



Minnesota Wetland Health Evaluation Program 2011



Hennepin County
Environmental Services





The Minnesota Wetland Health Evaluation Program is coordinated in Hennepin County by the Department of Environmental Services and in Dakota County by the Department of Water Resources.

More information on Minnesota WHEP can be obtained from the website:

www.mnwhep.org

Or by contacting:

Mary Karius
Hennepin County
Environmental Services
700 Fourth Ave., S, Suite 700
Minneapolis, MN 55415
612-596-9129



mary.karius@co.hennepin.mn.us

Paula Liepold
Dakota County
Water Resources
14955 Galaxie Ave
Apple Valley, MN 55124
952-891-7117



Hennepin County Project Partners:



Minnesota Pollution
Control Agency



elm creek
Watershed Management Commission



city of
bloomington, minnesota



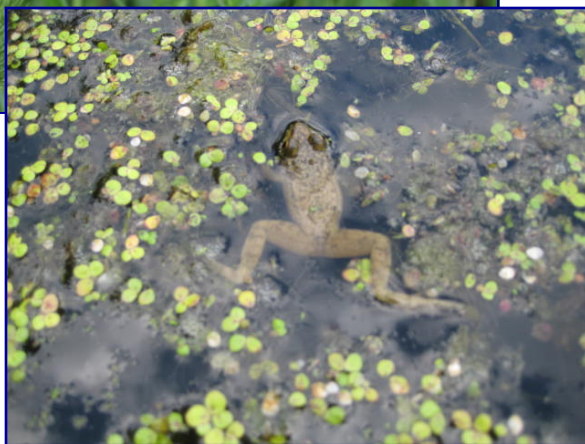
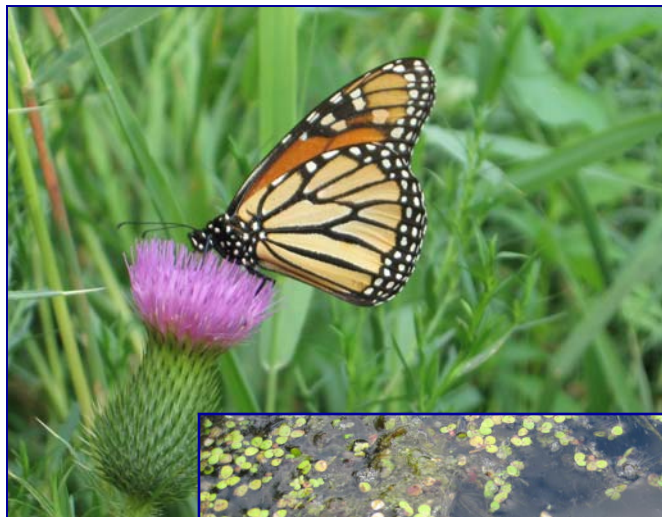
Minneapolis Park & Recreation Board
"playing for life"



Thank You Hennepin County WHEP Volunteers!

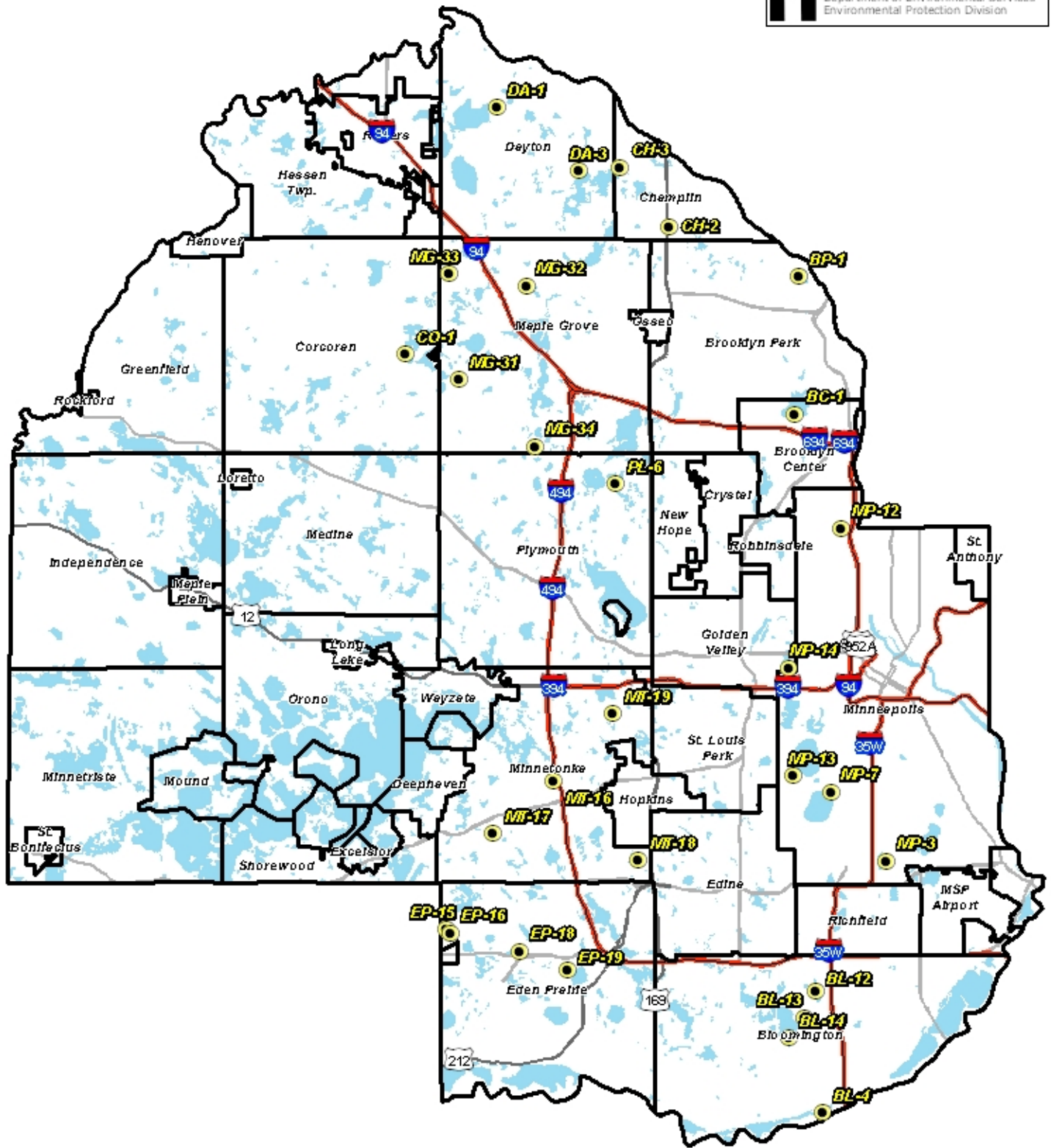
The success of the Wetland Health Evaluation Program (WHEP) would not be possible without the dedication and commitment from our volunteers. Thanks also goes out to our team leaders who contribute long hours and passion to this program. Our volunteers contributed more than **1,000 hours** to WHEP in 2011 valued at more than **\$20,000** Thank you to everyone involved in WHEP!





2011 Hennepin County WHEP

| Team | Team Leaders | Sponsors |
|--------------|-----------------|---|
| Bloomington | Angel Samolytz | City of Bloomington |
| Eden Prairie | Charlene Gruber | City of Eden Prairie |
| Minneapolis | Ann Journey | Minneapolis Park and Recreation Board |
| Minnetonka | Patty Acomb | City of Minnetonka |
| Watershed #1 | Jen Poate | Shingle Creek Watershed Management Commission Elm Creek Watershed Management Commission |
| Watershed #2 | Cynthia Ward | Shingle Creek Watershed Management Commission West Mississippi Watershed Management Organization |



2010 Hennepin County Wetland Health Evaluation Sites



0 1 2 3 4 5 6 Miles

Legend

- 2010 WHEP Monitoring Sites
- Municipal Boundaries
- Public Waters Inventory - DNR

Source Information:

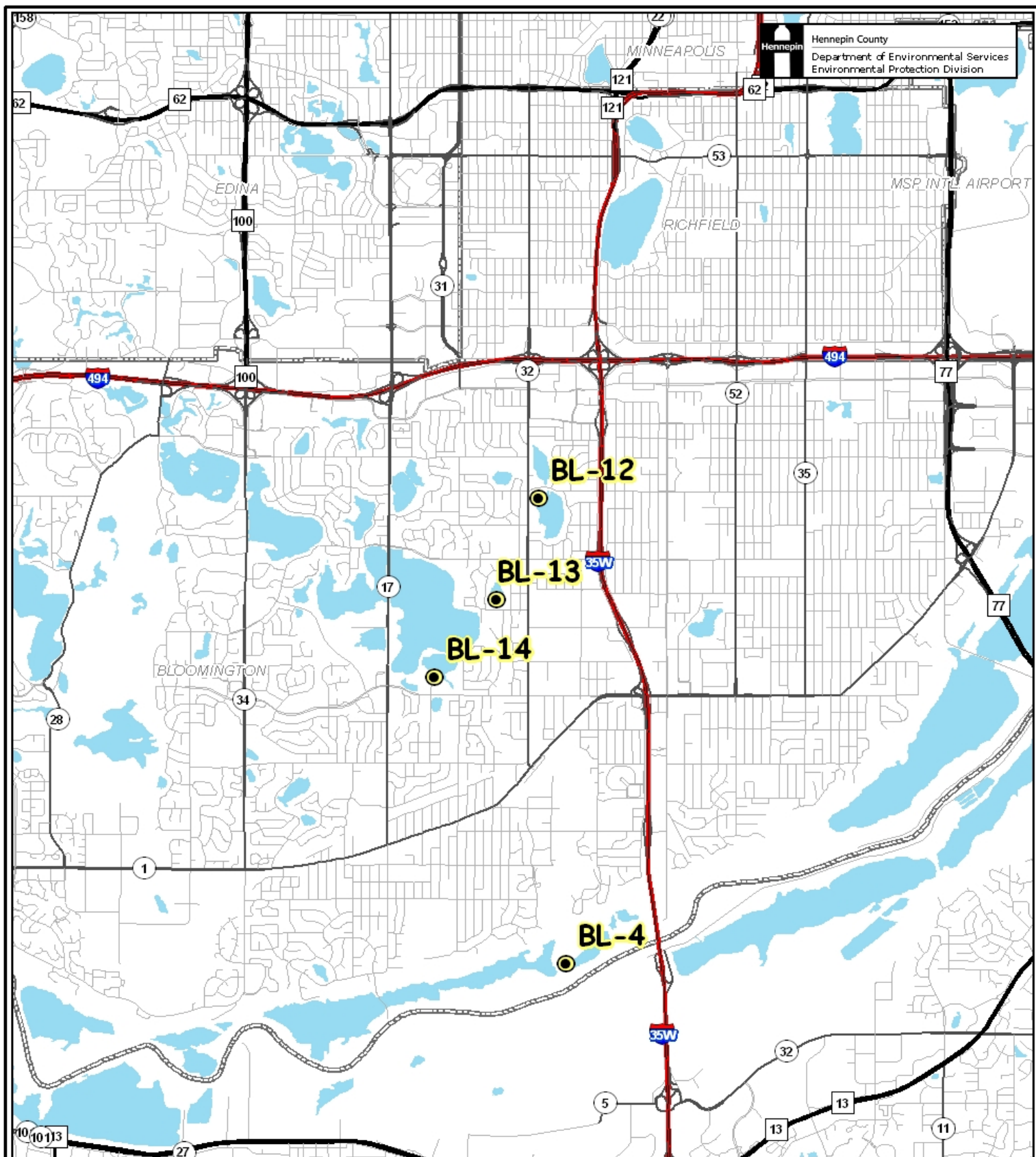
Minnesota Department of Natural Resources
 Hennepin County Tax Payer Services Department
 Hennepin County Survey Department
 Hennepin County Dept. of Environmental Services

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This map is a compilation of records, information and data located in various city, county, state and federal offices, affecting the area shown, and is to be used for reference purposes only. Hennepin County is not responsible for any inaccuracies herein contained.

Hennepin County Wetlands Monitored in 2011

| | Macroinvertebrate | | Vegetation | |
|------------------------------|-------------------|--------------------|------------|-------------------|
| | Score | Quality | Score | Quality |
| BLOOMINGTON | | | | |
| BL-12 Lower Penn Lake | 10/10 | Poor/Poor | 7/9 | Poor/Poor |
| BL-13 Barthell's Pond | 16 | Moderate | 9 | Poor |
| BL-14 Ice Garden Pond | 16 | Moderate | 21 | Moderate |
| BL-15 Timberglade Pond | 12 | Poor | 21 | Moderate |
| EDEN PRAIRIE | | | | |
| EP-20 Round Lake | 18/24 | Moderate/Excellent | 17/19 | Moderate/Moderate |
| EP-21 Round Lake Park East | 22 | Moderate | 23 | Moderate |
| EP-22 Technology Drive | 20 | Moderate | 25 | Moderate |
| EP-23 Braxton Lake Pond | 18 | Moderate | 23 | Moderate |
| MINNEAPOLIS | | | | |
| MP-3 Diamond Lake | 8 | Poor | 11 | Poor |
| MP-7 Robert's Bird Sanctuary | 22/23 | Moderate/Moderate | 21/23 | Moderate/Moderate |
| MP-12 Webber Pond | 14 | Poor | 29 | Excellent |
| MP-13 SW Calhoun | 14/10 | Poor/Poor | 21/25 | Moderate/Moderate |
| MINNETONKA | | | | |
| MT-16 Spring Lake | 12/16 | Poor/Moderate | 21/15 | Moderate/Poor |
| MT-17 Lake Charlotte Park | 18 | Moderate | 15 | Poor |
| MT-18 Green Circle Park | 14 | Poor | 21 | Moderate |
| MT-19 Nottingham Court | 16 | Moderate | 21 | Moderate |
| WATERSHED #1 | | | | |
| DA-1 Engstrom Easement | 20 | Moderate | 15 | Poor |
| DA-2 French Lake | 18 | Moderate | 13 | Poor |
| CO-1 Corcoran City Hall | 18/20 | Moderate/Moderate | 17/17 | Moderate |
| HAS-1 Signet Pond | 14 | Poor | 13/17 | Poor/Moderate |
| WATERSHED #2 | | | | |
| BP-1 Environmental Preserve | 18/21 | Moderate/Moderate | 21/18 | Moderate/Moderate |
| BC-1 Palmer Lake Park | 18/18 | Moderate/Moderate | 21/21 | Moderate/Moderate |
| CH-1 Zealand Pond | 16 | Moderate | 15 | Poor |

Team data = BLACK; Cross check data = BLUE; Quality Assurance check = RED





Bloomington

2011 Metric Scores

| Metric | BL-12 Lower Penn Lake | BL-13 Barthell's Pond | BL-14 Ice Garden Pond | BL-15 Timberglade Pond |
|---------------------------------|----------------------------------|------------------------------|------------------------------|------------------------------|
| # Kinds of Leeches | 1/1 | 1 | 5 | 3 |
| % Corixidae | 5/3 | 5 | 1 | 1 |
| # Kinds of Odonata | 1/1 | 3 | 1 | 1 |
| # ETSD | 1/1 | 3 | 1 | 3 |
| # Kinds of Snails | 1/1 | 1 | 3 | 1 |
| Total Invertebrate Taxa | 1/3 | 3 | 5 | 3 |
| Invertebrate Totals (30 Max) | 10/10 Poor/Poor | 16 Moderate | 16 Moderate | 12 Poor |
| Vascular Genera | 1/1 | 1 | 3 | 3 |
| Nonvascular Genera | 1/5 | 1 | 1 | 3 |
| Grasslike Genera | 1/1 | 1 | 3 | 1 |
| <i>Carex</i> Cover | 1/1 | 1 | 5 | 3 |
| <i>Utricularia</i> Presence | 1/1 | 1 | 5 | 1 |
| Aquatic Guild | 1/1 | 1 | 3 | 5 |
| Persistent Litter | 1/1 | 3 | 1 | 5 |
| Vegetation Totals (35 Max) | 7/9 Poor/Poor | 9 Poor | 21 Moderate | 21 Moderate |

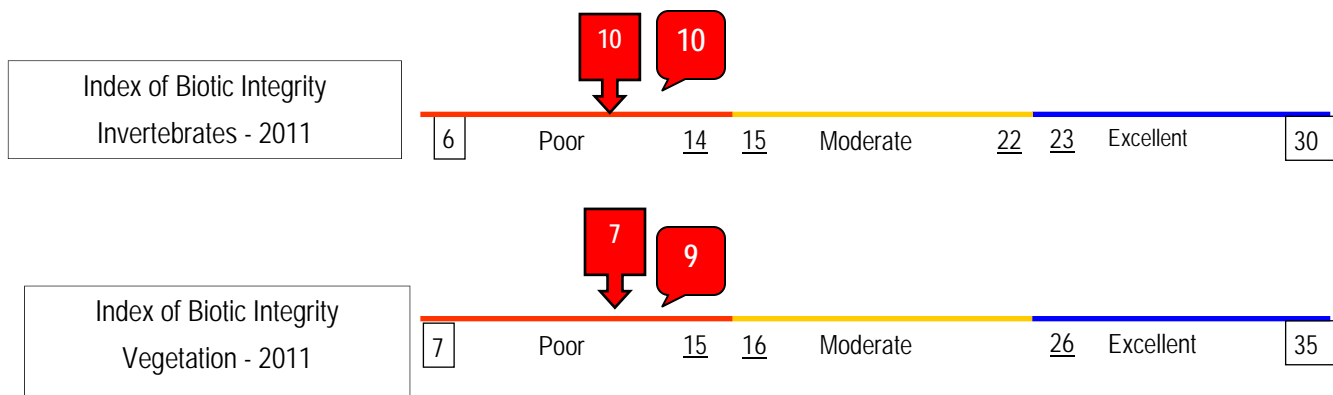


BLOOMINGTON

Site: BL-12

Lower Penn Lake

Lower Penn Lake sits immediately east of the 8600 block of Penn Avenue South. This wetland is 32 1/2 acres and is surrounded on 3 sides by residential homes. Inlets on the north side of Lower Penn include one from Upper Penn Lake. This area is heavily impacted by stormwater and includes drainage from 35W, 494, and the Best Buy campus on Penn and 494. This is the second year of monitoring at this site.



| Monitoring Results BL-12 | | | |
|--------------------------|-------------|-----------------|---------------------------|
| Year | 2009 | 2010 | 2011 |
| Invertebrate | <u>Poor</u> | <u>Poor</u> | <u>Poor</u> / <u>Poor</u> |
| Vegetation | <u>Poor</u> | <u>Moderate</u> | <u>Poor</u> / <u>Poor</u> |

= cross check

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |

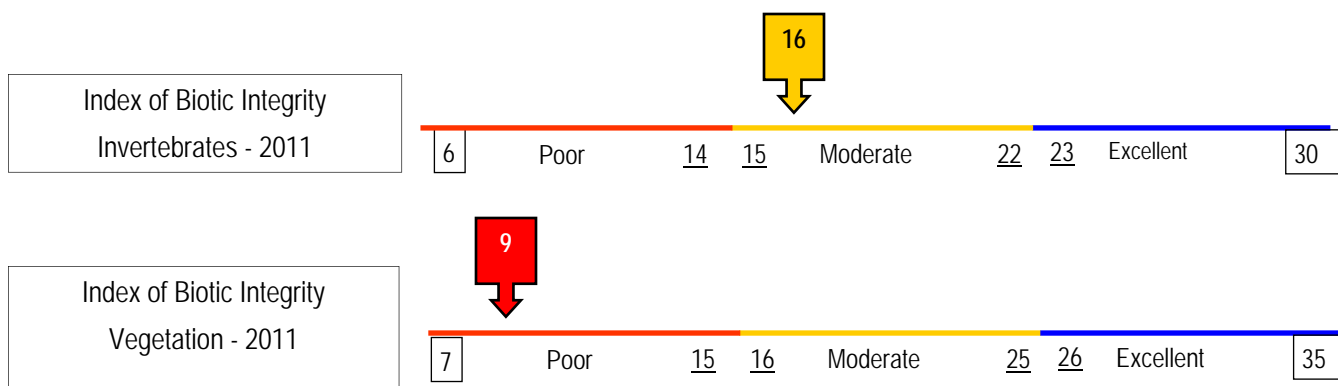


BLOOMINGTON

Site: BL-13

Barthel's Pond

Barthel's Pond was a late addition to the Bloomington site list in 2009. Because the site was added due to safety concerns at the original site, the team was able to collect only the vegetation data. This wetland is a Type 4 that is just over 6 acres in size. The pond is surrounded by residential homes and an elementary school. There are three inlets to this pond and secondary drainage includes Lower Penn Lake. Much of the surrounding lots mow to the wetland's edge.



| Monitoring Results BL-13 | | | |
|--------------------------|-----------------|-----------------|-----------------|
| Year | 2009 | 2010 | 2011 |
| Invertebrate | No sample | <u>Moderate</u> | <u>Moderate</u> |
| Vegetation | <u>Moderate</u> | <u>Poor</u> | <u>Poor</u> |

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |



BLOOMINGTON

Site: BL-14

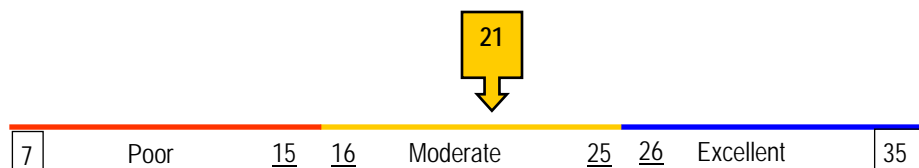
Ice Garden Pond

This wetland is located adjacent to the Bloomington City Ice Facility called the Ice Garden. This wetland is a large Type 5 wetland with several acres of open water. This wetland is bordered on the near north and west side by Marsh Lake Park, on the east by single family home subdivision and the south by the Ice Garden facilities and 98th Street. A walking path surrounds the northern perimeter of the wetland. Vegetation in the immediate vicinity is shrubs, trees and in the wetland itself, cattails.

Index of Biotic Integrity
Invertebrate - 2011



Index of Biotic Integrity
Vegetation - 2011

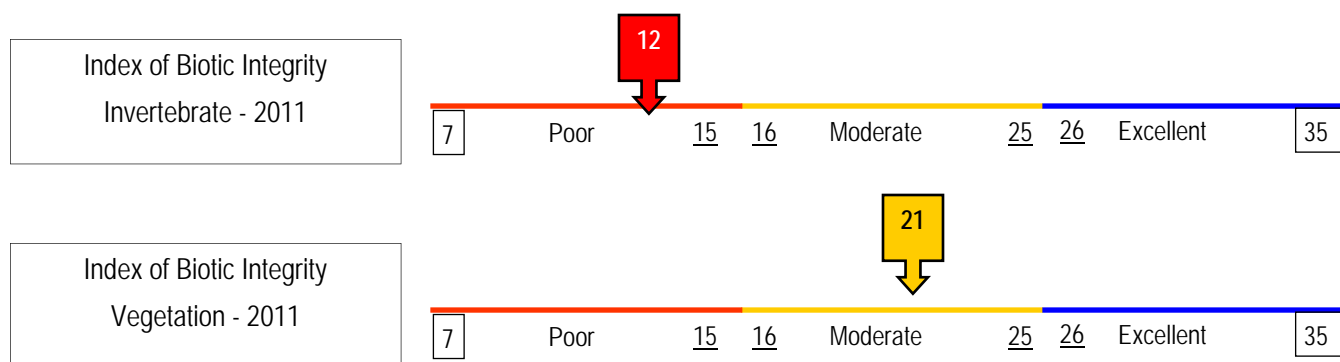


| Monitoring Results BL-14 | | |
|--------------------------|-----------------|-----------------|
| Year | 2010 | 2011 |
| Invertebrate | <u>Moderate</u> | <u>Moderate</u> |
| Vegetation | <u>Moderate</u> | <u>Moderate</u> |

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |

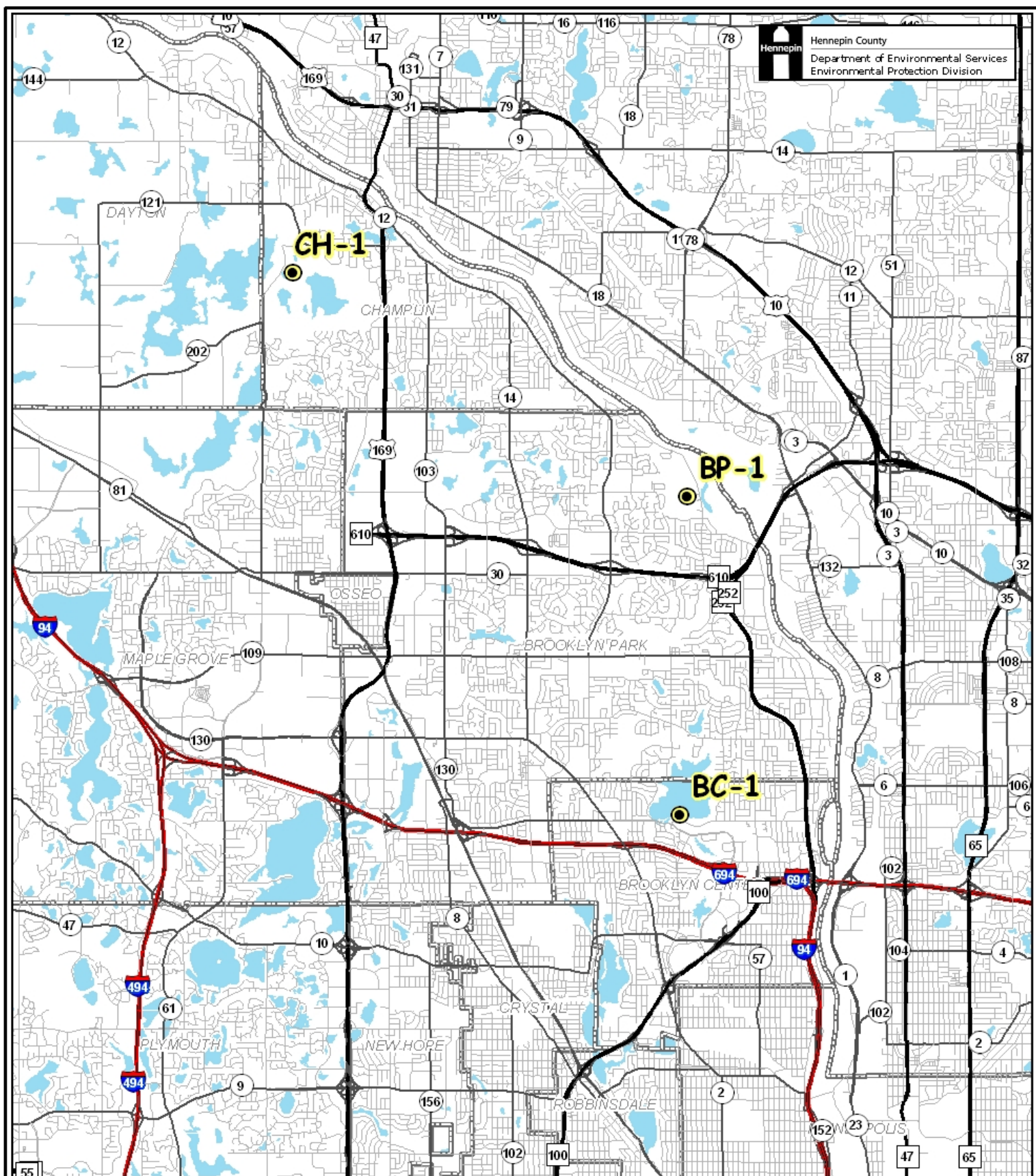


This wetland was added in 2011 after high water kept the Bloomington team from monitoring the reference wetland of Nine Mile Creek. Timberglade Pond is bordered by 102nd Street to the north, Wildwood Rd. to the east and Timberglade Road to the south. Mature woods surround this pond with homes along the west and east shore. Development appears imminent along the south shore as well. This site is across 102nd St. from Hyland Greens Golf Course.



| Monitoring Results BL-15 | |
|--------------------------|-----------------|
| Year | 2011 |
| Invertebrate | <u>Poor</u> |
| Vegetation | <u>Moderate</u> |







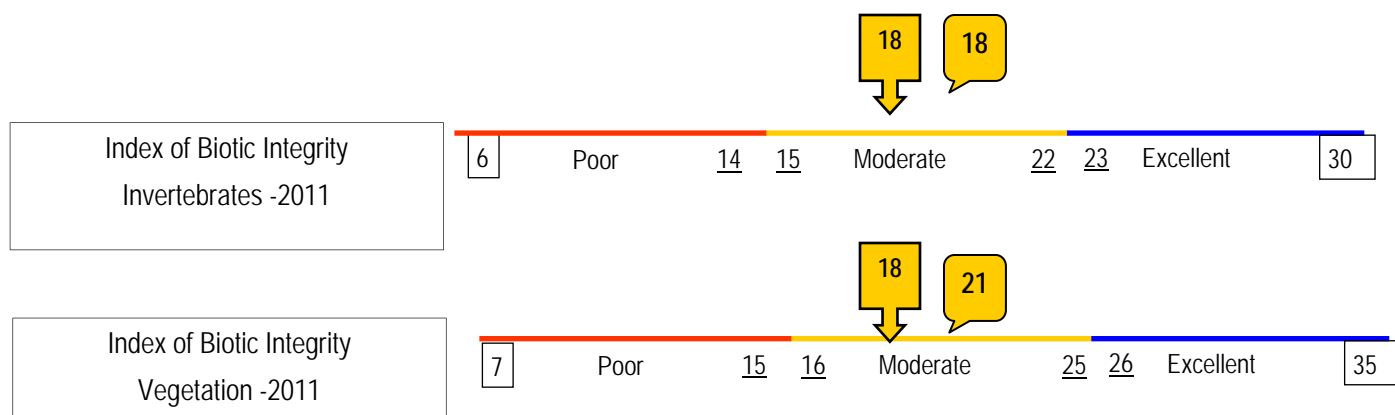
Brooklyn Center/Brooklyn Park 2011 Metric Scores

| Metric | BC-1 Palmer Lake | BP-1 Env Preserve |
|---------------------------------|---------------------|----------------------------|
| # Kinds of Leeches | 5 | 1/1 |
| % Corixidae | 1 | 3/3 |
| # Kinds of Odonata | 1 | 1/3 |
| # ETSD | 3 | 3/5 |
| # Kinds of Snails | 1 | 5/1 |
| Total Invertebrate Taxa | 5 | 5/5 |
| Invertebrate Totals (30 Max) | 18 Moderate | 18/18 Moderate/Moderate |
| Vascular Genera | 3 | 3/3 |
| Nonvascular Genera | 1 | 3/1 |
| Grasslike Genera | 3 | 3/3 |
| <i>Carex</i> Cover | 1 | 3/5 |
| <i>Utricularia</i> Presence | 1 | 1/1 |
| Aquatic Guild | 1 | 3/3 |
| Persistent Litter | 1 | 5/5 |
| Vegetation Totals (35 Max) | 11 Poor | 21/21 Moderate/Moderate |



Brooklyn Center Site: BC-1 Palmer Lake

This small wetland is part of the Palmer Lake complex and lies fully surrounded by vegetation on the southwest corner of the lake. Just south of the wetland is a park-and-ride lot off of County Road 130 (or 69th Avenue). There is a public landing adjacent to this wetland and a trodden path for access.



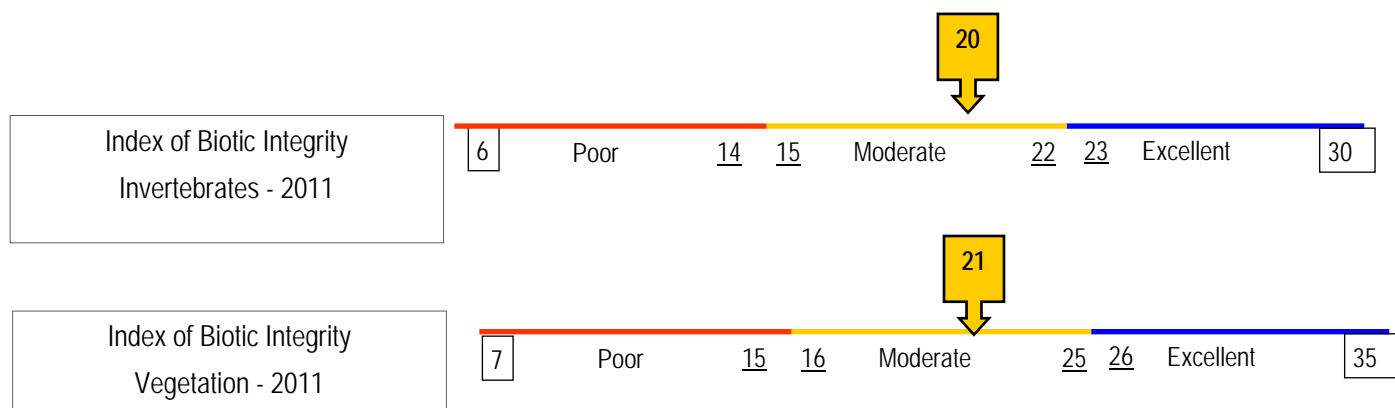
| Monitoring Results BC-1 | | | |
|-------------------------|------------------|------------------|--------------------------|
| Year | 2006 | 2010 | 2011 |
| Invertebrate | <u>Excellent</u> | <u>Excellent</u> | <u>Moderate/Moderate</u> |
| Vegetation | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate/Moderate</u> |

| Scale | |
|-----------|-------------|
| Excellent | <div></div> |
| Moderate | <div></div> |
| Poor | <div></div> |



Brooklyn Park Site: BP-1 Environmental Preserve

This site is located across the street from the Coon Rapids Dam on Russell Avenue. It lies within the Brooklyn Park Environmental Area and is surrounded by a mixture of tall grasses, shrubs and large trees. There is high foot and bicycle traffic along this wetland. There is a long gentle slope into the water from the upland area. The bottom is moderately mucky with some solid areas. There is an outlet at the northern edge of the site and an inlet at the southern end. The water level fluctuates significantly.



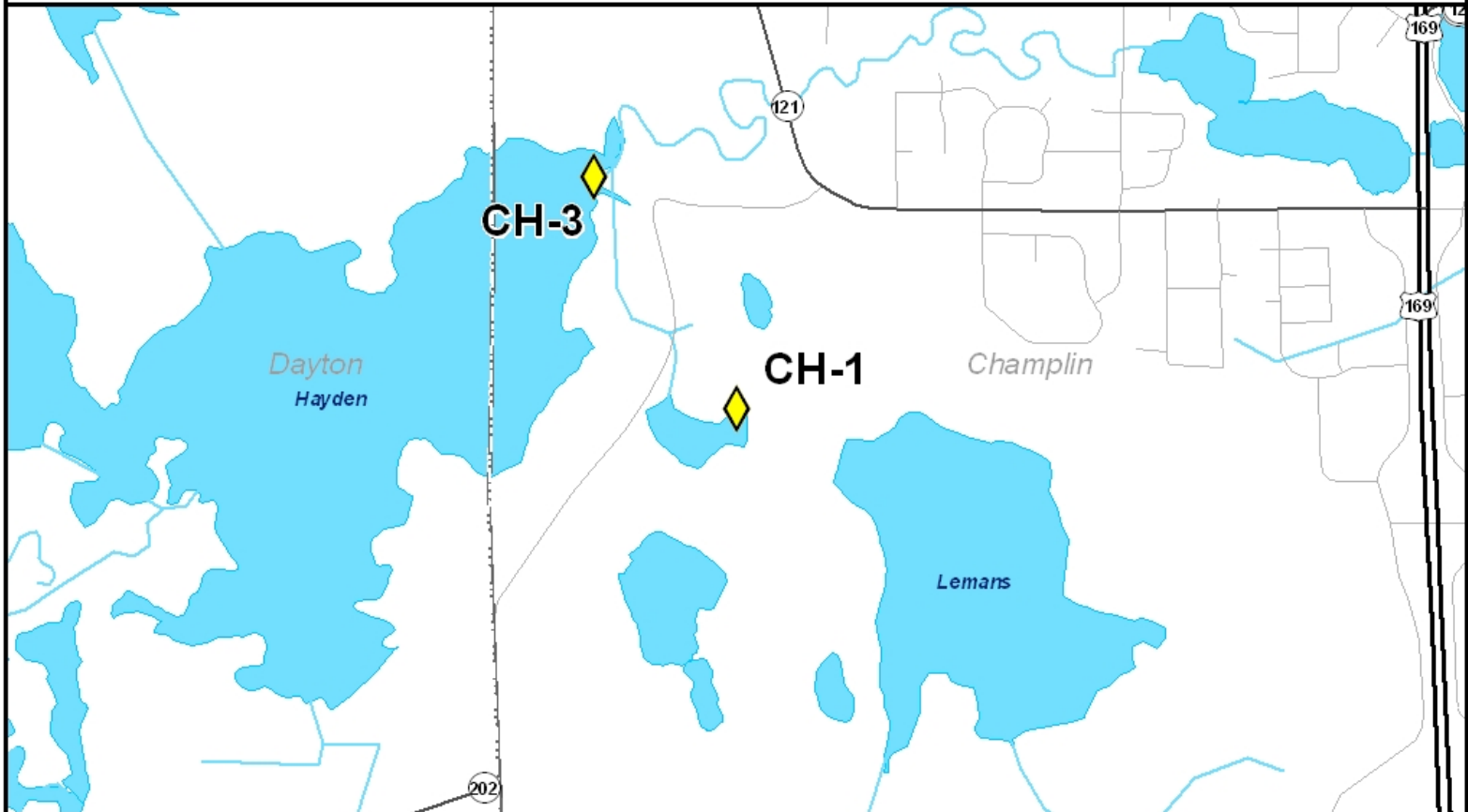
Monitoring Results BP-1

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|--------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Invertebrate | <u>Excellent</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> |
| Vegetation | <u>Poor</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> |

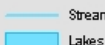


Wetland Health Evaluation Program

Wetland Site: CH-1



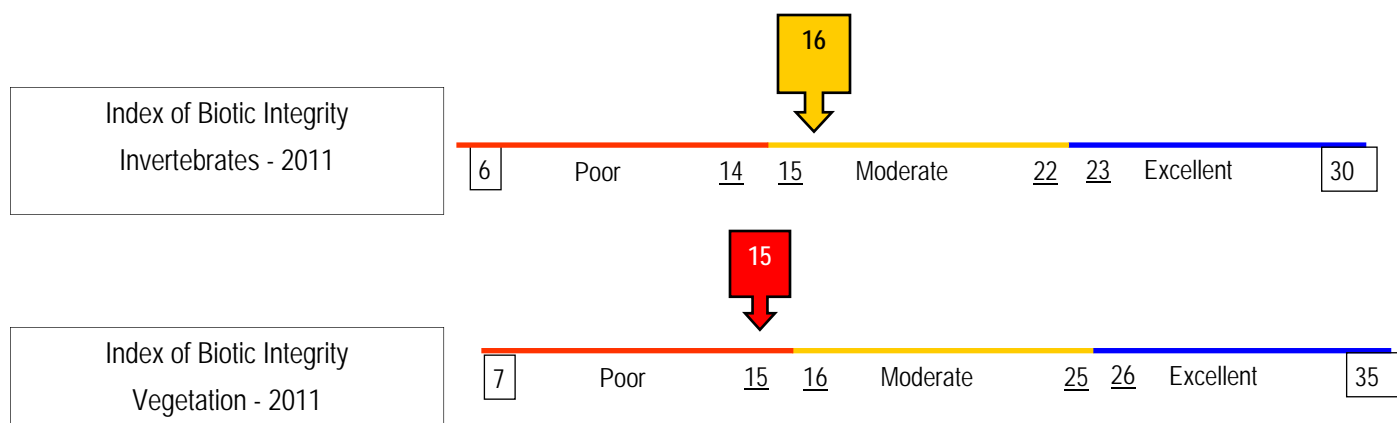
WHEP Sites





Champlin
Site: CH-1
Zealand Pond

This wetland is directly adjacent to Highway 169 on the eastern side. This wetland is the smaller of the Zealand Pond complex and sits in a commercial/residential area. The wetland was found to be dry over several trips by the team while monitoring.

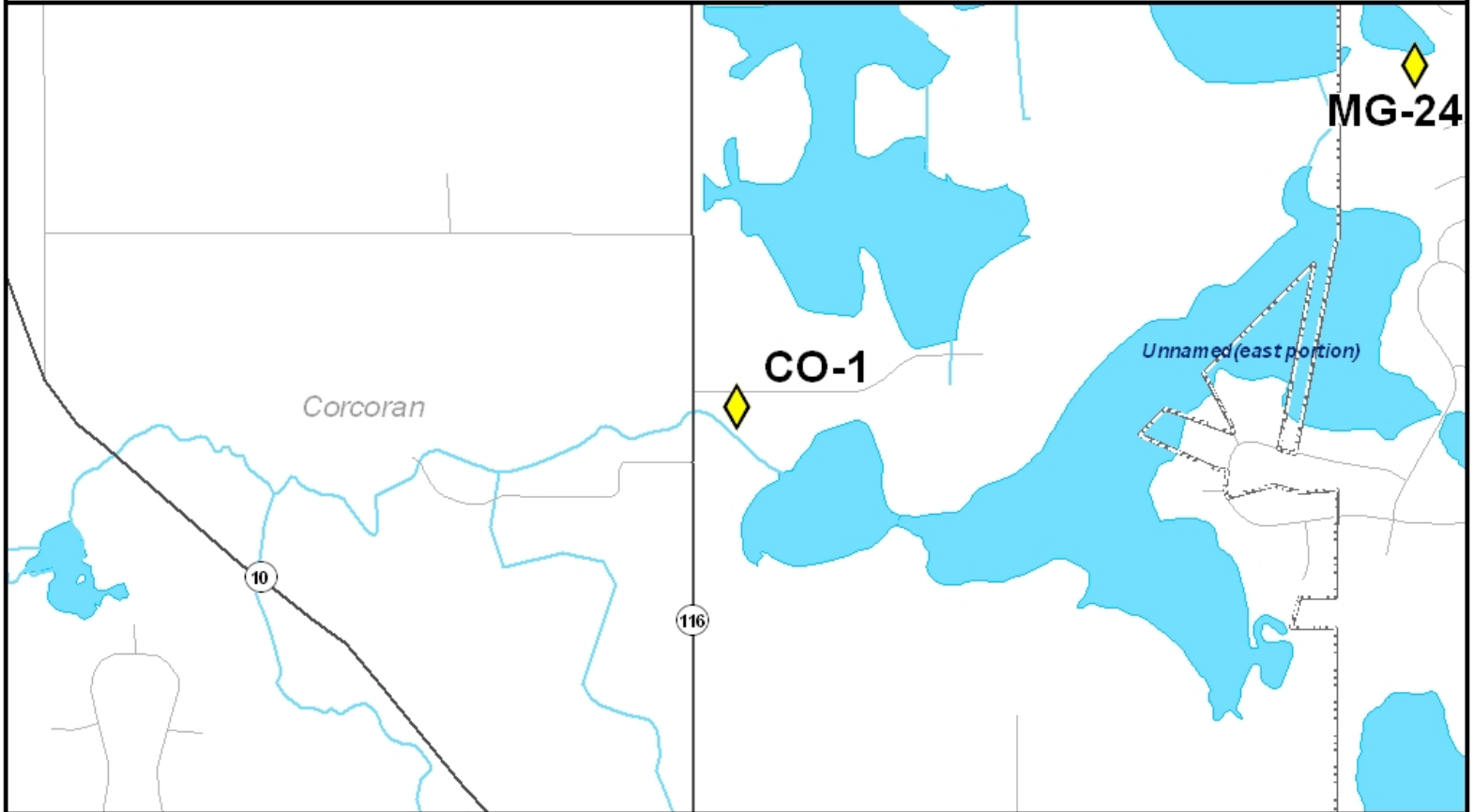


| Monitoring Results CH-1 | |
|-------------------------|-----------------|
| Year | 2011 |
| Invertebrate | <u>Moderate</u> |
| Vegetation | <u>Poor</u> |

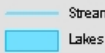
| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |

Wetland Health Evaluation Program

Wetland Site: CO-1



WHEP Sites



Streams
Lakes



City Boundaries
County Boundary
Parcels

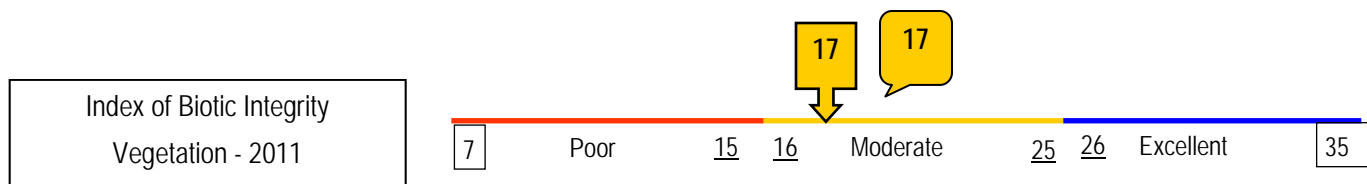
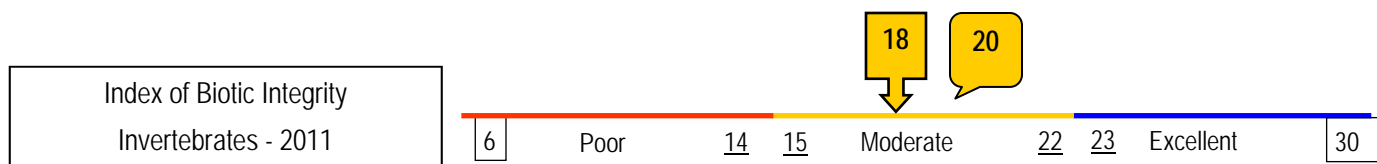
Roads
Interstate Highways
State or U.S. Highways
County Roads
City Streets





Corcoran
Site: CO-1
Corcoran City Hall

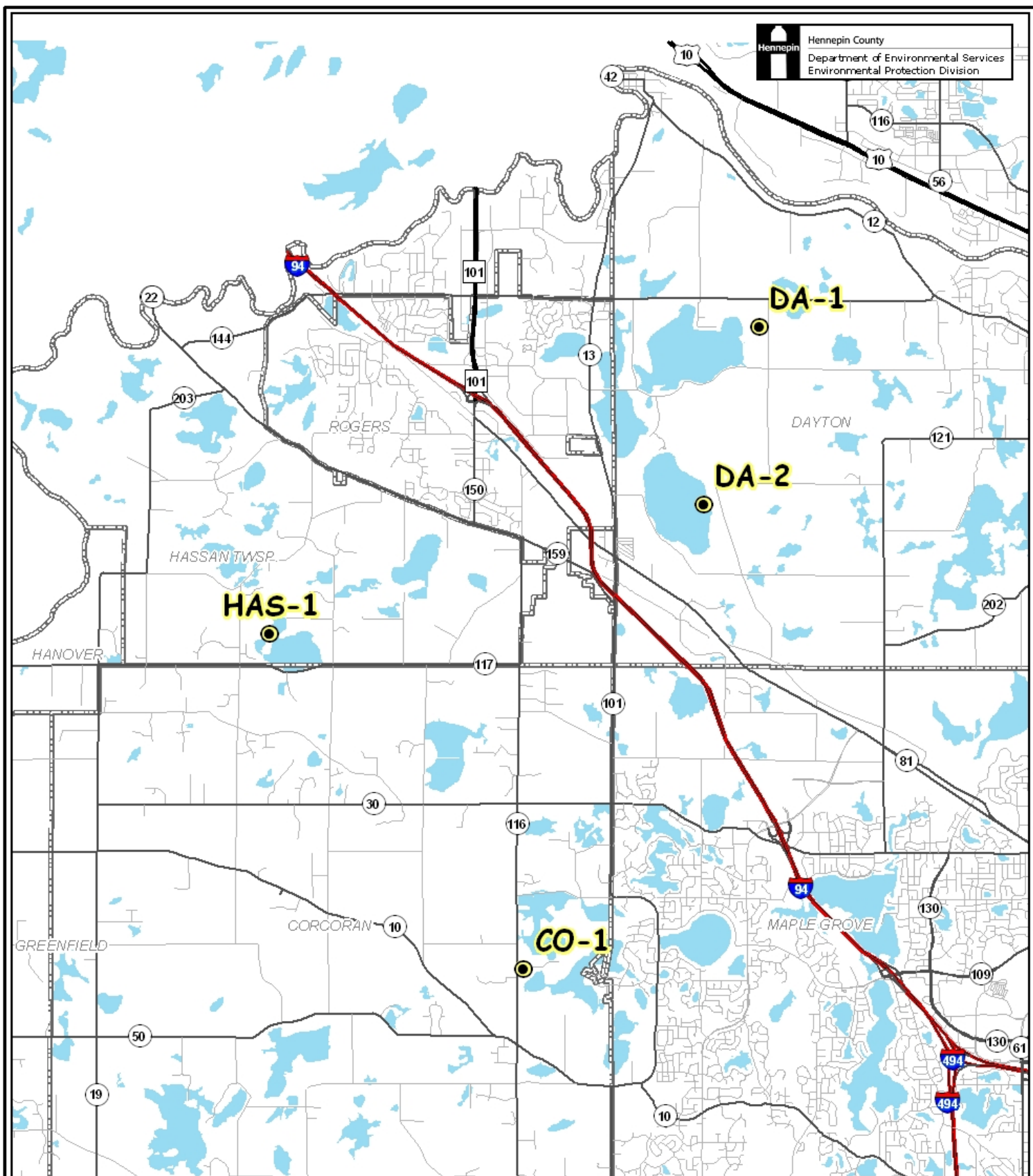
Site CO-1 is located within Corcoran adjacent to the City Hall. The wetland is on the corner of County Highway 116 and Schutte Place. The surrounding land use includes farming, residential homes, and two small tree groves. Grass is mown up to the wetland edge on the side of City Hall and along the highway.



| Monitoring Results CO-1 | | | | | |
|-------------------------|-------------------------------------|------------------|-----------------|------------------|--------------------------|
| Year | 2007 | 2008 | 2009 | 2010 | 2011 |
| Invertebrate | <u>Moderate/</u> <u>Moderate</u> | <u>Excellent</u> | <u>Moderate</u> | <u>Excellent</u> | <u>Moderate/Moderate</u> |
| Vegetation | <u>Poor/Moderate</u> | <u>Poor</u> | <u>Poor</u> | <u>Poor</u> | <u>Moderate/Moderate</u> |

= cross check

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |



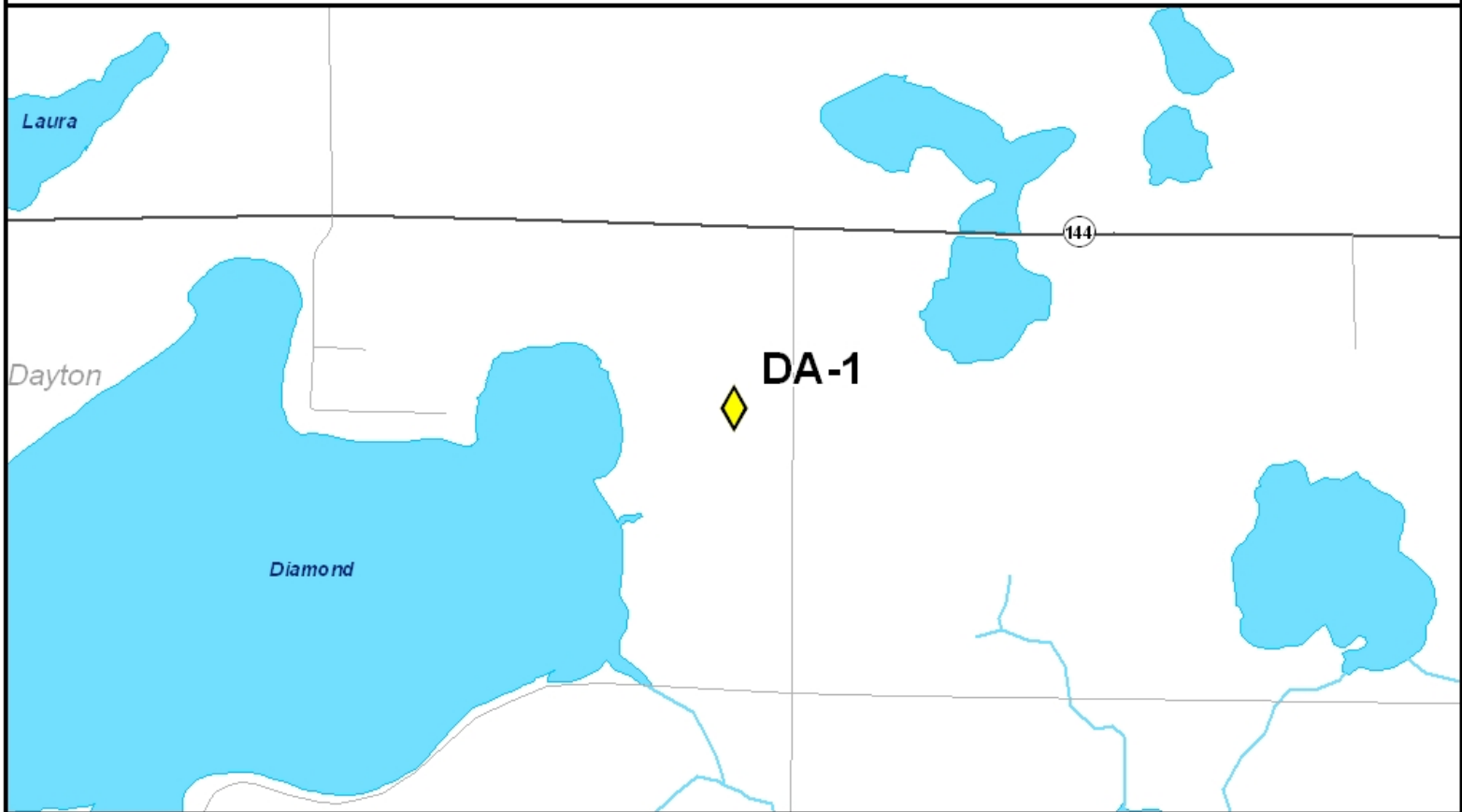


Dayton 2011 Metric Scores

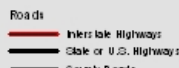
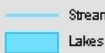
| Metric | DA-1 | DA-2 |
|---------------------------------|------------------------|------------------------|
| # Kinds of Leeches | 5 | 5 |
| % Corixidae | 5 | 5 |
| # Kinds of Odonata | 1 | 1 |
| # ETSD | 3 | 1 |
| # Kinds of Snails | 1 | 3 |
| Total Invertebrate Taxa | 5 | 3 |
| Invertebrate Totals (30 Max) | 20 Moderate | 18 Moderate |
| Vascular Genera | 3 | 3 |
| Nonvascular Genera | 1 | 1 |
| Grasslike Genera | 3 | 1 |
| <i>Carex</i> Cover | 3 | 5 |
| <i>Utricularia</i> Presence | 1 | 1 |
| Aquatic Guild | 3 | 1 |
| Persistent Litter | 1 | 1 |
| Vegetation Totals (35 Max) | 15 Poor | 13 Poor |

Wetland Health Evaluation Program

Wetland Site: DA-1



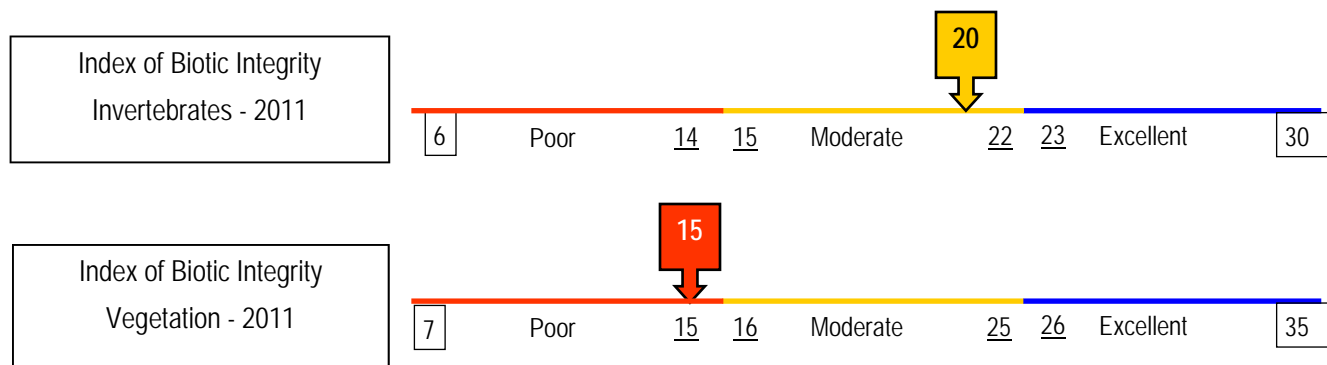
WHEP Sites





Dayton
Site: DA-1
Engstrom wetland

This wetland is part of a tract of land that is under a conservation easement through the County. This easement has been in place since 1997. The wetland is surrounded by vegetation with a gradual change from upland to emergent vegetation types. The surrounding area was at one time a farm field but the entire area is now in easement. After the area was placed into easement, the tiling was broken along the southern edge of the wetland. This site continues to undergo construction to expand the wetland area which may account for the varied results.



| Monitoring Results DA-1 | | | | |
|-------------------------|------------------|----------------------------|---|-----------------|
| Year | 2008 | 2009 | 2010 | 2011 |
| Invertebrate | <u>Excellent</u> | <u>Excellent/Excellent</u> | <u>Poor/Excellent/</u> <u>Moderate</u> | <u>Moderate</u> |
| Vegetation | <u>Poor</u> | <u>Poor/Poor</u> | <u>Poor/Moderate/Poor</u> | <u>Poor</u> |



= cross check

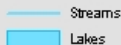
| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |

Wetland Health Evaluation Program

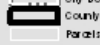
Wetland Site: DA-2



WHEP Sites



Lakes



Roads

Interstate Highways

State or U.S. Highways

County Roads

City Streets



Hennepin County

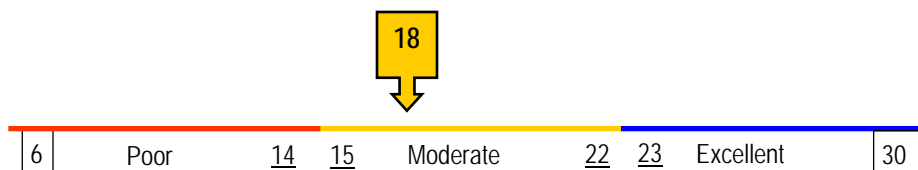
Department of Environmental Services
Environmental Protection Division



Dayton
Site: DA-2
French Lake

This site is situated in the northwest corner of French Lake. A Type 5 wetland, this site has an abundance of cattail. The access point is a DNR boat launch. The predominant surrounding land use is agriculture

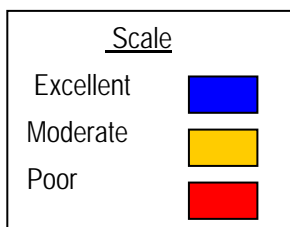
Index of Biotic Integrity
Invertebrates – 2010

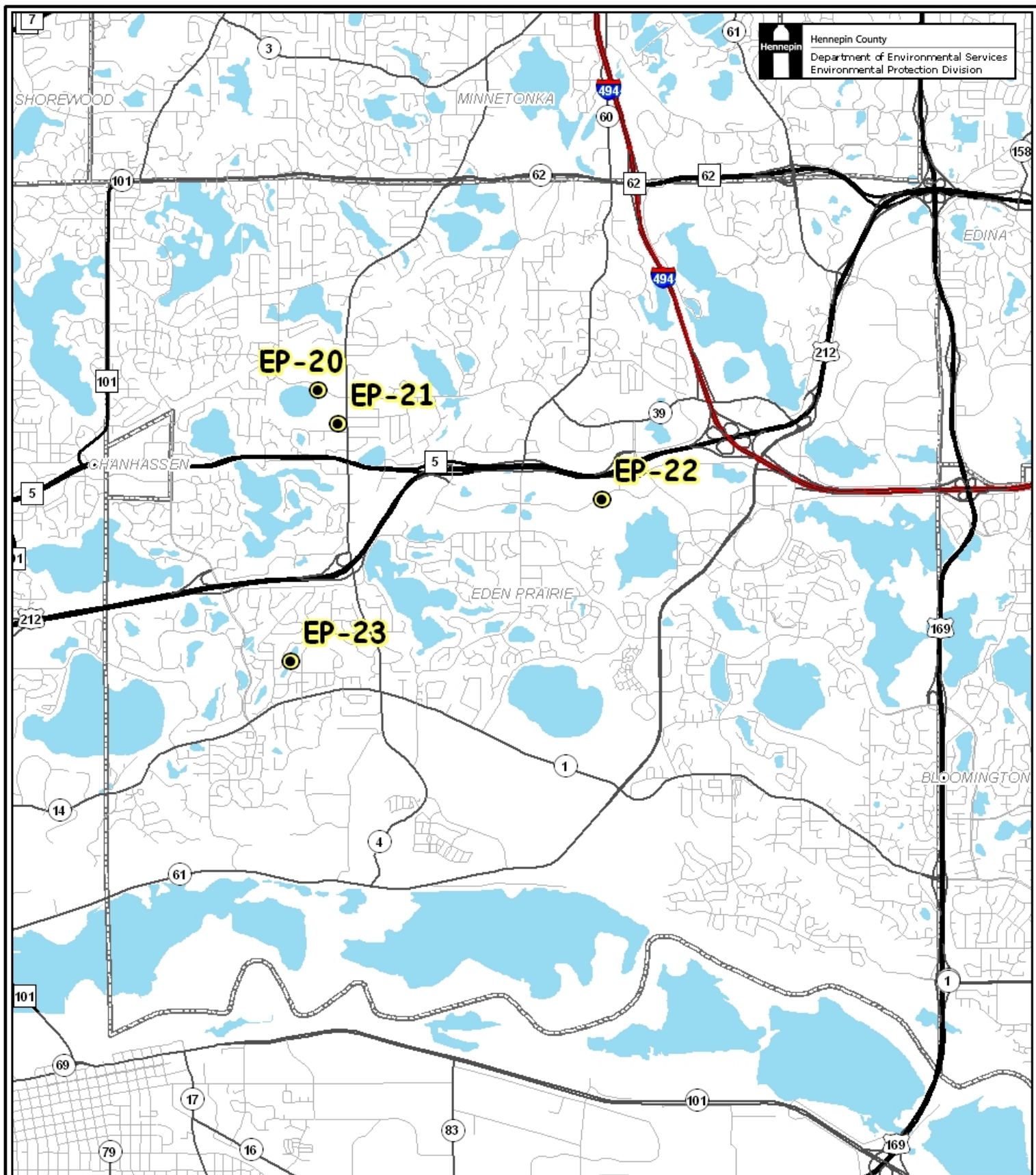


Index of Biotic Integrity
Vegetation – 2010



| Monitoring Results DA-2 | | |
|-------------------------|------------------|-----------------|
| Year | 2009 | 2011 |
| Invertebrate | <u>Excellent</u> | <u>Moderate</u> |
| Vegetation | <u>Poor</u> | <u>Poor</u> |





2011 City of Eden Prairie Wetland Health Evaluation Sites



0 0.5 1 1.5 2 Miles

Legend

- 2011 Monitoring Sites
- ▭ Municipal Boundaries
- Public Waters Inventory - DNR

Source Information:

Minnesota Department of Natural Resources
 Hennepin County Tax Payer Services Department
 Hennepin County Survey Department
 Hennepin County Dept. of Environmental Services

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This map is a compilation of records, information and data located in various city, county, state and federal offices, affecting the area shown, and is to be used for reference purposes only. Hennepin County is not responsible for any inaccuracies herein contained.



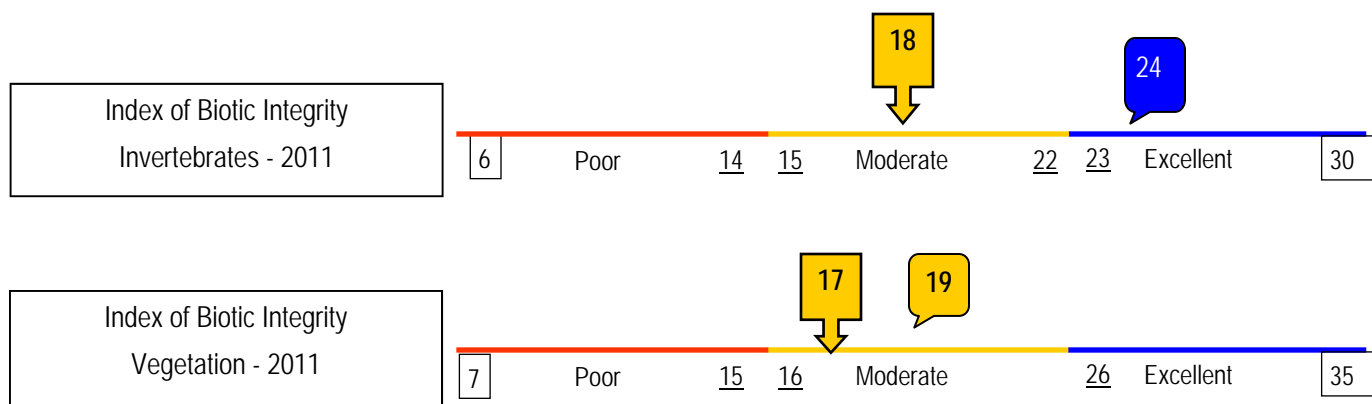
Eden Prairie 2011 Metric Scores

| Metric | EP-20 Round Lake | EP-21 Round Lake E | EP-22 Technology Drive | EP-23 Braxton Lake Pond |
|---------------------------------|---|------------------------------|------------------------------|------------------------------|
| # Kinds of Leeches | 3/5 | 5 | 1 | 3 |
| % Corixidae | 5/5 | 5 | 5 | 1 |
| # Kinds of Odonata | 1/5 | 1 | 3 | 3 |
| # ETSD | 1/3 | 3 | 3 | 5 |
| # Kinds of Snails | 5/1 | 3 | 5 | 1 |
| Total Invertebrate Taxa | 3/5 | 5 | 3 | 5 |
| Invertebrate Totals (30 Max) | 18/24 Moderate/Excellent | 22 Moderate | 20 Moderate | 18 Moderate |
| Vascular Genera | 3/5 | 3 | 5 | 5 |
| Nonvascular Genera | 1/1 | 1 | 3 | 3 |
| Grasslike Genera | 3/3 | 5 | 5 | 3 |
| <i>Carex</i> Cover | 1/1 | 5 | 1 | 1 |
| <i>Utricularia</i> Presence | 1/1 | 1 | 1 | 1 |
| Aquatic Guild | 3/3 | 3 | 5 | 5 |
| Persistent Litter | 5/5 | 5 | 5 | 5 |
| Vegetation Totals (35 Max) | 17/19 Moderate/Moderate | 23 Moderate | 25 Moderate | 23 Moderate |



Eden Prairie
Site: EP-20
Round Lake

This site is located in a park area adjacent to Round Lake. The steep into the wetland is very steep and cattails and sedges dominate the vegetation along the fringe. Re-stored areas were noted along the wetland edge.



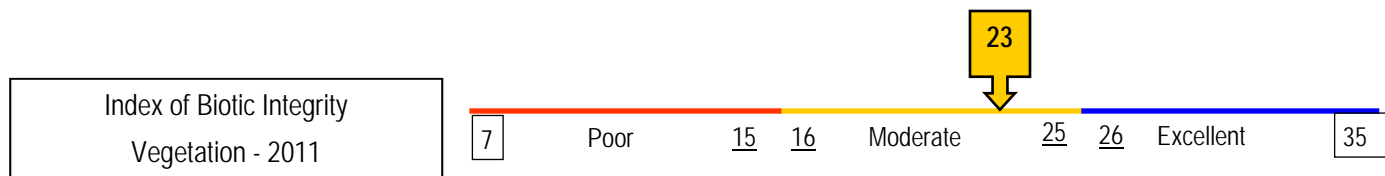
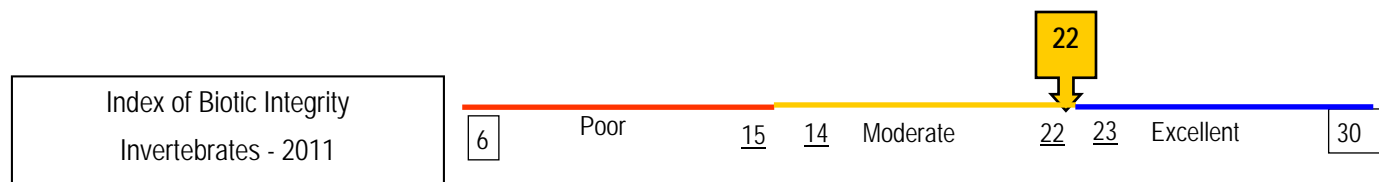
| Monitoring Results EP - 20 | |
|----------------------------|----------------------------------|
| Year | 2011 |
| Invertebrate | <u>Moderate</u> <u>Excellent</u> |
| Vegetation | <u>Moderate</u> <u>Moderate</u> |

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |



Eden Prairie
Site: EP-21
Round Lake Park East

The wetland is located just west of Eden Prairie Road with the southern boundary marked by Luther Road. This is a small wetland that has a relatively newly restored buffer. Along the southern edge is a block of homes and a ball field is nestled along the western edge.



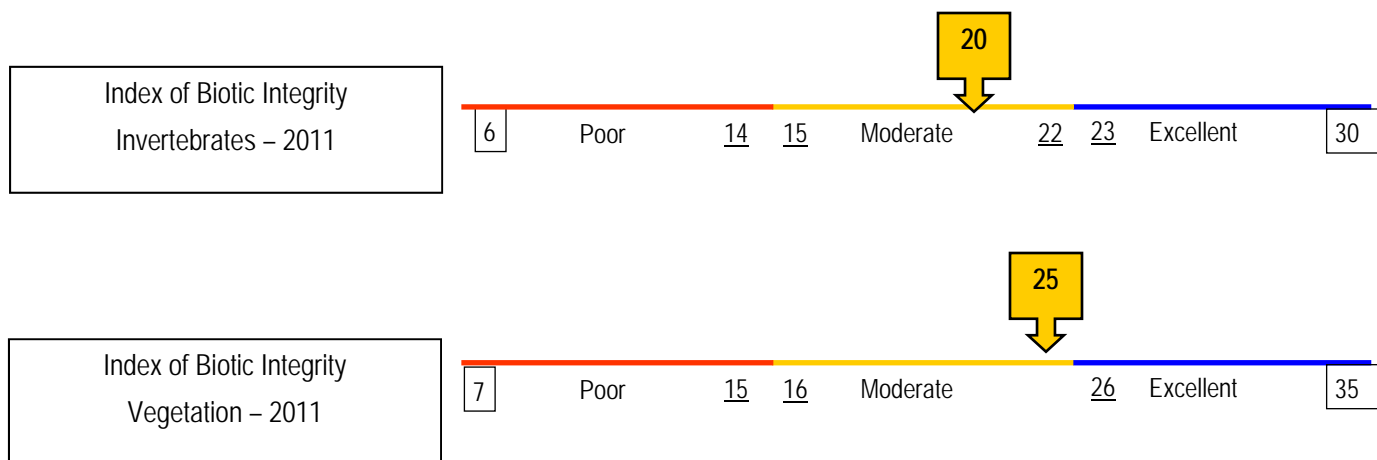
| Monitoring Results EP - 21 | |
|----------------------------|-----------------|
| Year | 2011 |
| Invertebrate | <u>Moderate</u> |
| Vegetation | <u>Moderate</u> |

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |



Eden Prairie Site: EP-22 Technology Drive

This site abuts Technology Drive and is the smallest wetland in the complex. The southeastern boundary is all cattail. There is a large building just to the west. Between EP-22 and the next closest wetland, the area appears to have been restored. The team noted an interesting blue tint to the water in both neighboring wetlands on their first trip to the site in June.



| Monitoring Results EP - 22 | |
|----------------------------|-----------------|
| Year | 2011 |
| Invertebrate | <u>Moderate</u> |
| Vegetation | <u>Moderate</u> |

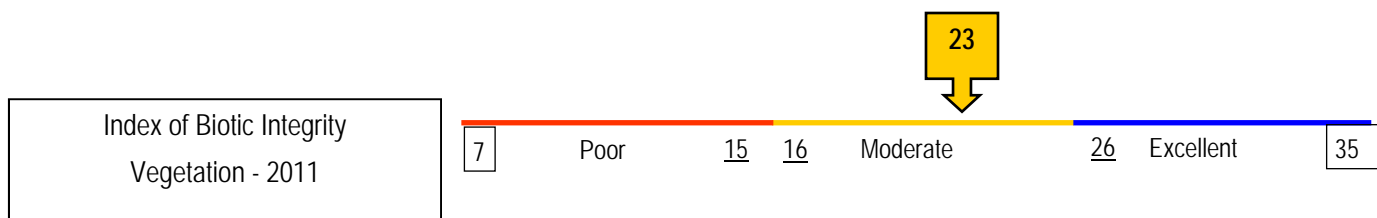
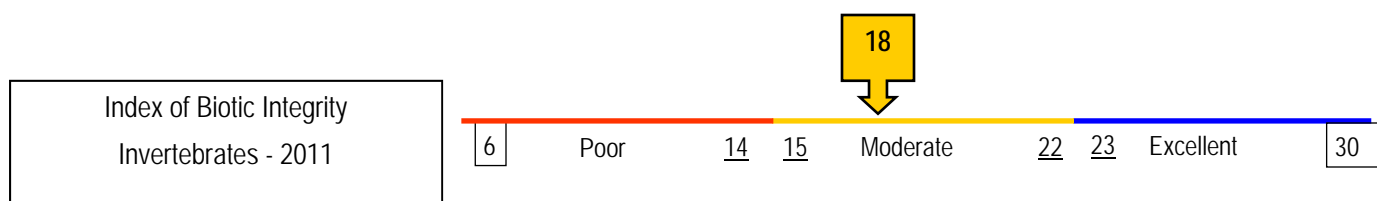
= cross check

| Scale | |
|-----------|---|
| Excellent | <div style="width: 20px; height: 15px; background-color: blue; border: 1px solid black;"></div> |
| Moderate | <div style="width: 20px; height: 15px; background-color: yellow; border: 1px solid black;"></div> |
| Poor | <div style="width: 20px; height: 15px; background-color: red; border: 1px solid black;"></div> |



Eden Prairie
Site: EP-23
Braxton Lake Pond

This site is in the middle of a heavy residential area. The edge is completely surrounded by homes and the only access is through backyards. Cedar Ridge Elementary School is to the east.



| Monitoring Results EP - 23 | |
|----------------------------|-----------------|
| Year | 2011 |
| Invertebrate | <u>Moderate</u> |
| Vegetation | <u>Moderate</u> |

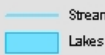
| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |

Wetland Health Evaluation Program

Wetland Site: HAS-1



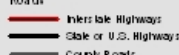
WHEP Sites



Streams
Lakes



City Boundaries
County Boundary
Roads



Interstate Highways
State or U.S. Highways
County Roads
City Streets



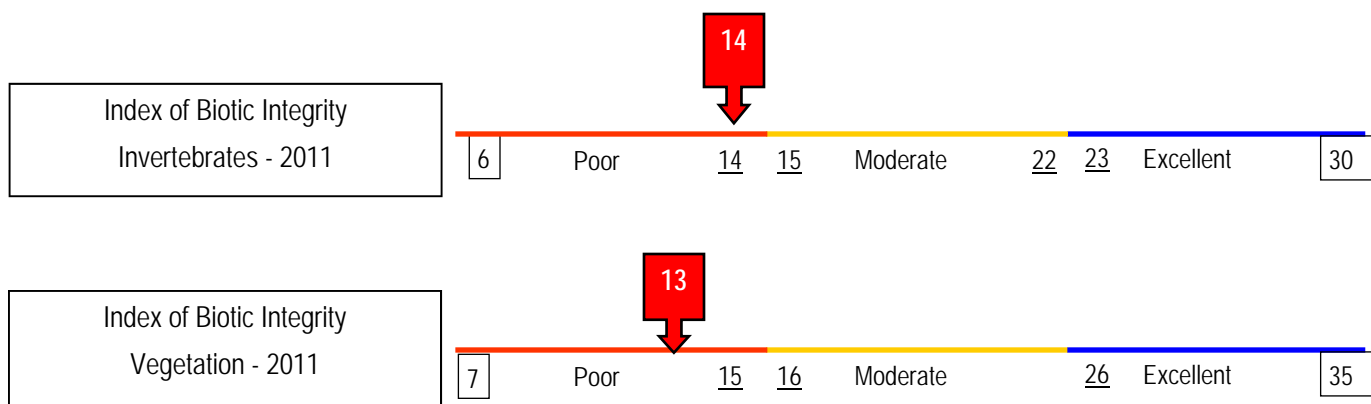


Hassan Township

Site: HA-1

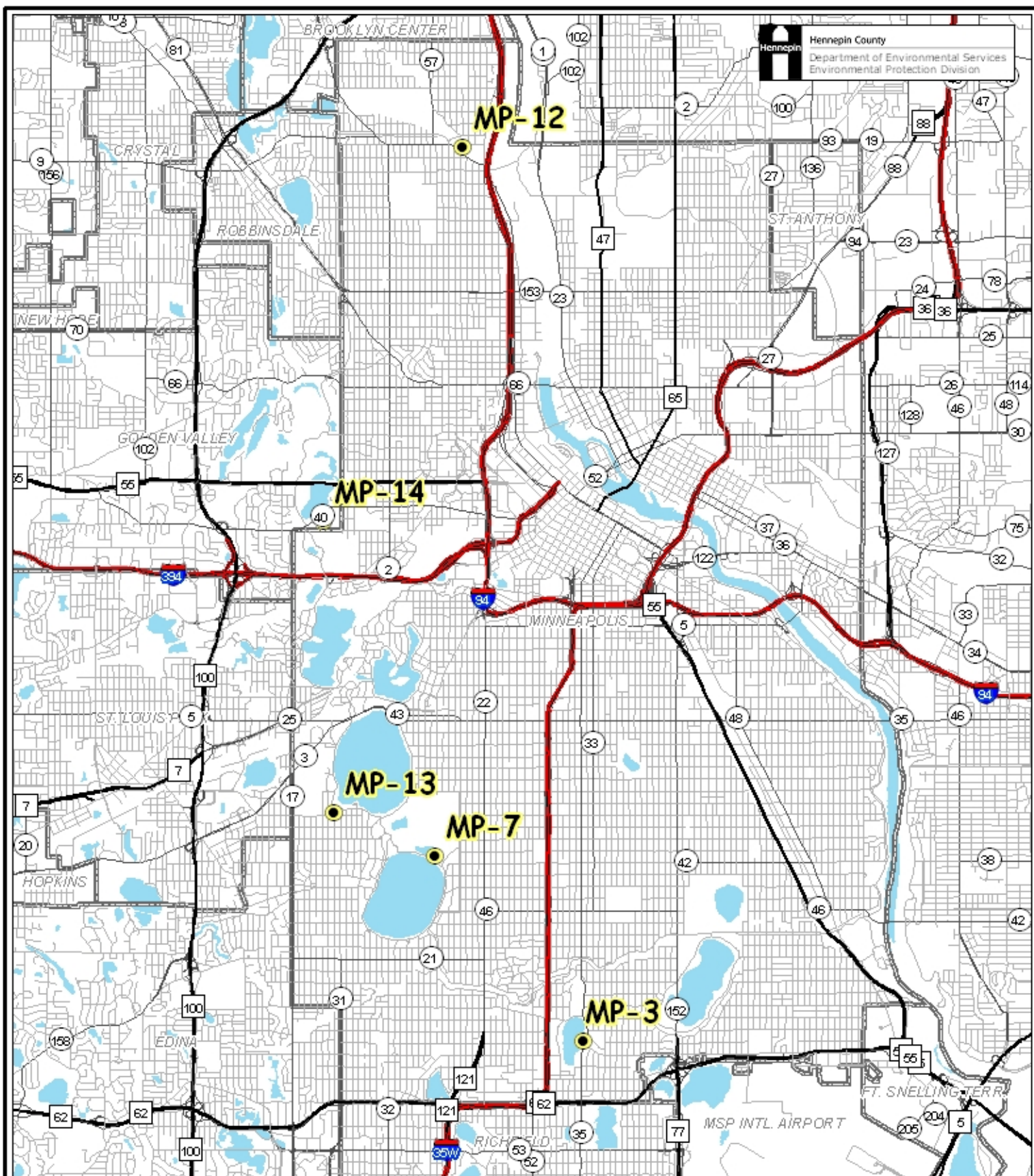
Signet Pond

2011 is the first year for monitoring this site in Hassan. It is on private property and access was by landowner permission. The wetland is surrounded by fields, natural marsh and woodland. There were massive cattail mats in the wetland which made sampling difficult.



| Monitoring Results HAS-1 | |
|--------------------------|-------------|
| Year | 2011 |
| Invertebrate | <u>Poor</u> |
| Vegetation | <u>Poor</u> |

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |





Minneapolis 2011 Metric Scores

| Metric | MP-3 Diamond Lake | MP-7 Roberts Bird Sanctuary | MP-12 Webber Pond | MP-13 SW Calhoun |
|---------------------------------|----------------------|--------------------------------|----------------------|----------------------------|
| # Kinds of Leeches | 1 | 3/3 | 1 | 1/1 |
| % Corixidae | 1 | 5/5 | 1 | 5/3 |
| # Kinds of Odonata | 1 | 3/3 | 3 | 1/1 |
| # ETSD | 1 | 5/5 | 1 | 3/1 |
| # Kinds of Snails | 1 | 1/1 | 3 | 1/1 |
| Total Invertebrate Taxa | 3 | 5/5 | 5 | 3/3 |
| Invertebrate Totals (30 Max) | 8 Poor | 22/22* Moderate Moderate | 14 Poor | 14/10 Poor/Poor |
| Vascular Genera | 3 | 5/5 | 5 | 5/5 |
| Nonvascular Genera | 1 | 5/5 | 5 | 1/1 |
| Grasslike Genera | 1 | 3/3 | 3 | 3/5 |
| <i>Carex</i> Cover | 1 | 1/3 | 5 | 15 |
| <i>Utricularia</i> Presence | 1 | 1/1 | 1 | 1/1 |
| Aquatic Guild | 3 | 5/5 | 5 | 5/3 |
| Persistent Litter | 1 | 1/1 | 5 | 3/5 |
| Vegetation Totals (35 Max) | 11 Poor | 21/23 Moderate Moderate | 29 Excellent | 23/25 Moderate/Moderate |

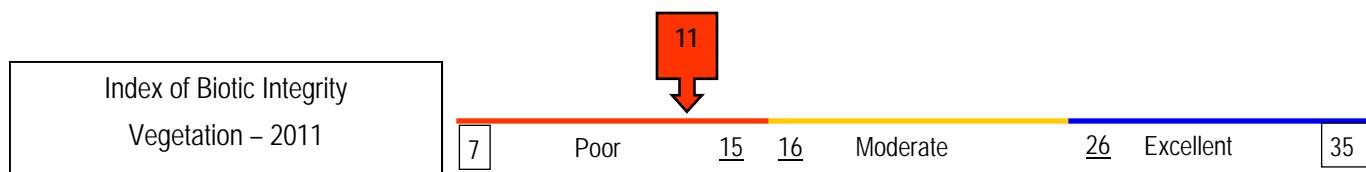
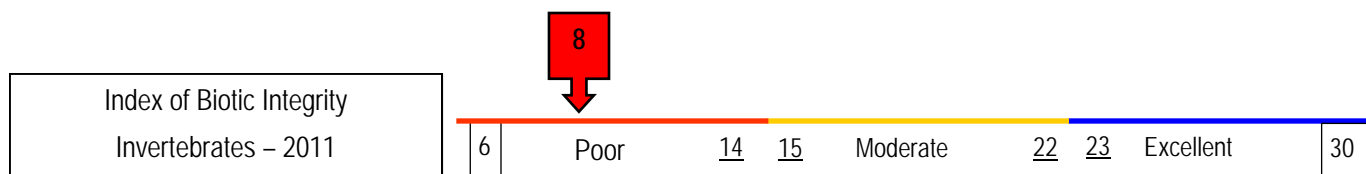


Minneapolis

Site: MP-3

Diamond Lake

This large open water wetland is located within the heavily urbanized area of south Minneapolis in Diamond Lake Park. The wetland is surrounded by residential neighborhoods and parkland. Todd Park is directly to the east. The vegetative buffer around the wetland is all designated as part of the park and includes a very tight cattail fringe. The bottom is very thick muck making sampling and walking very difficult. 2010 saw a return to a higher water level increasing the diversity of the invertebrates although the variety in vegetation is lacking. There is an abundance of cattail, water lilies and pondweed. This wetland has been monitored off and on since 2002.



| Monitoring Results MP-3 | | | | | | | |
|-------------------------|-------------|-------------|-----------------|-------------|-----------------|------------------|-------------|
| Year | 2002 | 2005 | 2006 | 2008 | 2009 | 2010 | 2011 |
| Invertebrate | <u>Poor</u> | <u>Poor</u> | <u>Moderate</u> | <u>Poor</u> | <u>Moderate</u> | <u>Excellent</u> | <u>Poor</u> |
| Vegetation | <u>Poor</u> | <u>Poor</u> | <u>Poor</u> | <u>Poor</u> | <u>Poor</u> | <u>Poor</u> | <u>Poor</u> |



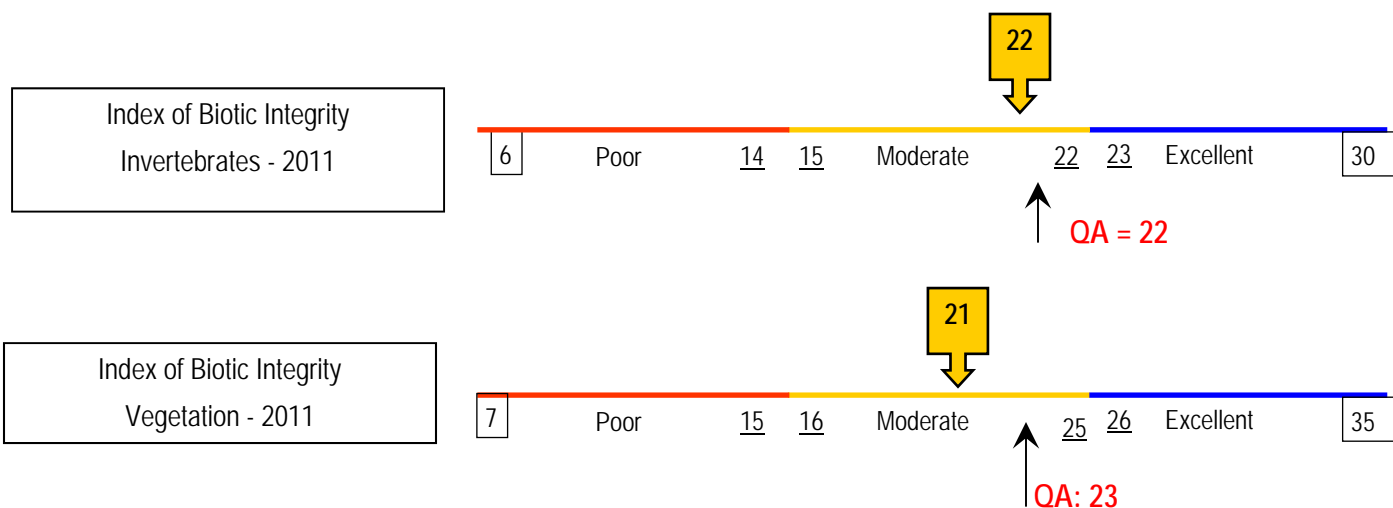


Minneapolis

Site: MP-7

Roberts Bird Sanctuary

This site is located within public land in the Robert's Bird Sanctuary across the road from Lake Harriet. The ponds were created here by dredging around 1960 and were used by the DNR as a fishery from 1960 to the early 1970s. This area is mainly boggy soil surrounded by woods and semi-wooded park on three sides. The sampling site is separated from the street by a fence and a boulevard strip. his year.



| Monitoring Results MP-7 | | | | | | | | | |
|-------------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|
| Year | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| Invertebrate | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Excellent</u> | <u>Moderate</u> | <u>Excellent</u> | <u>Moderate</u> | <u>Moderate</u> |
| Vegetation | <u>Moderate</u> | <u>Moderate</u> | <u>Poor</u> | <u>Moderate</u> | <u>Poor</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate</u> |



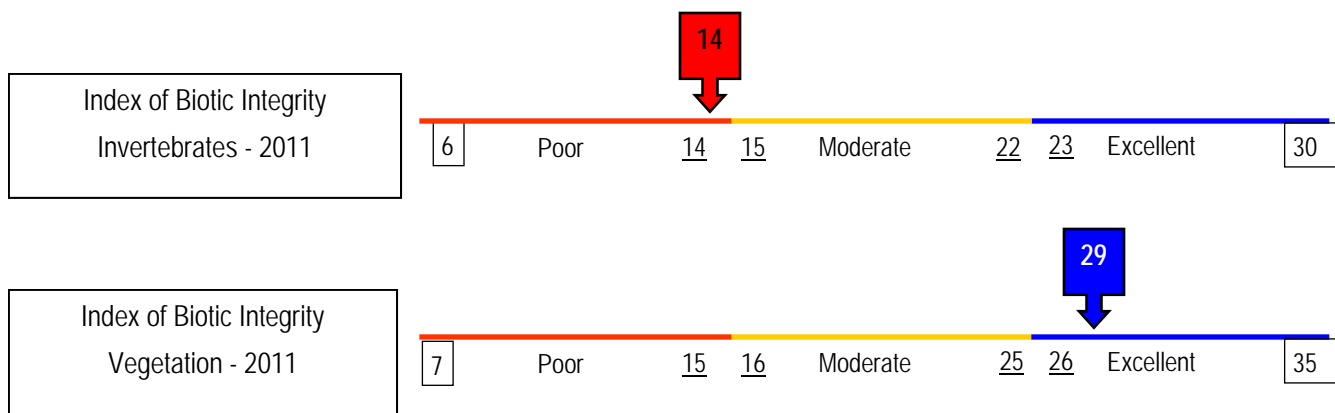


Minneapolis

Site: MP-12

Webber Pond

This monitoring site is in Webber Park nestled among tennis courts, a public swimming pool, Shingle Creek and two major roadways. The water level in this wetland is maintained by an augmentation well and is stocked every year by the Department of Natural Resources for the Fishing in Neighborhoods program. The infamous “Minneapolis Muckstars” report a huge abundance of predators such as amphibians, ducks, herons and egrets. The low score for inverts suggests a healthy feed ground. This wetland is stocked with fish as part of the DNR’s “Fishing in the Neighborhoods” program. The vegetation is intentionally diverse as the shoreline has undergone restoration efforts.



| Monitoring Results MP-12 | | | |
|--------------------------|------------------|------------------|------------------|
| Year | 2009 | 2010 | 2011 |
| Invertebrate | <u>Moderate</u> | <u>Poor</u> | <u>Poor</u> |
| Vegetation | <u>Excellent</u> | <u>Excellent</u> | <u>Excellent</u> |



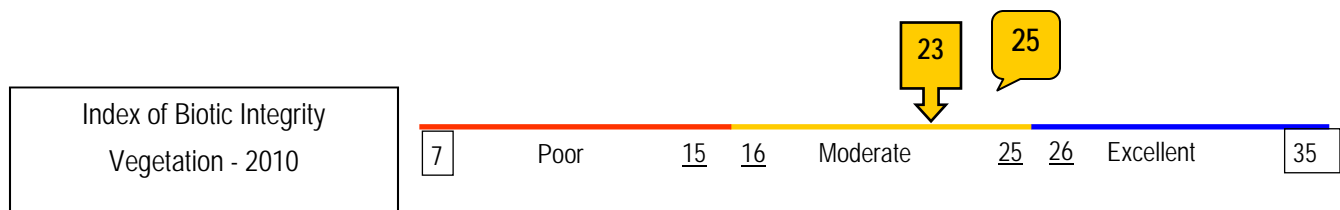
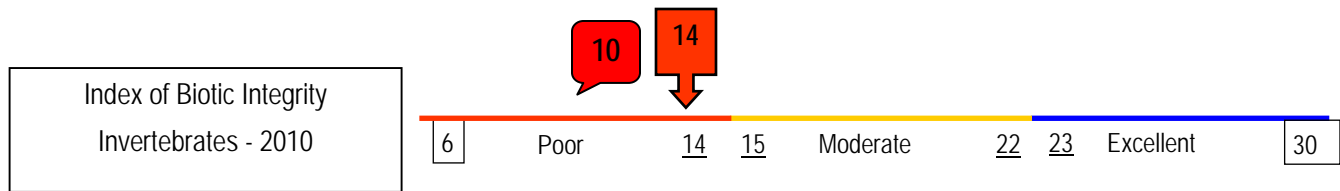


Minneapolis

Site: MP-13

Southwest Calhoun

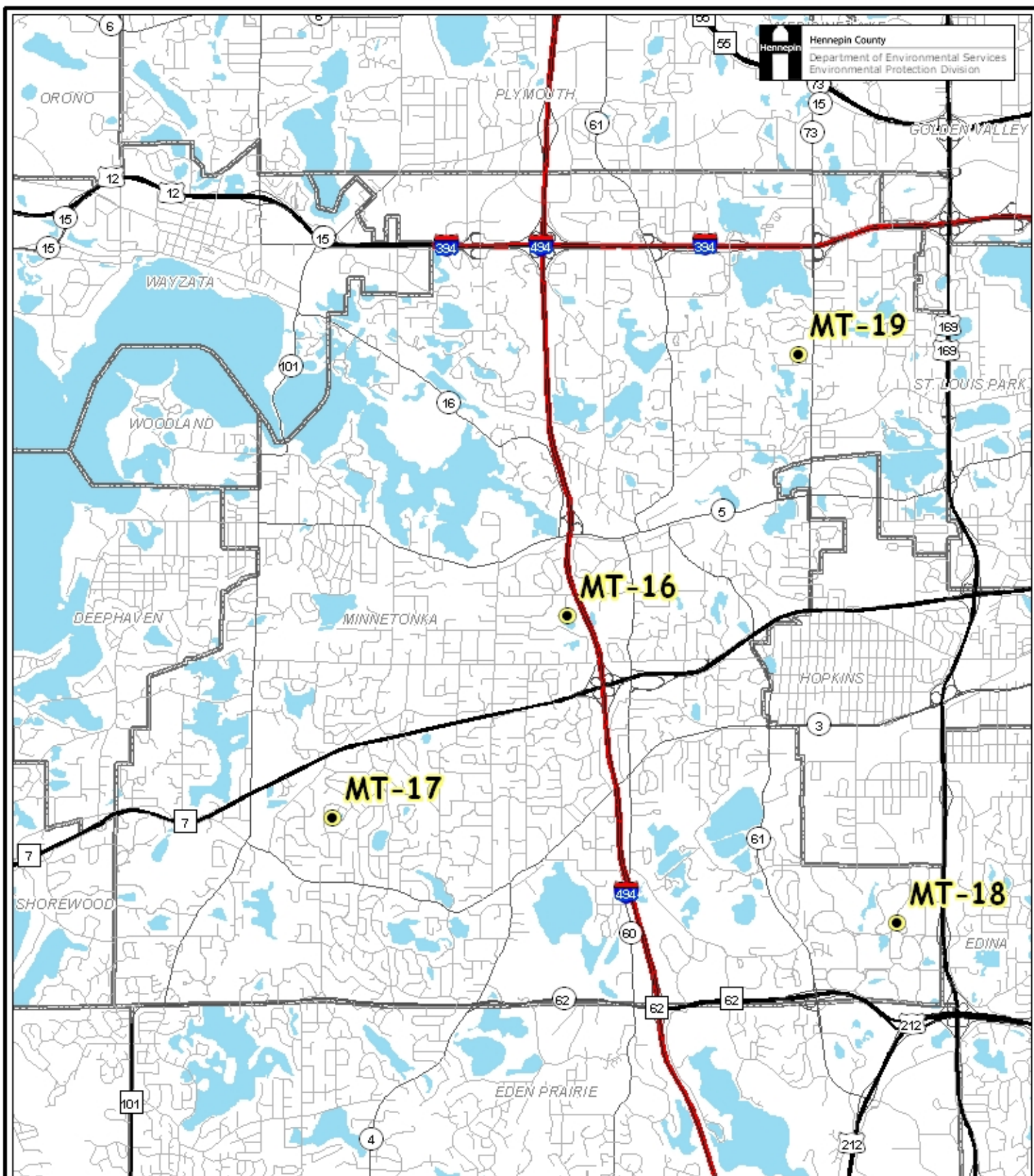
This wetland is a stormwater catchment basin that was “built” around the year 2000. The wetland is small and surrounded by trees and shrubs on one side and mown grass on the other. The team saw a small increase in invertebrate score, from “6” in 2009 with a slow increase of emergent vegetation. The higher vegetation score is indicative of the restoration efforts.



| Monitoring Results MP-13 | | | |
|--------------------------|-----------------|-----------------|--------------------------|
| Year | 2009 | 2010 | 2011 |
| Invertebrate | <u>Poor</u> | <u>Poor</u> | <u>Poor/Poor</u> |
| Vegetation | <u>Moderate</u> | <u>Moderate</u> | <u>Moderate/Moderate</u> |

= cross check

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |





Minnetonka 2011 Metric Scores

| Metric | MT-16 Spring Lake | MT-17 Lake Charlotte Park | MT-18 Green Circle Park | MT-19 Nottingham Court1 |
|---|--------------------------------|------------------------------|----------------------------|----------------------------|
| # Kinds of Leeches | 1/1 | 3 | 3 | 3 |
| % Corixidae | 5/5 | 3 | 1 | 3 |
| # Kinds of Odonata | 1/1 | 3 | 1 | 1 |
| # ETSD | 1/5 | 3 | 3 | 3 |
| # Kinds of Snails | 1/1 | 1 | 1 | 1 |
| Total Invertebrate Taxa | 3/3 | 5 | 5 | 5 |
| Invertebrate Totals (30 Max) | 12/16 Poor/Moderate | 18 Moderate | 14 Poor | 16 Moderate |
| Vascular Genera | 5/3 | 3 | 5 | 5 |
| Nonvascular Genera | 5/1 | 1 | 1 | 5 |
| Grasslike Genera | 3/3 | 3 | 5 | 3 |
| <i>Carex</i> Cover | 1/1 | 1 | 5 | 1 |
| <i>Utricularia</i> Presence | 1/1 | 1 | 1 | 1 |
| Aquatic Guild | 1/1 | 3 | 3 | 1 |
| Persistent Litter | 5/5 | 1 | 1 | 5 |
| Vegetation Totals (35 Max) | 21/15 ModeratePoor | 15 Poor | 21 Moderate | 21 Moderate |

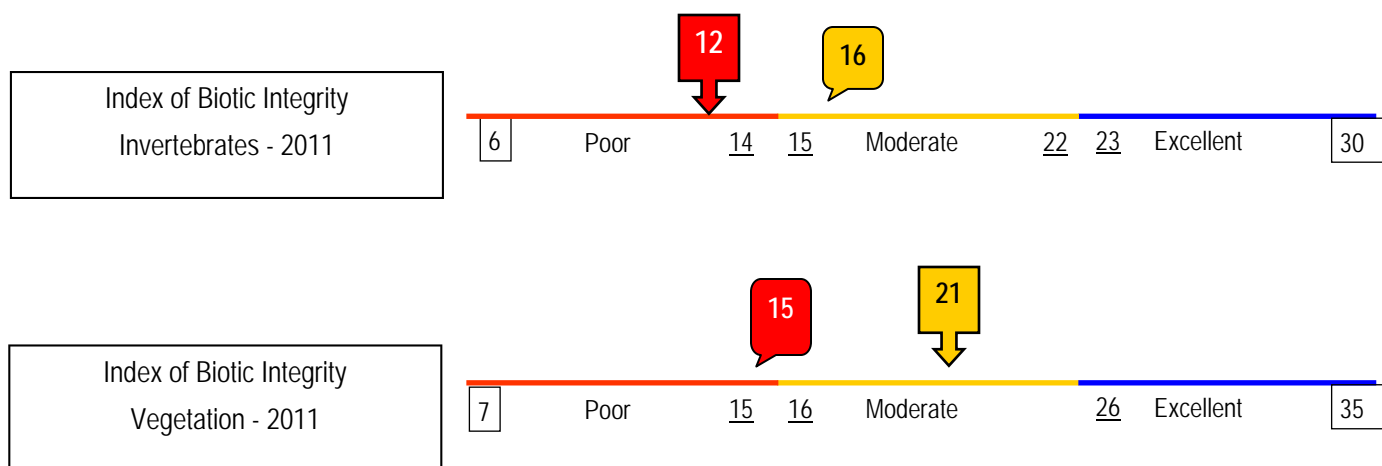


Minnetonka

Site: MT-16

Spring Lake

This wetland is just off from Spring Lake Road in Minnetonka. The site is surrounded by residential homes. The lawns are mown to the edge of the wetland and quite a bit of buckthorn was noted by the team. This wetland is cared for by the surrounding residents, one of which stated that they stock fish. Traditionally kids in the area catch the large goldfish, some up to 8 inches, to local pet stores.



| Monitoring Results MT-16 | | |
|--------------------------|-----------------|-------------------------------|
| Year | 2010 | 2011 |
| Invertebrate | <u>Poor</u> | <u>Poor</u> / <u>Moderate</u> |
| Vegetation | <u>Moderate</u> | <u>Moderate</u> / <u>Poor</u> |

= cross check

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |

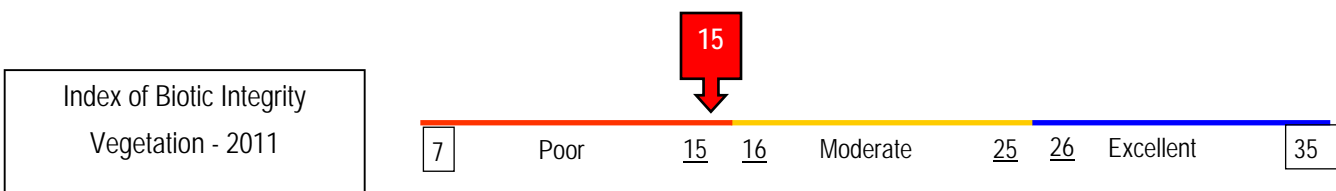
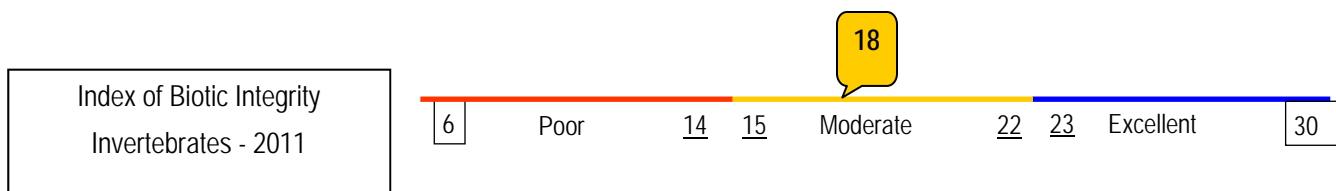


Minnetonka

Site: MT-17

Charlotte Park

This wetland is situated between Birch Road and Norwood Drive in Minnetonka. On the south side of the wetland is a picnic area that is maintained by the City. The lawns surrounding the wetland are mown to the edge. There is a small area of open water but the entire wetland is abundant in leaf litter. This wetland serves primarily as a storm water runoff pond.



| Monitoring Results MT-17 | | |
|--------------------------|----------------------|-----------------|
| Year | 2010 | 2011 |
| Invertebrate | <u>Poor/Moderate</u> | <u>Moderate</u> |
| Vegetation | <u>Moderate/Poor</u> | <u>Poor</u> |

= cross check

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |

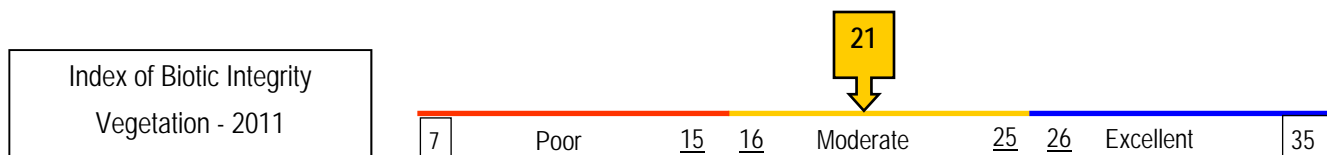
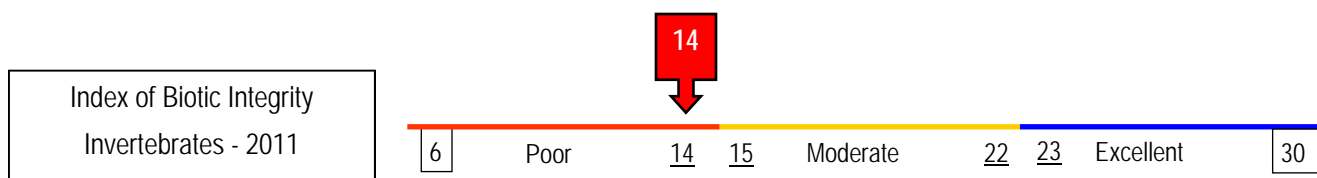


Minnetonka

Site: MT-18

Green Circle Lake

This wetland sits among a community park, business complexes and town homes. There is a picnic area off from Green Circle Drive that abuts the wetlands. There is plenty of vegetated buffer around the wetland with a nice variety of plant materials. This mitigated wetland site is well maintained by the City.



| Monitoring Results MT-18 | | |
|--------------------------|-----------------|-----------------|
| Year | 2010 | 2011 |
| Invertebrate | <u>Moderate</u> | <u>Poor</u> |
| Vegetation | <u>Moderate</u> | <u>Moderate</u> |



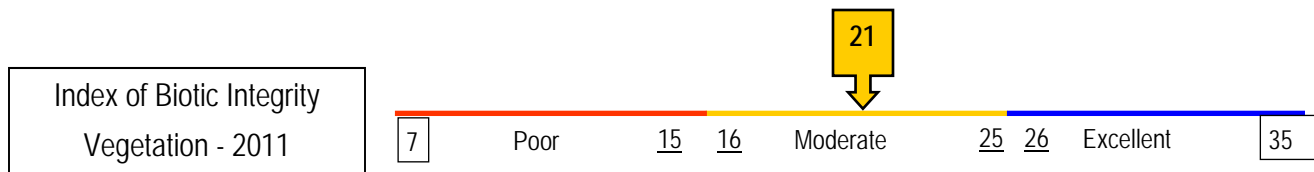
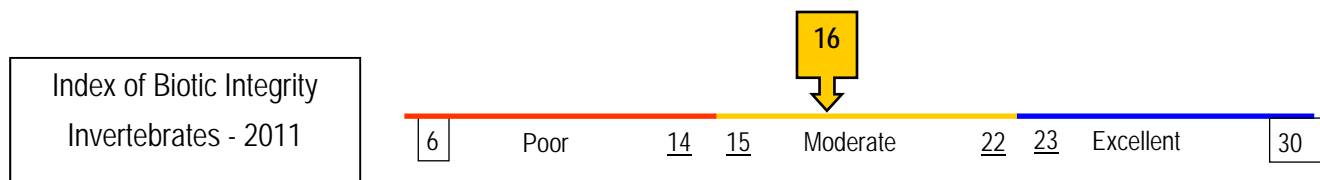


Minnetonka

Site: MT-19

Nottingham Court

This wetland is located in a cul de sac on Nottingham Court road. This is a small shallow wetland surrounded by homes. The water level appeared low as the dock was dry and the shoreline indicated a history of higher water. There were signs of recreational activity on this wetland including a paddleboat as well as several wood duck homes situated along the wetland edge.



| Monitoring Results MT-19 | | |
|--------------------------|-----------------|-----------------|
| Year | 2010 | 2011 |
| Invertebrate | <u>Moderate</u> | <u>Moderate</u> |
| Vegetation | <u>Moderate</u> | <u>Moderate</u> |

| Scale | |
|-----------|--|
| Excellent | |
| Moderate | |
| Poor | |



For more information about the Hennepin County
Wetland Health Evaluation Program, please contact:

Mary Karius

Hennepin County Environmental Services
701 Fourth Ave. S, Suite 700

Minneapolis, MN 55415

612-596-9129

mary.karius@co.hennepin.mn.us



