

Instructions: **Bold** fields must be completed.

| Station Summary | | | |
|---|------------------------------|--|---|
| Waterbody Name MILWAUKEE RIVER | | Waterbody ID Code 15000 | Sample ID (YYYYMMDD-CY-FD) 20201008-67-21 |
| Sampling Location Adjacent + Wildlife Drive | | Database Key 251163081 | |
| SWIMS Station ID 10037390 | | SWIMS Station Name MILWAUKEE RIVER AT WILDLIFE DR KEWAUSKUM | |
| Latitude 43.5272 | Longitude -88.2295 | Lat/Long Determination Method (circle) SWIMS SWDV GPS | Datum Used if using GPS WGS84 or NAD83 |
| Basin (WMU) MILWAUKEE RIVER | | Watershed Name EAST AND WEST BRANCHES MILWAUKEE R | County WASHINGTON |

| Sample and Site Descriptors | |
|---|--|
| Sample Collector (Last Name, First) Watkinson, Arthur | Project Name MILWAUKEE RIVER BASIN AQUATIC MACROINVERTEBRAT |

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) 3 | Number of Samples in Composite | Replicate No. _____ of _____ |
|---------------------------------------|--|--------------------------------|------------------------------|

Reason For Sampling

Least Impacted Reference Baseline Impact / Treatment Site
 Control Site Trend Other: **Milwaukee River Sampling**

| | | | | | |
|---------------------------------|----------------------------|-------------------------------|---------|---|----------------------------------|
| Water Temp. (C) 14.28 | D.O. (mg/l) 19.9 | D.O. (% sat.) 195.9 | pH (su) | Conductivity (umhos/cm) 707.3 | Transparency (cm) +120 |
|---------------------------------|----------------------------|-------------------------------|---------|---|----------------------------------|

Water Color

Clear Turbid Stained

Estimated Stream Velocity (m/s)
 Slow (< 0.15 m/s) Moderate (0.15 m/s - 0.5 m/s) Fast (> 0.5 m/s)

| | | |
|---|--|--|
| Measured Velocity circle units m/s or f/s | Average Stream Depth of reach (m) .9 | Average Stream Width of reach (m) 20 |
|---|--|--|

Composition of Substrate Sampled (Percent):

Bedrock: _____ Boulders (basketball or larger): _____ Rubble (tennisball to basketball): _____ Gravel (ladybug to tennisball): **80**

Sand: _____ Clay: _____ Silt/Muck: _____ Overhanging Vegetation: **20**

Aquatic Macrophytes: _____ Leaf Snags: _____ Coarse Woody Debris: _____ Other (_____): _____

Embeddedness of Substrate at Sample Site (%) **30** Canopy Cover at Sample Site (%) **20**

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: | | | |
| | | | | Pasturing of Livestock | | | |
| Bank Erosion | | | | Runoff: - Barnyard | | | |
| Channelization: - Upstream | | | | - Construction | | | |
| - Downstream | | | | - 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 | | | |
| Turbidity | | | | Other - Specify: | | | |
| Other - Specify: | | | | | | | |

Comments

Special Instructions for Laboratory

For Lab Use Only

| | | | | | |
|----------------|----------------------|-----------------|---|------------------------------------|-------------|
| Sample Sorter | <i>Cowh, Natalie</i> | Taxonomist | <i>Dimick, Jeffrey</i> | Estimated Percent of Sample Sorted | <i>10 %</i> |
| Date Processed | <i>1/11/2021</i> | Specimens Saved | <i>Subsample archived in ABL until Feb 2024</i> | | |

B2:2-25 E3:3-30 ~~B2:4~~
E3:4-11 B2:3-27 ~~E3:2~~
B2:1-24 E3:1-15 132

| Taxa | Life Stage | Bench Tally | Count | Taxonomic Reference | Condition | Unique Taxon |
|--|------------|-------------|-------|-------------------------------|-----------|--------------|
| <i>Isuraeon anoka</i> | L | 1 | 1 | Kub 2016 | | |
| <i>Labrobæticus proninguis</i> | L | 1 | 1 | " | | |
| <i>Paracloeodes minutus</i> | L | 1 | 1 | " | | |
| <i>Leucocatta</i> | L | 11 | 2 | Merrillum B 2019 | | |
| <i>Stenacron</i> | L | 1 | 1 | " | imm | |
| <i>Boyeria virosa</i> | L | 1 | 1 | Tennissen 2019 | | |
| <i>Calopteryx maculata</i> | L | 1 | 1 | West May 2006 | | |
| <i>Hetaerina</i> | L | 11 | 2 | Merrillum B 2019 | imm | N |
| <i>H. americana</i> | L | x/ | 15 | West May 1986 2006 | 2006 | |
| Coenagrionidae | L | 1 | 1 | Merrillum B 2019 | imm | N |
| <i>Argia moesta</i> | L | 11 | 2 | West May 2006 | | |
| <i>Enallagma</i> | L | 1 | 1 | Merrillum B 2019 | imm | |
| <i>Hesperocorixa atopocenta</i> | A | 1 | 1 | Hils 1984a | | |
| <i>Neophaea striola</i> | A | 1 | 1 | " | | |
| <i>Taeniopteryx</i> | L | B | 40 | Merrillum B 2019 | imm | |
| <i>Protophila</i> | L | 0 | 2 | " | | |
| <i>Ceratopsyche merosa bifida form</i> | L | 1 | 1 | Schm Hils 1986 | | |
| <i>Chumatopsyche</i> | L | 1 | 1 | Merrillum B 2019 | | |
| <i>Hydropsyche cyanis</i> | L | 11 | 2 | Schm Hils 1986 | | |
| Leptoceridae | P | 1 | 1 | Merrillum B 2019 | | Y |
| <i>Oecetis</i> | L | 11 | 2 | " | imm | |
| Limnephilidae | L | -11 | 8 | " | imm | |
| <i>Neureclipsis</i> | L | 1 | 1 | " | | |
| <i>Nyctophylax</i> | L | 1 | 1 | " | | |
| <i>Leptodesmus affinis</i> | A | 111 | 3 | Hils 1994 | | |
| <i>Dubiraphia</i> | L | 111 | 1 | Merrillum B 2019 | | |
| <i>Stenelmis</i> | L | -1 | 6 | " | | N |
| <i>S. crenata</i> | A | 11 | 2 | Hils Schm 1992 | | |
| <i>Psephenus herricki</i> | L | 1 | 1 | " | | |
| <i>Cyphon = Contacyphon = Elodes</i> | L | -111 | 8 | Hils 1995 | | |
| <i>Elophila</i> | L | 1 | 1 | Merrillum B 2019 | | |
| <i>Cricotopus (Cricotopus)</i> | P | 1 | 1 | Wieder 1986 | | N |
| <i>Hemerodromia</i> | L | 1 | 1 | Merrillum B 2019 | | |
| <i>Chrysops</i> | L | 1 | 1 | " | | |
| <i>Gammarus pseudolimnaceus</i> | A | 1 | 1 | Hils 1972 | | |
| <i>Nyalilla azteca</i> | A | x11 | 12 | Sawick et al 2015 | | |
| Dugesidae | A | 1 | 1 | Thorp Bog 2016 | | |
| <i>Ferrissia</i> | A | 1 | 1 | " | can | |

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2018 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2019 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 2020 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 |
| 2021 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 2022 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 2023 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2024 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 2025 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 |
| 2026 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 2027 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 2028 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 2029 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 2030 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 |
| 2031 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 2032 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 2033 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2034 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 2035 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 2036 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2037 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 2038 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 |
| 2039 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 2040 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 2041 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2042 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 2043 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 |
| 2044 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 2045 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 2046 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2047 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 2048 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 2049 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2050 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 2051 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 |
| 2052 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 2053 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 2054 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2055 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 2056 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 |
| 2057 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 2058 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 2059 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 2060 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 2061 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 |
| 2062 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 2063 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 2064 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2065 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 2066 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 2067 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2068 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 2069 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 |
| 2070 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 2071 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 2072 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2073 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 2074 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 |
| 2075 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 2076 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 2077 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2078 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 2079 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 2080 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2081 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 2082 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 |
| 2083 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 2084 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 2085 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2086 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 2087 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 |
| 2088 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 2089 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 2090 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 2091 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 2092 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 |
| 2093 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 2094 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 2095 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2096 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 2097 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 2098 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2099 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 2100 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 |

