

Hennepin County
Wetland Health Evaluation Program
2017



Staring Lake, Eden Prairie. Photo by Rod Flancher

The Wetland Health Evaluation Program (WHEP) is a citizen volunteer wetland monitoring program that is focused on educating the public on wetland ecology and quality issues; as well as, providing local governments with wetland planning information. WHEP is currently active in Dakota and Hennepin counties, with a number of cities sponsoring local monitoring teams. The MPCA was instrumental in developing the WHEP sampling invertebrate and Citizen Plant Wetland Assessment Guide, which were adapted from the depressional wetland Indices of Biological Integrity (IBI). WHEP is coordinated in Hennepin County by staff in Environment and Energy. For more information please contact:

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Hennepin County Project Partners:

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 Contact: Steve Gurney
 Team Leader: Jim Drake
- **City of Eden Prairie**, Public Works
 Contact: Environmental Coordinator, Leslie Stovring
 Team Leader: Abigail Hammond
- **City of Minnetonka** Natural Resources
 Contact: Aaron Schwartz, Natural Resource Specialist
 Team Leader: Kristine Maurer, David Kuhlmann
- **Hennepin County wetlands**
 Contact: Mary Karius, David Thill Hennepin County Environment and Energy
- **Minneapolis Park and Recreation Board**, Environmental Operations Department
 Contact: Rachel Crabb
 Team Leader: Ann Journey
- **Mississippi Park Connection/National Park Service**
 Contact: Katie Nyberg
 Team Leader: Ann Journey
- **Elm Creek Watershed Management Commission**
 Contact: Judie Anderson, JASS; Richard Brasch, Three Rivers Park District
 Team Leader: Alex Yellick
- **Pioneer/Sarah Watershed Management Commission**
 Contact: Judie Anderson, JASS; Jim Kujawa, Kristen Barta, Hennepin County Environment and Energy
 Team Leader: Alex Yellick
- **Shingle Creek Watershed Management Commission**
 Contact: Diane Spector, Wenck and Assoc.
 Team Leader: DeeDee Crist
- **West Mississippi Watershed Management Commission**
 Contact: Diane Spector, Wenck and Assoc.
 Team Leader: DeeDee Crist
- **Minnesota Pollution Control Agency**
 Trainers: Joel Chirhart, Mark Gernes
- **Normandale Community College**

What is Hennepin County's Wetland Health Evaluation Program (WHEP)?

For the past two decades, WHEP has provided a great opportunity for Hennepin County residents to connect with the wetlands in their communities and become advocates for their sustainability.

Watershed management organizations and cities contract with Hennepin County to administer volunteer water quality monitoring programs. WHEP is designed to collect data and provide hands-on environmental education experiences for volunteers. The volunteers use protocols approved by the Minnesota Pollution Control Agency to gather a variety of organisms. Their presence or absence can indicate a possible change in water quality. This biological data is often used to assess the long-term health of water and is complimentary to chemical analysis and other data used to determine water quality.

How is the WHEP data used?

The data collected is primarily used by watershed management organizations and cities. Some organizations use the data to communicate to residents about the health of their local water resource. Some organizations have used the data to identify or track impacts of restoration efforts. They may also use the data as a historic catalog of specific organisms that have been collected and identified. For example, the county's program has data going back 17 years on Minnehaha Creek. In many cases, organizations use the data to fulfill the education requirement for storm water management plans.

"Quick glances from the street only provide a very basic assessment of the types of plants that may be present compared to the plot sampling and careful ID work of the WHEP volunteers. Much of the information collected to date has indicated that many of the wetlands that have been examined fare better than expected, have more species than are visible from edge, and may contain some surprises that we would never have been discovered through other means." – Aaron Schwartz, *Natural Resource Specialist, City of Minnetonka*

DATA KEY

INVERTEBRATES

Kinds of Leeches

The # of Leeches present in the sample; number is higher in healthier wetlands.

Kinds of Odonata

This measures the number of dragonflies and damselflies in a sample. This number is higher in healthier wetlands.

ETS

This metric adds the number of mayfly larvae (Ephemeroptera), caddisfly larvae (Trichoptera), dragonfly presence (D), and fingernail clam presence (Sphaeriidae). This collection is sensitive to pollution.

Kinds of Snails

This measures the number of Snails TYPES in the wetland. The higher the number the better quality wetland.

Total Invertebrate Taxa

The total number of invertebrate taxa is the strongest indicators of health in a wetland. This is an overall inventory of invertebrates, the higher the number the better diversity.

VEGETATION

Vascular Genera

This measures the richness or number of different kinds of vascular plants.

Nonvascular Genera This measures the richness or number of different kinds of nonvascular plants such as mosses, liverworts and lichens.

Grasslike Genera This measures the richness of a specific type of vascular plants including grasses, sedges and related genera.

Carex Cover This measures the extent of coverage by member of the genus Carex or sedges. Abundance increases in healthier wetlands.

Utricularia Presence Bladderwort is a group of carnivorous plants that feed on macroinvertebrates. Its presence suggests a good condition.

Aquatic Guild This metric measures the richness of the aquatic plants which tends to decrease as human disturbance increases.

Persistent Litter This measures the abundance of certain plants whose leaves and stems decompose very slowly. The greater abundance means more nutrients are tied up in undecomposed plants. This will increase with increased disturbance.

SCORING SUMMARY

Invertebrates

19 - 25 Excellent
 12 - 18 Moderate
 5 - 11 Poor

Vegetation

26-35 Excellent
 16-25 Moderate
 7-15 Poor



Odonata. Photo by Rod Flancher

2017 Wetlands	Invertebrate Score	Vegetation Score
Elm Creek Watershed Commission		
EC – 1 Blundell Restoration	11 - Poor	17 – Moderate
EC – 2 Bulduc Restoration	7 - Poor	15 – Poor
EC – 3 Bulduc wetland	13 - Moderate	15 - Poor
EC-4 Cedar Hollow, Plymouth	7 - Poor	13 – Poor
EC-5 NW Greenway, Plymouth	17 - Moderate	7 - Poor

Site Summaries

Elm Creek Watershed

Team Leader: Alex Yellick

Team Members: Neil Buelow, Judy Hovell, Carolyn Mueller, Kevin Smith, Thomas Saba,

Number of Hours: 84

Site	Notes	Invertebrate Community	Vegetation Community
Elm Creek sites			
EC-1 Blundell Restoration	This is a wetland restoration in Rogers. We are monitoring to check how it is doing. Data will help us track how wetland restorations fare over time as well as making sure this one is holding up and no additional work is needed.	11 – Poor	17- Moderate
EC-2 Bulduc Restoration	This is a wetland restoration in Rogers. We are monitoring to check how it is doing. Data will help us track how wetland restorations fare over time as well as making sure this one is holding up and no additional work is needed.	7 – Poor	15 – Poor
EC-3 Bulduc Wetland	This wetland is part of the Bulduc properties where a restored wetland is also being monitored. This wetland is east of the entry road and is being monitored to determine general condition.	13 - Moderate	15 - Poor
EC-4 Cedar Hollow	This wetland is on city property in Plymouth, very urbanized watershed with developments, nestled in a maple-basswood forest. The area surrounding the wetland and the wetland itself is being developed into a new park system. We will use this data to assess the condition of the water resource given its location in the watershed.	7 – Poor	13 – Poor
EC-5 Northwest Greenway	This site is part of a large wetland/floodplain complex that the Elm Creek flows through. A pedestrian bridge is being built over the creek on north edge of this complex. Ultimately we want to see impacts of bridge/trail on this wetland. The Watershed Organization will find it useful for evaluating impacts of infrastructure.	17 - Moderate	7 - Poor