visit river and creek 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, and the word “macroinvertebrate” refers to creatures that don’t have a backbone and that are large enough to see with the naked eye.

Like canaries in a coal mine, benthic macroinvertebrates are indicative of a stream’s habitat and water quality. If these macroinvertebrates are absent or start disappearing from once abundant populations, there is a good chance that something is negatively affecting the stream (like pollution, erosion, or uneven stream flow). Collecting and counting macroinvertebrates does not tell what the problem is, but it does show us, in an inexpensive and rapid way, if there might be a problem. If HRWC gets a macroinvertebrate sample that is particularly bad from what is normally found at that site, then we can mobilize more volunteers to resample the site, and if the problem continues, visit the site and perform a more thorough assessment.

There are three categories of benthic macroinvertebrates that are particularly interesting. All of these categories are counted by the number of families in a sample. A “family” is a taxonomic term that indicates a type of macroinvertebrate (for example, there are mayfly families or stonefly families). HRWC does not identify macroinvertebrates down to a genus or species level. The number of individuals in that family is not considered because this number is too easily influenced by body size (it is easier to put bigger bugs in a jar than bugs that you can barely see).

Insects: This category counts 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 category counts 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, these insects are not likely to be found in streams polluted with fertilizers or animal and human waste.

This Perlidae stonefly is only found in cold, well oxygenated water.

October 2009- Davis Creek Watershed

Site #	Location	Insects	EPT	Sensitive	5 year trend
81	Davis Creek:11 Mile Road	16	2	0	Stable
6	Davis Creek: Doane Road (April 2009)	12	4	1	Stable
7	Davis Creek: Pontiac Trail (April 2009)	11	5	1	Stable
8	Greenoak Creek: Rushton Road	4	1	0	Stable
49	S Branch Huron River: Silver Lake	19	8	4	Stable
82	Walker Creek: 8 Mile Road (September 2008)	16	8	2	Stable

Key:

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Long-term Trends- Davis Creek Watershed

Site #	Location	Length (years)	Insects	EPT	Sensitive
81	Davis Creek:11 Mile Road	6	Stable	Stable	Stable
6	Davis Creek: Doane Road	15	Stable	Stable	↓ 4 (1994) 1 (2008)
7	Davis Creek: Pontiac Trail	15	Stable	Stable	↓ 3 (1996) 1 (2009)
8	Greenoak Creek: Rushton Road	13	↓ 18 (1997) 4 (2009)	↓ 3 (1997) 1 (2009)	↓ 1 (1997) 0 (2009)
49	S Branch Huron River: Silver Lake	11	Stable	Stable	Stable
82	Walker Creek: 8 Mile Road	6	Stable	Stable	Stable

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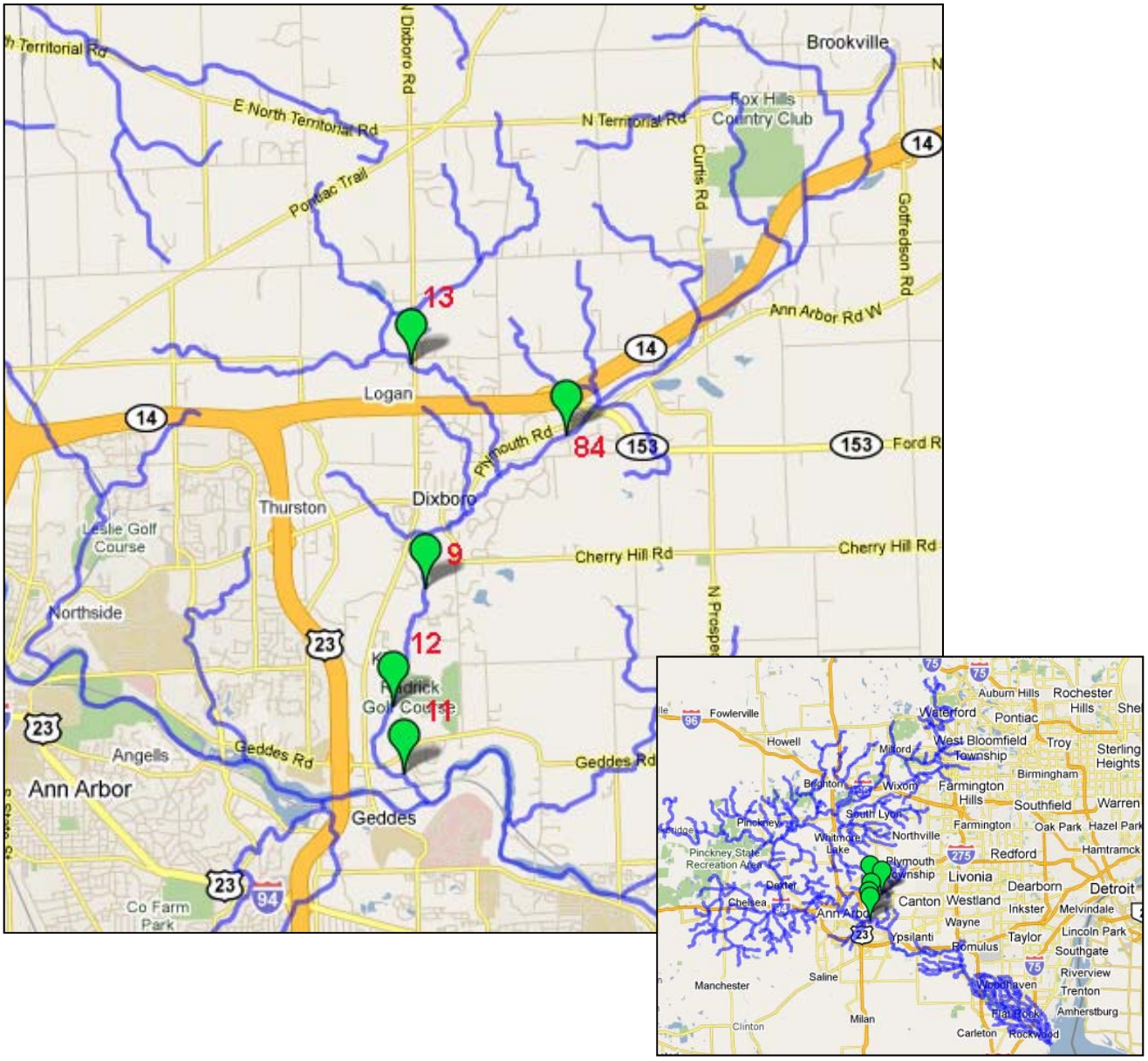
October 2009 data and long term trends for the Fleming Creek watershed sample sites



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This Perlidae stonefly is only found in cold, well oxygenated water.

October 2009- Fleming Creek Watershed

Site #	Location	Insects	EPT	Sensitive	5 year trend
9	Fleming Creek: Botanical Gardens (April 2009)	12	7	2	Stable
84	Fleming Creek: Galpin	15	3	0*	↓ 2(2004) 0(2009)
11	Fleming Creek: Geddes Road	8	5	1	Stable
12	Fleming Creek: Radrick Farms (April 2009)	15	6	3	Stable
13	Fleming Creek: Warren Road	17	9	4	Stable

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Long-term Trends- Fleming Creek Watershed

Site #	Location	Length (years)	Insects	EPT	Sensitive
9	Fleming Creek: Botanical Gardens	16	Stable	Stable	Stable
84	Fleming Creek: Galpin	5	Stable	Stable	↓ 2(2004) 0(2009)
11	Fleming Creek: Geddes Road	17	Stable	Stable	Stable
12	Fleming Creek: Radrick Farms	15	Stable	Stable	Stable
13	Fleming Creek: Warren Road	16	↑ 10 (1997) 17 (2009)	↑ 4(1994) 9 (2009)	Stable

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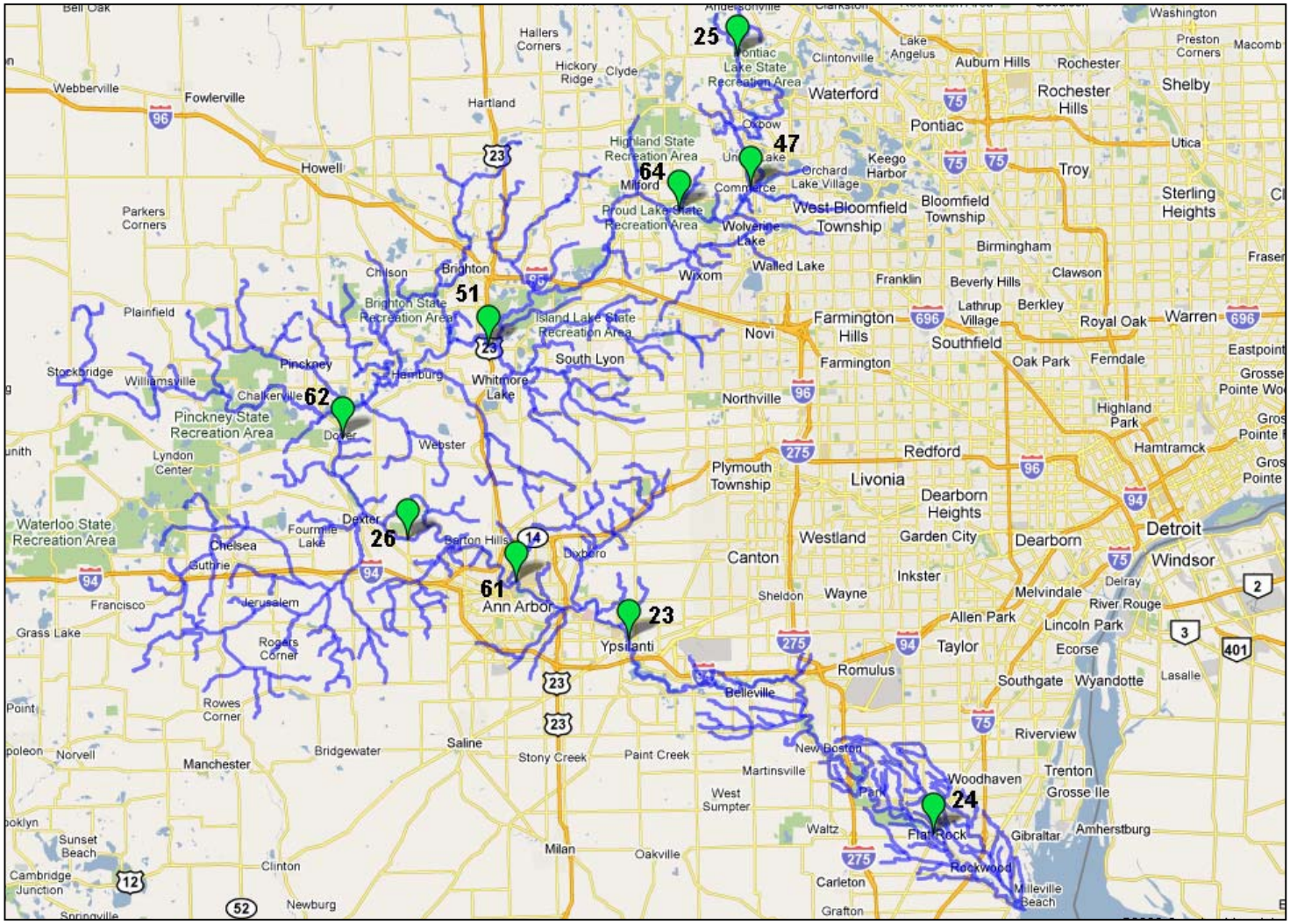

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October 2009- Huron River Mainbranch

Site #	Location	Insects	EPT	Sensitive	5 year trend
62	Huron River: Bell Road	11	5	0	Stable
47	Huron River: Commerce Road	6	3	0	Stable
24	Huron River: Cross Street	12	5	0	Stable
23	Huron River: Flat Rock	10	4	0	Stable
61	Huron River: Island Park (September 2008)	16	8*	2*	↑ EPT: 5->8 Sensitive: 1->2
64	Huron River: Proud Lake Rec Area	20	8	1	Stable
51	Huron River: US-23 (Liv. Co)	8	3	1	Stable
25	Huron River: White Lake Road	13	7	5*	↓ Sensitive: 7->5
26	Huron River: Zeeb Road	16	7	2	Stable

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Long-term Trends- Huron River Mainbranch

Site #	Location	Length (years)	Insects	EPT	Sensitive
62	Huron River: Bell Road	9	Stable	Stable	Stable
47	Huron River: Commerce Road	12	Stable	Stable	Stable
24	Huron River: Cross Street	12	Stable	Stable	↓ 1 (1997) 0 (2009)
23	Huron River: Flat Rock	13	Stable	Stable	Stable
61	Huron River: Island Park	8	Stable	↑ 4 (2003) 8 (2008)	Stable
64	Huron River: Proud Lake Rec Area	8	Stable	Stable	Stable
51	Huron River: US-23 (Liv. Co)	11	Stable	Stable	Stable
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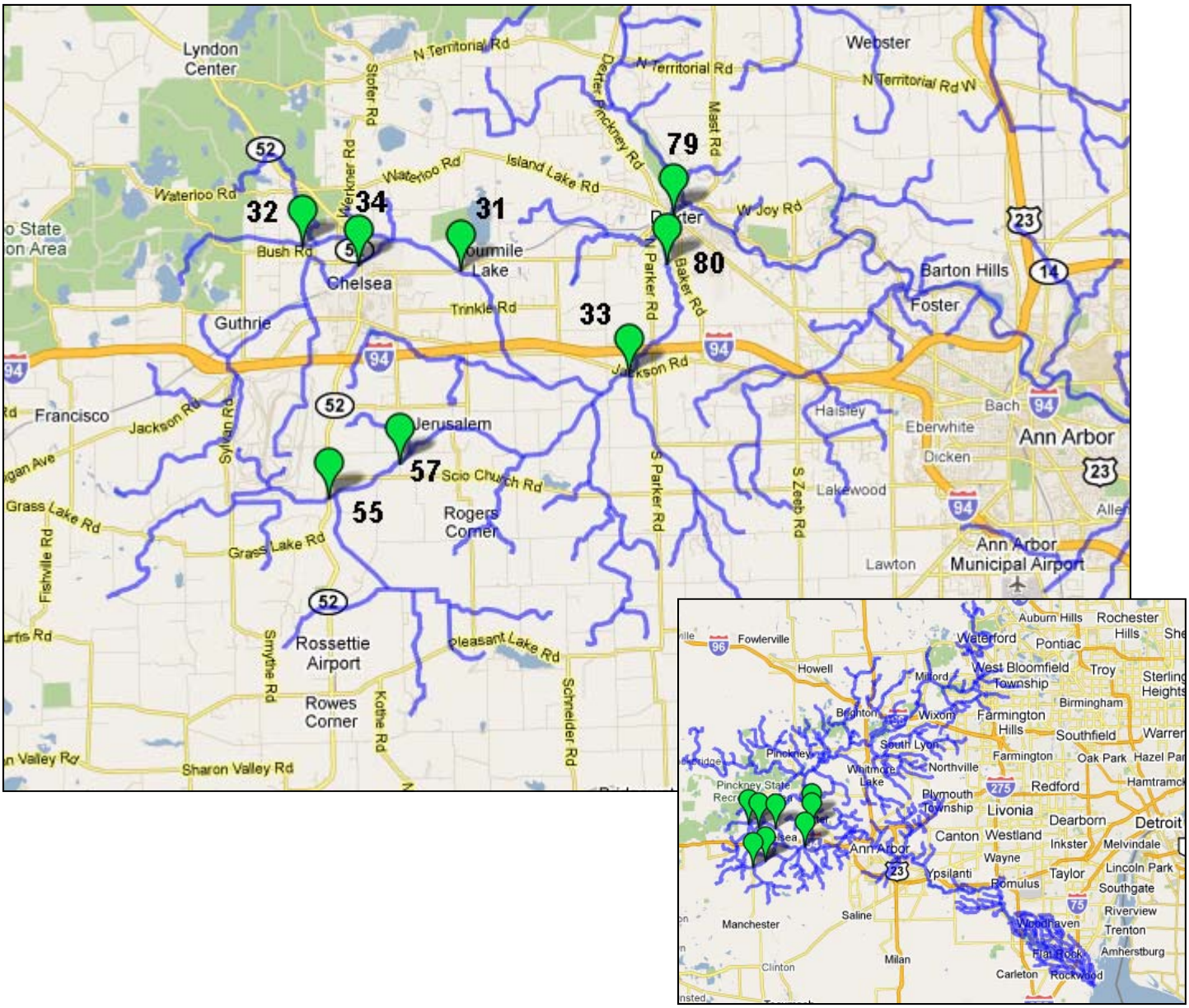

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This Perlidae stonefly is only found in cold, well oxygenated water.

October 2009- Mill Creek Watershed

Site #	Location	Insects	EPT	Sensitive	5 year trend
31	Mill Creek: Fletcher Road (April 2009)	9	5	1	Stable
32	Mill Creek: Ivey Road	15	8	3	Stable
33	Mill Creek: Jackson Road	13	6	1	Stable
57	Mill Creek: Klinger Road	15	5*	3	↑ EPT: 2->5
34	Mill Creek: Letts Cr at M-52 (September 2008)	12	2	0	Stable
55	Mill Creek: Manchester Road	16	8	4	Stable
80	Mill Creek: Shield Road (September 2008)	14	6*	1	↑ EPT: 3->6
79	Mill Creek: Warrior Park	18	8	3	Stable

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Long-term Trends- Mill Creek Watershed

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31	Mill Creek: Fletcher Road	16	Stable	Stable	Stable
32	Mill Creek: Ivey Road	15	Stable	Stable	Stable
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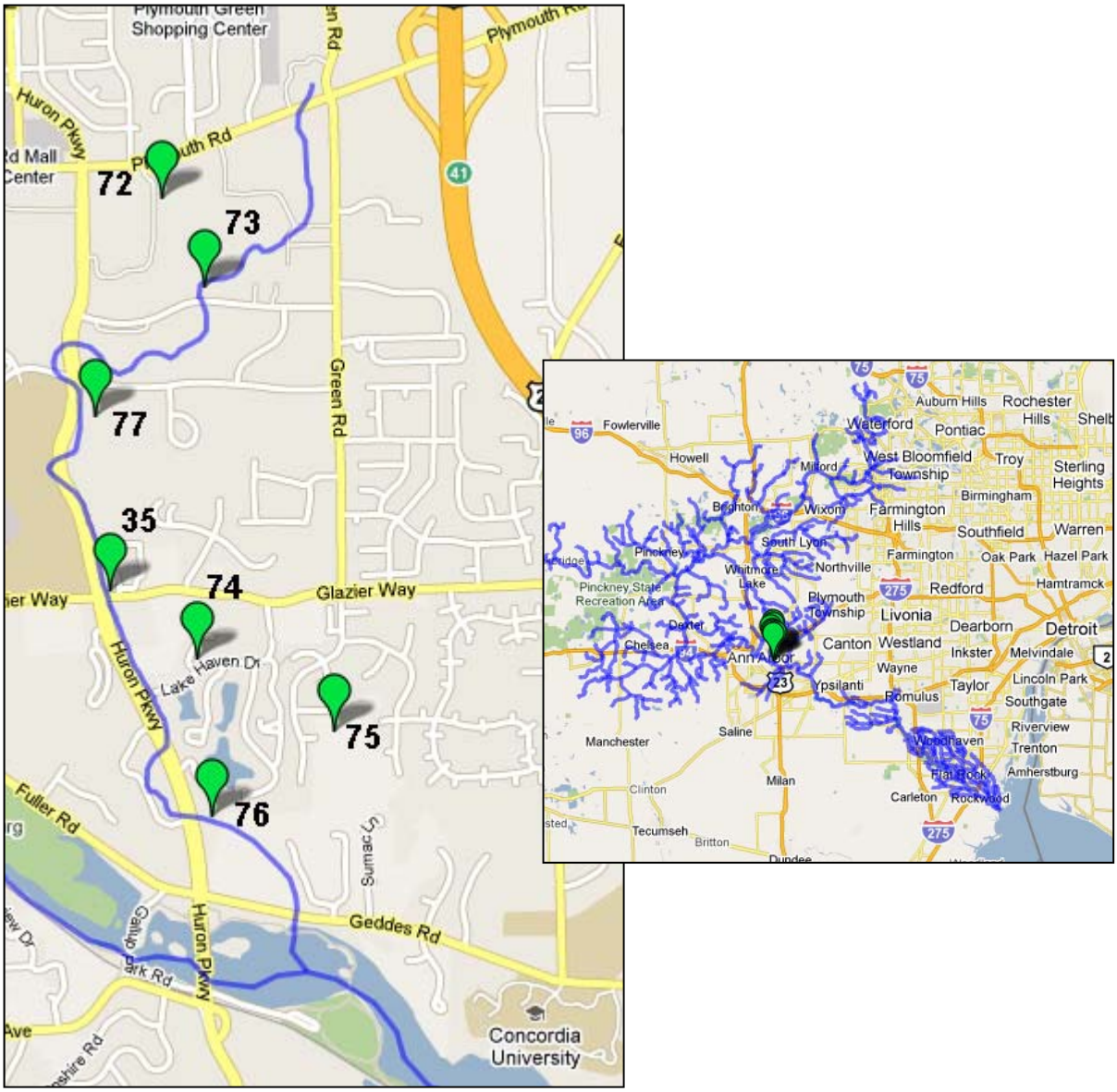

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October 2009- Millers Creek Watershed

Site #	Location	Insects	EPT	Sensitive	5 year trend
73	Millers Creek (E Branch): Baxter Rd (April 2009)	3	0	0	Stable
75	Millers Creek (Trib): Green Road (September 2008)	7	3	2	Stable
74	Millers Creek (Trib): Lakehaven Ct (September 2008)	16	1	0	Stable
72	Millers Creek (W Branch): Plymouth Road	5	1	0	Stable
35	Millers Creek: Glazier Way	10	1	0	Stable
77	Millers Creek: Hubbard	8	1	0	Stable
76	Millers Creek: Huron Pkwy (April 2009)	2	0	0	Stable

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74	Millers Creek (Trib): Lakehaven Ct	7	Stable	Stable	Stable
72	Millers Creek (W Branch): Plymouth Road	7	Stable	Stable	Stable
35	Millers Creek: Glazier Way	16	Stable	Stable	Stable
77	Millers Creek: Hubbard	7	Stable	Stable	↓ 1 (2002) 0 (2008)
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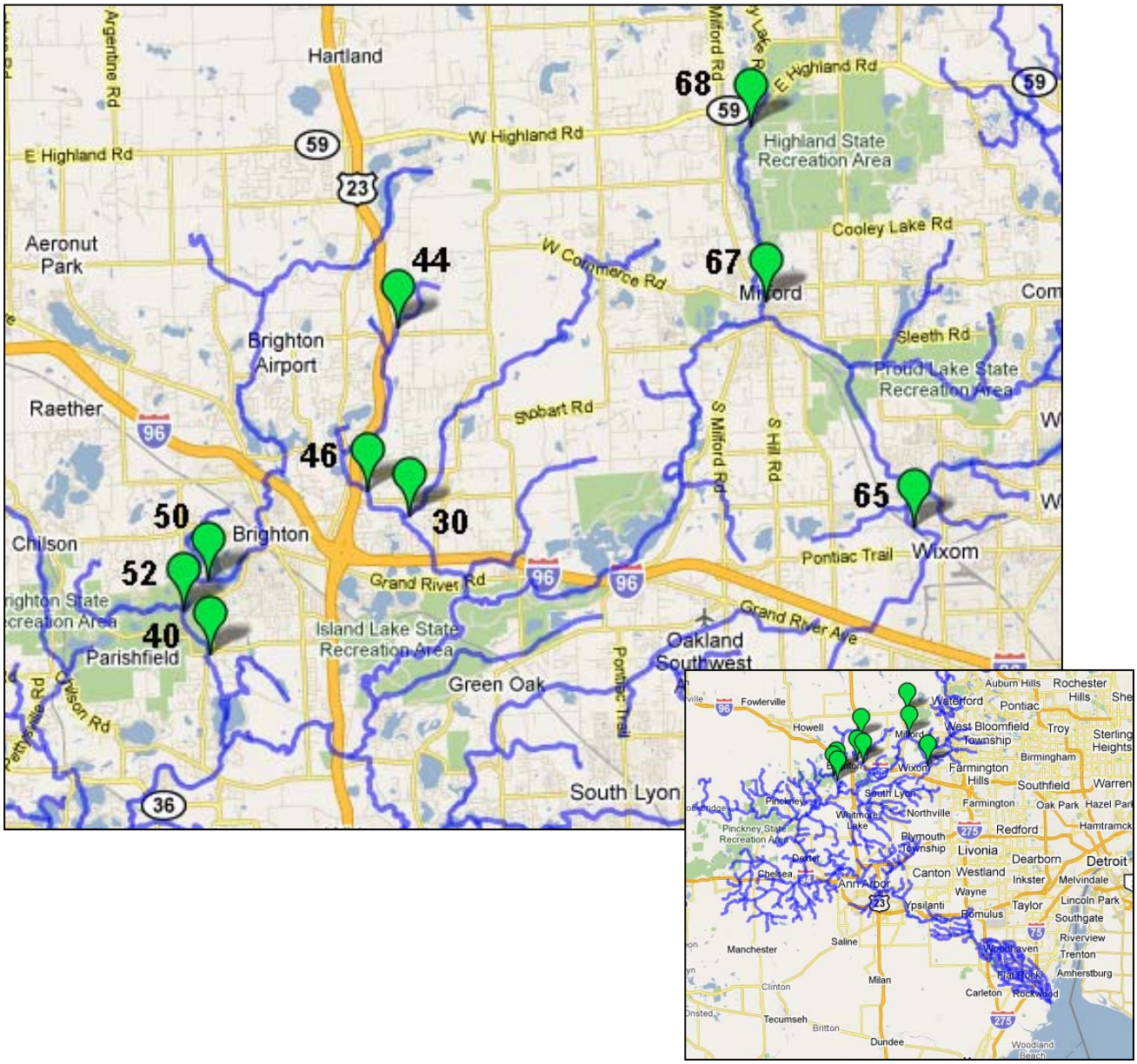

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October 2009- Northeast Tributaries

Site #	Location	Insects	EPT	Sensitive	5 year trend
30	Mann: VanAmberg Road	9	6	2	Stable
65	Norton Creek: West Maple Road	3	0*	0	↓
67	Pettibone Creek: Commerce Road	12	4	0	Stable
68	Pettibone Creek: Livingston Road	11	4	0	Stable
52	South Ore Creek: Bauer Road	13	3	0	Stable
40	South Ore Creek: Hamburg Road	14	3	2	Stable
50	South Ore Creek: Lake Ridge (April 2009)	6	2	0	Stable
46	Woodruff Creek: Bruno Road	22	6	2	Stable
44	Woodruff Creek: Maxfield Road	13	2	2	Stable

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Long-term Trends- Northeast Tributaries

Site #	Location	Length (years)	Insects	EPT	Sensitive
30	Mann: VanAmberg Road	13	Stable	↑ 4 (1996) 10 (2008)	Stable
65	Norton Creek: West Maple Road	9	Stable	↓ 2 (2000) 0 (2009)	Stable
67	Pettibone Creek: Commerce Road	8	Stable	Stable	Stable
68	Pettibone Creek: Livingston Road	8	Stable	Stable	Stable
52	South Ore Creek: Bauer Road	11	Stable	Stable	Stable
40	South Ore Creek: Hamburg Road	14	Stable	Stable	Stable
50	South Ore Creek: Lake Ridge	11	Stable	↑ 2 (1998) 7 (2008)	Stable
46	Woodruff Creek: Bruno Road	7	Stable	Stable	Stable
44	Woodruff Creek: Maxfield Road	13	Stable	Stable	Stable

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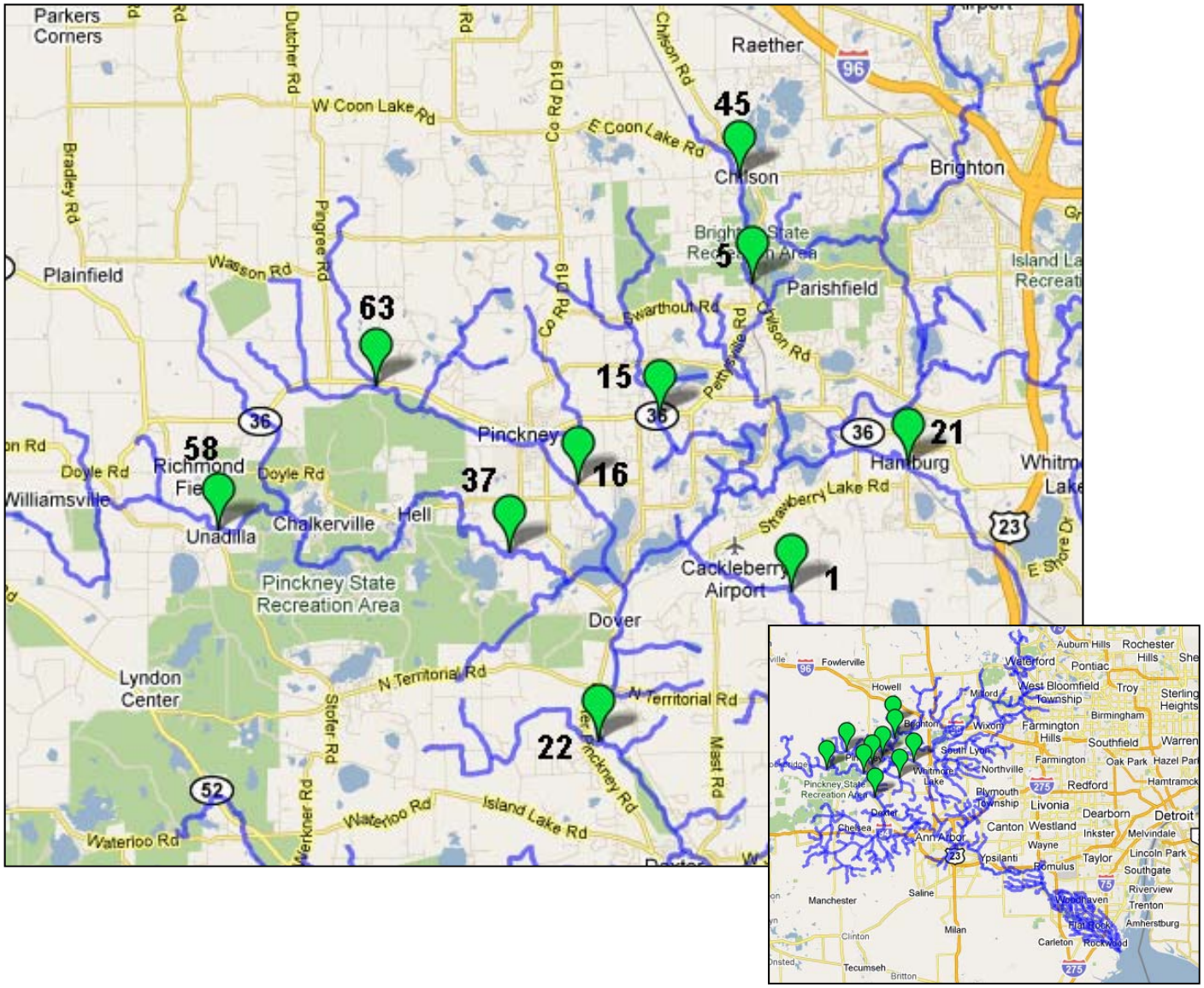
Benthic Macroinvertebrate Monitoring Report

October 2009 data and long term trends for creek sampling sites in the Northwest section of the Huron River watershed



Direct questions to: Paul Steen, 1100 N. Main Street, Ann Arbor, MI 48104, psteen@hrwc.org

What does this data mean?

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“Benthic macroinvertebrates” are another word for stream insects, crustaceans, worms, and mollusks. The word “benthic” refers to the bottom of a lake or stream, and the word “macroinvertebrate” refers to creatures that don’t have a backbone and that are large enough to see with the naked eye.

Like canaries in a coal mine, benthic macroinvertebrates are indicative of a stream’s habitat and water quality. If these macroinvertebrates are absent or start disappearing from once abundant populations, there is a good chance that something is negatively affecting the stream (like pollution, erosion, or uneven stream flow). Collecting and counting macroinvertebrates does not tell what the problem is, but it does show us, in an inexpensive and rapid way, if there might be a problem. If HRWC gets a macroinvertebrate sample that is particularly bad from what is normally found at that site, then we can mobilize more volunteers to resample the site, and if the problem continues, visit the site and perform a more thorough assessment.

There are three categories of benthic macroinvertebrates that are particularly interesting. All of these categories are counted by the number of families in a sample. A “family” is a taxonomic term that indicates a type of macroinvertebrate (for example, there are mayfly families or stonefly families). HRWC does not identify macroinvertebrates down to a genus or species level. The number of individuals in that family is not considered because this number is too easily influenced by body size (it is easier to put bigger bugs in a jar than bugs that you can barely see).

Insects: This category counts 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 category counts 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, these insects are not likely to be found in streams polluted with fertilizers or animal and human waste.

This Perlidae stonefly is only found in cold, well oxygenated water.

October 2009- Northwest Tributaries

Site #	Location	Insects	EPT	Sensitive	5 year trend
1	Arms Creek: Walsh Road	17	7	1	Stable
45	Chilson Creek: Brighton Road	12	4	0	Stable
5	Chilson Creek: Chilson Road (April 2009)	14	8	3	Stable
15	Hay Creek: M-36 (April 2009)	10	5	1	Stable
16	Honey Creek (N): Darwin Road) (Sept 2008)	15	8	2	Stable
21	Horseshoe Creek	12	5	1	Stable
63	Hummocky Lick: M-36	12	6	2	Stable
22	Huron Creek: near the mouth	17	8	3	Stable
37	Portage Creek: Dexter-Townhall Road	14	9	3	Stable
58	Portage Creek: Unadilla	10	4	0	Stable

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Long-term Trends- Northwest Tributaries

Site #	Location	Length (years)	Insects	EPT	Sensitive
1	Arms Creek: Walsh Road	15	Stable	Stable	Stable
45	Chilson Creek: Brighton Road	12	Stable	Stable	Stable
5	Chilson Creek: Chilson Road	↓ 17 (1995) 14 (2009)	Stable	Stable	Stable
15	Hay Creek	13	Stable	Stable	Stable
16	Honey Creek (N): Darwin Road	12	↑ 15 (1996) 24 (2008)	↑ 6 (1996) 15 (2008)	Stable
21	Horseshoe Creek	13	Stable	Stable	Stable
63	Hummocky Lick: M-36	9	↓ 18 (2000) 12 (2009)	Stable	Stable
22	Huron Creek: near the mouth	13	Stable	Stable	Stable
37	Portage Creek: Dexter-Townhall Road	13	Stable	Stable	Stable
58	Portage Creek: Unadilla	10	Stable	Stable	Stable

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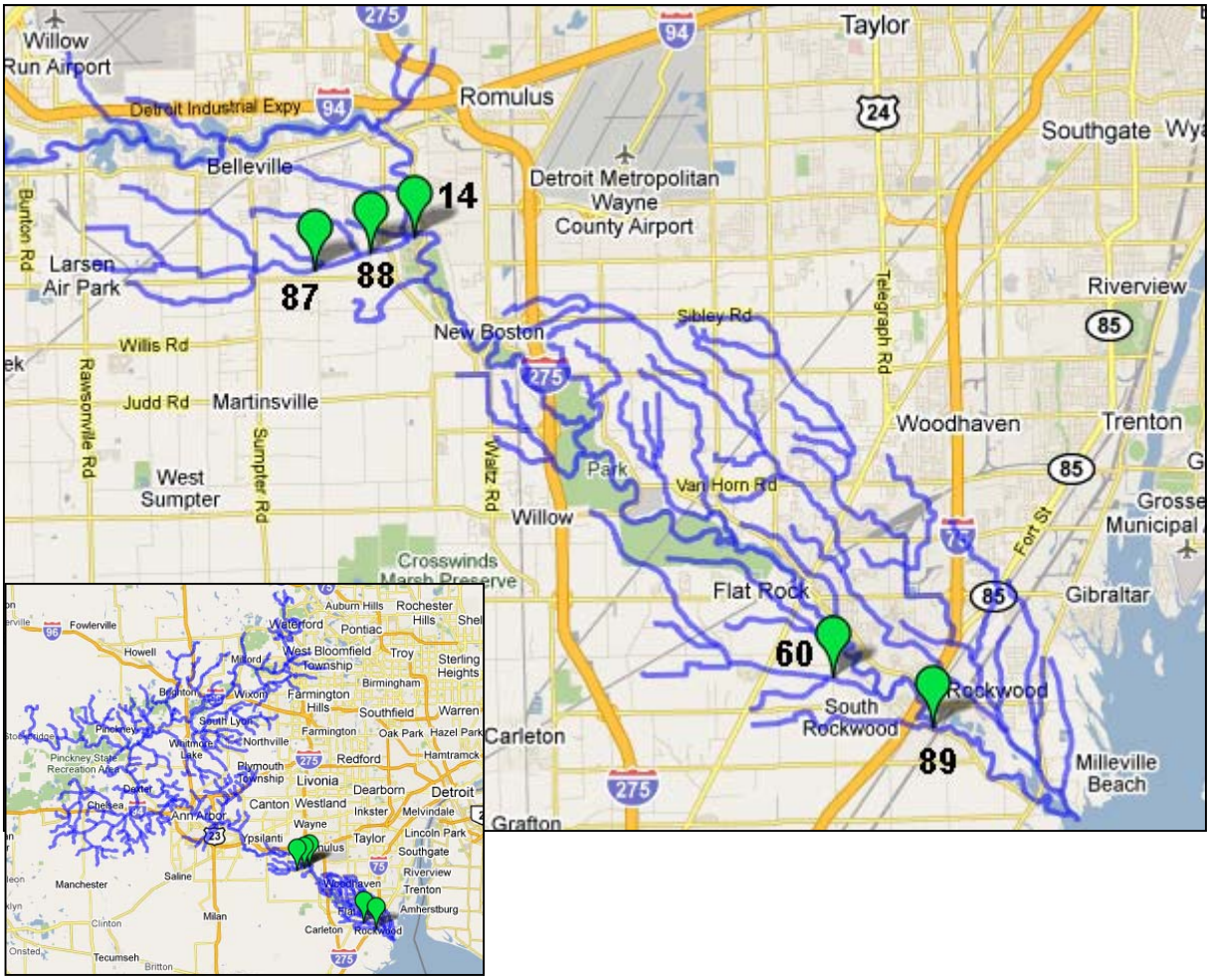
October 2009 data and long term trends for creek sampling sites in the Southeast section of the Huron River watershed



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This Perlidae stonefly is only found in cold, well oxygenated water.

October 2009- Southeast Tributaries

Site #	Location	Insects	EPT	Sensitive	5 year trend
89	Bancroft Noles Drain: Lebo Park	6	1	1	Stable (trend after 3 samples)
60	Port Creek: Armstrong Road	10	1	1	Stable
14	Woods Creek: L Huron Metropark	10	4	1	Stable
87	Woods Creek: Martinsville Road	17*	3	2	↑ (trend after 4 samples)
88	Woods Creek: Renton Road	12	4	1	Stable (trend after 4 samples)

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Long-term Trends- Southeast Tributaries

Site #	Location	Length (years)	Insects	EPT	Sensitive
89	Bancroft Noles Drain: Lebo Park	1	n/a	n/a	n/a
60	Port Creek: Armstrong Road	7	Stable	↓ 3 (2000) 0 (2009)	Stable
14	Woods Creek: L Huron Metropark	13	Stable	Stable	Stable
87	Woods Creek: Martinsville Road	1	n/a	n/a	n/a
88	Woods Creek: Renton Road	1	n/a	n/a	n/a

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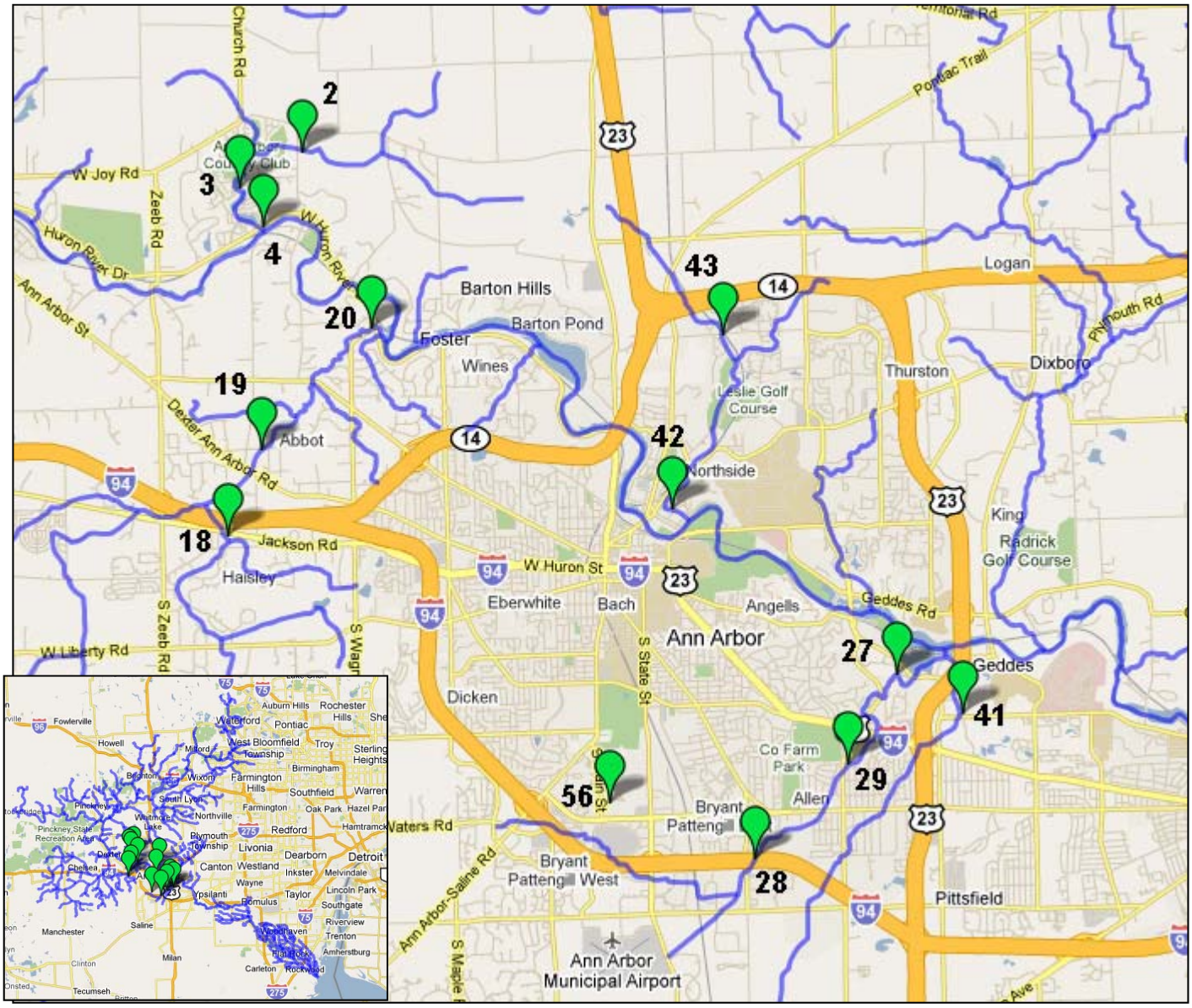

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October 2009- Southwest Tributaries

Site #	Location	Insects	EPT	Sensitive	5 year trend
2	Boyden Creek: Delhi	18	6	1	Stable
3	Boyden Creek: Golf Course	15	7	2	Stable
4	Boyden Creek: Huron River Drive	11	6	0	Stable
18	Honey Creek: Jackson Road	4	2	0	Stable
19	Honey Creek: Pratt Road	9	2	0	Stable
27	Malletts Creek: Chalmers	8	2	0	Stable
28	Malletts Creek: I-94	7	2	0	Stable
56	Malletts Creek: Main Street	9	1	0	Stable
29	Malletts Creek: Scheffler (April 2009)	4	1	0	Stable
41	Swift Run: Swift Run	10	1	0	Stable
42	Traver Creek: Broadway (April 2009)	5	2*	0	↑
43	Traver Creek: Dhu Varren Road	11	4	0	↑
20	Honey Creek: Wagner Road (April 2009)	10	3	2	Stable

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Long-term Trends- Southwest Tributaries

Site #	Location	Length (years)	Insects	EPT	Sensitive
2	Boyden Creek: Delhi	16	↑ 10 (1993) 18 (2009)	↑ 3 (1993) 6 (2009)	Stable
3	Boyden Creek: Golf Course	14	Stable	Stable	Stable
4	Boyden Creek: Huron River Drive	16	Stable	Stable	Stable
18	Honey Creek: Jackson Road	16	Stable	Stable	Stable
19	Honey Creek: Pratt Road	16	Stable	Stable	Stable
27	Malletts Creek: Chalmers	16	Stable	Stable	Stable
28	Malletts Creek: I-94	17	Stable	Stable	Stable
56	Malletts Creek: Main Street	10	↓ 16 (1999) 4 (2008)	Stable	Stable
29	Malletts Creek: Scheffler	17	Stable	Stable	Stable
41	Swift Run: Swift Run	17	↑ 4 (1993) 10 (2009)	Stable	Stable
42	Traver Creek: Broadway (April 2007)	17	Stable	Stable	Stable
43	Traver Creek: Dhu Varren Road	17	Stable	Stable	Stable
20	Honey Creek: Wagner Road	16	Stable	↓ 6 (1996) 3 (2009)	Stable

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