

2019/0247001

Instructions: Bold fields must be completed.

Station Summary			
Waterbody Name PINE RIVER		Waterbody ID Code 247800	Sample ID (YYYYMMDD-CY-FD) Macroinvertebrate 910247001
Sampling Location SM from Rd.		Database Key 210950259 207759371	
SWIMS Station ID 10007883		SWIMS Station Name PINE RIVER - APACHE ROAD	
Latitude 44.195847	Longitude -89.18284	Lat/Long Determination Method (circle) SWIMS SWDV GPS	Datum Used if using GPS WGS84 or NAD83
Basin (WMU) WOLF RIVER		Watershed Name PINE AND WILLOW RIVERS	County WAUSHARA

Sample and Site Descriptors	
Sample Collector (Last Name, First) MICHAEL MILLER	Project Name CENTRAL SANDS INFLUENCE OF PESTICIDES ON MACROIN

Sampling Device

D-Frame Kick Net
 Surber Sampler
 Eckman
 Ponar
 Artificial Substrate
 Hess Sampler
 Other: _____

Habitat Sampled

Riffle
 Run
 Pool
 Other
 Shoreline Composite
 Proportionally-Sampled Habitat
 Littoral Zone
 Profundal Zone
 Wetland

Total Sampling Time (min) 5	Estimated Area Sampled (m ²) 1	Number of Samples in Composite 1	Replicate No. _____ of _____
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Reason For Sampling

Least Impacted Reference
 Baseline
 Impact / Treatment Site
 Control Site
 Trend
 Other: _____

Water Temp. (C) 8.1	D.O. (mg/l) 12.11	D.O. (% sat.) 102.1	pH (su) 8.13	Conductivity (umhos/cm) 234.5	Transparency (cm) 122+
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Water Color <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Stained	Estimated Stream Velocity (m/s) <input type="checkbox"/> Slow (< 0.15 m/s) <input checked="" type="checkbox"/> Moderate (0.15 m/s - 0.5 m/s) <input type="checkbox"/> Fast (> 0.5 m/s)
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Measured Velocity circle units m/s or f/s	Average Stream Depth of reach (m) 1 m	Average Stream Width of reach (m) 5 m
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Composition of Substrate Sampled (Percent):

Bedrock: _____ Boulders (basketball or larger): _____ Rubble (tennisball to basketball): _____ Gravel (ladybug to tennisball): _____
 Sand: _____ Clay: _____ Silt/Muck: _____ Overhanging Vegetation: 70%
 Aquatic Macrophytes: 30% Leaf Snags: _____ Coarse Woody Debris: _____ Other (): _____

Embeddedness of Substrate at Sample Site (%) _____ Canopy Cover at Sample Site (%) _____

Stream and Watershed Descriptors

N = Not a problem
 U = Uncertain
 PL = Present, Low Impact
 PH = Present, High Impact

Factors that may be influencing Water Resource Integrity		Local	Water-shed	Factors that may be influencing Water Resource Integrity		Local	Water-shed
Biological				Chemical			
Algae: - Diatoms / Periphyton				Chlorine			
- Filamentous Algae				Dissolved Oxygen			
- Planktonic Algae				Nutrients (P, N...)			
Iron Bacteria				Toxics: - Inorganic (Metals)			
Macrophytes				- Organic (PCBs, pesticides...)			
Slimes				Other - Specify:			
Other - Specify:				Sources of Stream Impacts			
				Bank Erosion			
				Point Source - Specify:			
Physical				Pasturing of Livestock			
Bank Erosion				Runoff: - Barnyard			
Channelization: - Upstream		P		- Construction			
- Downstream		P		- Cropland			
Hydraulic Scour / Channel Incision				- Urban			
Impoundment: - Upstream				Septic Systems			
- Downstream				Tile Drainage - Organic Soils			
Low Flow				- Mineral Soils			
Sedimentation				Springs			
Sludge				Tributary(s)			
Thermal				Wetland			P
Turbidity				Other - Specify:			
Other - Specify:							

Comments *benthic habitat for insects limited by sandy substrate*

Special Instructions for Laboratory

C3
 91-7 D1 93-2 C1 94-5 A1
 94-13 92-7 92-9 91-5 = 134
 93-12 91-5 91-14 93-5
 92-16 94-25 94-2 92-5

For Lab Use Only		
Sample Sorter <i>Mary Jay Rebaio</i>	Taxonomist <i>Dimick, Jeffrey</i>	Estimated Percent of Sample Sorted <i>25%</i>
Date Processed <i>3-9-2023</i>	Specimens Saved <i>Subsample archived in ABC until Apr 2026</i>	

Taxa	Life Stage	Benthic Tally	Count	Taxonomic Reference	Condition	Unique Taxon
<i>Baetis brunneicolor</i>	L	0	20	Kleb 2016		
<i>Ephemerella invaria</i>	L	1	1	"		
<i>E. subvaria</i>	L	1	1	"		
<i>Mesochoreus</i>	L	1	1	"	imm	
<i>Leptophlebia</i>	L	1	2	MCB 2019	imm	
<i>Calopteryx maculata</i>	L	1	1	West May 2006		
<i>Coenagrionidae</i>	L	1	1	MCB 2019	dam	
<i>Coryidae</i>	A	1	1	"	dam	Y
<i>Neserocoryca atropodonta</i>	A	1	7	Hils 1984a		
<i>N. minorata</i>	A	1	6	"		
<i>H. semilucida</i>	A	1	1	"		
<i>H. vulgaris</i>	A	1	2	"		
<i>Baetis flavistriga</i> species complex	L	1	1	Kleb 2016		
<i>Brachycentrus americanus</i>	L	1	1	Hils 1985		
<i>B. occidentalis</i>	L	1	1	"		
<i>Lepidostoma</i>	L	xiii	13	MCB 2019		
<i>Cheumatopsyche</i>	L	1	2	"		
<i>Limnephilidae</i>	L	1	7	"	imm	N
<i>Pycnopsyche</i>	L	1	1	"		
<i>Molanna blanda</i>	L	1	1	Sherbwell 1971		
<i>Lepidoptera</i>	L	1	1	MCB 2019	terr?	
<i>Dibryophra</i>	L	1	1	"		
<i>Gyrinus lecontei</i>	A	1	1	Hils 1990		
<i>Atherix variegata</i>	L	1	1	Hils 1995		
<i>Simulium venustum</i> species complex	L	1	2	Acker et al 2004		
<i>S. vittatum</i> species complex	L	0-111	24	"		
<i>Gammarus pseudolimnoides</i>	A	1	31	Holsinger 1972		
<i>Physa</i>	A	x	10	Thompson 2016		
<i>Aspidium</i>	A	1-1111	39	"	imm	N
<i>P. dobium</i>	A	111	3	Mackie 2007		
<i>Lumbricolidae</i>	A	1	1	Thompson 2016	dam	
<i>Naidinae</i>	A	1	1	Kahn Brin 1999		
<i>Tubificoidae</i> (without hairs)	A	xiii	14	"		
<i>Spilostethus</i> Chironomidae <i>Polypodilum</i> (Tripodura) <i>scaberrimus</i>	L	1	2			
<i>Cladotanytarsus</i>	L	1	2	Ander et al 2013		
<i>Cryptochironomus</i>	L	1	2	"		

> 3 taxa, TVAL ≤ 2.0

18 > (0.1 x 93)