

# elm creek Watershed Management Commission

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February 7, 2018

Representatives  
Elm Creek Watershed Management Commission  
Hennepin County, MN

*The meeting packets for these meetings may be found on the Commission's website:*  
<http://www.elmcreekwatershed.org/minutes--meeting-packets.html>

Dear Representatives:

A **regular meeting** of the Elm Creek Watershed Management Commission will be held on **Wednesday, February 14, 2018, at 11:30 a.m.** in the Mayor's Conference Room at Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN.

The **Technical Advisory Committee (TAC)** will meet at **9:30 a.m.**, prior to the regular meeting, to discuss the following: 1) Rush Creek Subwatershed Assessment; 2) changes to the Commission's Cost Share Policy; 3) updates to the Commission's CIP; and 4) draft manure management model ordinance/policy.

Please email Tiffany at [tiffany@jass.biz](mailto:tiffany@jass.biz) to confirm whether you or your Alternate will be attending the TAC and the regular meetings.

Thank you.

Regards,



Judie A. Anderson  
Administrator  
JAA:tim  
Encls: Meeting Packet

cc: Alternates  
Joel Jamnik  
TRPD

HCEE  
Diane Spector  
Clerks

BWSR  
Met Council  
Official Newspaper

MPCA  
DNR

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# elm creek

## Watershed Management Commission

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### AGENDA February 14, 2018

1. Call Regular Meeting to Order.
  - a. Approve Agenda.\*
2. Consent Agenda.
  - a. Minutes last Meeting.\*
  - b. Treasurer's Report and Claims.\*
3. Open Forum.
4. Action Items.
  - a. Project Reviews – *see Staff Report*.\*
  - b. Hennepin County Cooperative Agreement.\*
  - c. 2017 Work Plan in Review.\*
  - d. 2018 Work Plan.\*
  - e. Blue Thumb Partnership.\*
5. New Business.
  - a. TAC Meeting Recap.
6. Water Quality.
  - a. CAMP.
    - 1) 2017 Survey.\*
    - 2) 2018 Lakes – we are budgeted (\$720) to monitor one lake (\$550).
  - b. TRPD Lake Monitoring – we are budgeted to monitor the sentinel lakes (Diamond, Fish, Weaver and Rice Main Basin \$3,300), one additional lake (\$825) and perform one vegetative survey (\$1,100).
  - c. Stream Monitoring – we are budgeted to continue USGS monitoring (\$24,900), TRPD extensive stream monitoring (\$7,600), and one DO longitudinal survey (\$1,000).
7. Grant Opportunities and Updates.
  - a. Fish Lake Internal Phosphorus Loading Control.\*
  - b. Rush Creek Headwaters Subwatershed Assessment.\*
8. Education.
  - a. Education and Outreach Update.\*\*
9. Watershed Management Plan.
10. Communications.
11. Project Reviews – *also see Staff Report*.\*
12. Other Business.
  - a. Election of Officers at March meeting.
13. Adjourn.

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A = Action item   E = Enclosure provided   I = Informational update available at meeting   RPFI - removed pending further information   R = Will be removed  
 removed   RP= Information will be provided in revised meeting packet..... D = Project is denied   AR awaiting recordation   \*in meeting packet  
 \*\*available at meeting

CHAMPLIN - CORCORAN - DAYTON - MAPLE GROVE - MEDINA - PLYMOUTH - ROGERS

Project Reviews. (See Staff Report.*)						
a.					2013-046	Woods of Medina, Medina.
b.					2014-015	Rogers Drive Extension, Rogers.
c.					2015-004	Kinghorn Outlet A, Rogers.
d.				AR	2015-030	Kiddiegarten Child Care Center, Maple Grove.
e.					2016-002	The Markets at Rush Creek, Maple Grove.
f.					2016-004	Park Storage Place, Corcoran.
g.					2016-005W	Ravinia Wetland Bank Plan, Corcoran.
h.				AR	2016-026	Faithbrook Church, Dayton.
i.					2016-040	Kinghorn 4th Addition, Rogers.
j.					2016-047	Hy-Vee Maple Grove #1 (Hy-Vee Maple Grove North).
k.				AR	2016-052	The Woods at Rush Creek, Maple Grove.
l.				AR	2017-014	Laurel Creek, Rogers.
m.				AR	2017-016	Territorial Woods, Maple Grove.
n.				AR	2017-017	Mary Queen of Peace Catholic Church, Rogers.
o.				AR	2017-019	Medina Senior Living Community, Medina.
p.				AR	2017-021	Hindu Society of MN Staff Housing, Maple Grove.
q.				AR	2017-029	Brayburn Trails, Dayton.
r.					2017-030	Brindle Path, Medina.
s.					2017-031	Bass Lake Crossing, Corcoran.
t.				AR	2017-034	Plymouth Memory Care, Plymouth.
u.					2017-035	Weston Woods PUD, Medina.
v.					2017-036	Enclave at Elm Creek, Plymouth.
w.				AR	2017-037	Corcoran L-80 Lift Station MCES Project 808520, Corcoran.
x.					2017-038	Bass Lake Estates, Corcoran.
y.					2017-039	Rush Creek Apartments, Maple Grove.
z.					2017-044	Reserve at Medina 2nd Addition, Medina.
aa.					2017-045	Fish Lake Estates, Maple Grove.
ab.					2017-046W	Wessell Property Wetland Delineation, Corcoran.
ac.					2017-047W	Newman Property Wetland Delineation, Corcoran.
ad.					2017-048W	Ebert Parcel Wetland Delineation, Corcoran.
af.					2017-049W	Rolling Hills Wetland Delineation, Corcoran.
ag.		E			2017-050W	Ernie Mayer Wetland/floodplain violation, Corcoran.
ah.					2017-051	Mallard South 2nd Addition, Rogers.
ai.				R	2017-052W	John Meister Ditch Cleaning, Corcoran - formerly 2015-031W
aj.					2017-053	Corcoran Community Solar, Corcoran.
ak.	A	E			2018-001	Rush Creek Commons, Maple Grove.
al.					2018-002	Mill Pond Pedestrian Trail and Bridge, Champlin.
am.					2018-003	Rathburn Driveway, Rogers.
an.					2018-004	Rush Creek Restoration, Maple Grove.
ao.					2018-005	Sundance Greens, Dayton.
ap.						
aq.						
ar.						
as.						

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## Regular Meeting Minutes January 10, 2018

I. A **regular meeting** of the Elm Creek Watershed Management Commission was called to order at 11:33 a.m., Wednesday, January 10, 2018, in the Mayor's Conference Room, Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN, by Chairman Doug Baines.

Present were: Gerry Butcher, Champlin; Sharon Meister, Corcoran; Doug Baines, Dayton; Joe Trainor, Maple Grove; Elizabeth Weir, Medina; Catherine Cesnik, Plymouth; Kevin Jullie, Rogers; James Kujawa and Jason Swenson, Hennepin County Dept. of Environment and Energy (HCEE); Brian Vlach, Three Rivers Park District (TRPD); Jeff Weiss, Barr Engineering; and Judie Anderson, JASS.

Also present: Todd Tuominen, Champlin; Kevin Mattson, Corcoran; Mark Lahtinen, Maple Grove; Ben Scharenbroich, Plymouth; Andrew Simmons, Rogers; and Jason Naber, Ryan Fleming, and Spencer Peck, EOR, Inc., and Dean Leischow, Sunrise Energy Ventures, for Project Review 2017-053.

A. Motion by Weir, second by Butcher to approve the **revised agenda**. \* *Motion carried unanimously.*

B. Motion by Weir, second by Jullie to approve the **minutes**\* of the December 13, 2017 regular meeting. *Motion carried unanimously.*

C. Motion by Weir, second by Jullie to approve the January **Treasurer's Report and Claims**\* totaling \$13,324.80. *Motion carried unanimously.*

II. **Open Forum.**

III. **Action Item.**

A. **Project Reviews.**

1. **2017-051 Mallard South 2nd Addition, Rogers.\*** This is a 1.5 acre parcel proposed to be replatted for a 9-unit townhome development. It was originally approved as 12 townhome units in 2001. Because of the change in platting, the site must conform to the Commission's Third Generation Stormwater Management Plan. Staff recommends the Commission approve the revised site plans dated December 22, 2017 pending compliance with the Commission's operation and maintenance standards on the rain garden/bio-filtration basin. Motion by Weir, second by Cesnik to approve this project per Staff's recommendation in their findings dated December 28, 2017. *Motion carried unanimously.*

2. **2017-053 Sunrise Solar Garden, Corcoran.\*** This project proposes to construct a 5 MW Solar Facility on an 80-acre site located northwest of the intersection of County Roads 50 and 19 on the western border of Corcoran with Greenfield. On December 20, Staff met with the applicant prior to the application to discuss the site. The project proposes to place solar panels across much of the site, including through several lower quality wetlands and their associated buffers. Otherwise, the site proposes minimal grading to install the panels and associated infrastructure. The project was reviewed for compliance with Commission Rules D, E, F, G and I – stormwater management, erosion and sediment control, floodplain alteration, wetland alteration and buffer strips, respectively. Motion by Weir, second by Trainor to approve this project per Staff's recommendation in their findings dated December 28, 2017, namely that 1) stormwater easements and buffers are provided over all stormwater features on the site, including a stipulation that no other structures other than the proposed solar panels are allowed for installation in the buffers and wetlands, and that 2) an approved O & M agreement is recorded on the land title within 90 days after City approval. Additionally, Staff will request final signed plans from the applicant's engineer. *Motion carried unanimously.*



**B. BWSR Funding.\*** The Board of Water and Soil Resources is considering moving from a competitive funding model towards a more systematic Clean Water Funding model for local water management authorities on a watershed basis. Included in the meeting packet was a document entitled, “Guiding Principles,”\* which outlines how these principles will direct and influence future policies and procedures for Clean Water funds appropriated to BWSR for the purposes of implementing comprehensive watershed management plans. Eligible watersheds are defined as those areas that have watershed management plans developed under the One Watershed, One Plan Program or the Metropolitan Surface Water Management Act.

For the metro area, the funding will be allocated by county, calculated based on the square mileage of private land within the county. County and municipal-owned land is included as private land for the purposes of this calculation. Hennepin County’s share of watershed-based funding for FY 2018-2019 is \$1,018,000. If all watershed organizations in Hennepin County choose to create a collaborative group for the watershed-based funding, that share of funds is available for Hennepin County projects. If the WMOs choose to remain in the competitive-based grant funding, that money will be pooled with counties who also choose to remain competitive-based, meaning that Hennepin County watershed organizations may receive more or less than the \$1,018,000.

The decision on whether to move forward as a collaborative within the county or to remain as competitive must be made by June 30, 2018. This decision can be changed in the future, but BWSR requires that eligible LGUs complete a documented process to make that determination by June 30.

The watershed-based funding pilot program does allow certain activities to be eligible for BWSR grant funds that are not eligible under the competitive grant program such as: programs, project support, grant management and reporting, and technical and engineering assistance necessary to implement activities.

Beginning over the next few weeks, Hennepin County will be convening meetings of all eligible LGUs, which includes Watershed Districts, WMOs and Cities with a state-approved plan (City Local Water Management Plans are considered state-approved if approved by the governing watershed). The first meetings are to determine eligible participants, establish voting representation, establish a direction for the collaborative, and discuss potential projects for FY2018-2019.

Staff is requesting approval to attend the Hennepin County collaboration meetings on behalf of the Commission. Commissioners and Cities will also be invited to participate in these meetings. Motion by Butcher, second by Weir to grant this approval. *Motion carried unanimously.* Staff will send notices of future meetings to Commissioners and member cities.

#### **IV. New Business.**

**Cost Share Policy.\*** At the December meeting, the Commissioners briefly discussed the “cap” on the maximum annual levy for Capital Improvement Projects (CIPs). It was noted that, according to the Commission’s current Cost Share Policy which was adopted in 2012, the cap is \$250,000/project, \$500,000/year. The current CIP,\* which was amended in 2017, shows estimated costs for projects anticipated to be levied in 2018/payable 2019 are \$1,395,250. While some 2018 projects may be reassigned to future years, others will most probably be added and the costs of some existing projects may increase. The TAC will make a recommendation to the Commissioners regarding revising the cap at their February meeting. TAC members are encouraged to discuss this possible action with their city personnel/councilors.

#### **V. Grant Opportunities and Updates.**

**A. Internal Phosphorus Loading Control in Fish Lake project.** The initial alum treatment occurred September 18-21, 2017. The next steps include collecting sediment cores to determine the alum dosage calculations in 2018 and continuing to monitor the lake to determine the effectiveness of the first treatment. The second treatment will occur in the spring of 2019. The estimated cost for two treatments is \$300,000; the first treatment cost \$176,379. Project funding sources include the BWSR Clean Water Fund Grant, the City of Maple Grove, the Fish Lake Area Residents Association (FLARA), Three Rivers Park District (TRPD), and the Commission. Staff is currently developing the annual progress report due February 1, 2018. A second payment of 40% of the \$200,000 grant amount will be distributed after the first payment (50%) has been expended and reporting requirements have been met.

\*in meeting packet

**B. Rush Creek Headwaters Subwatershed Assessment project.\*** On December 7, 2017, Wenck, Hennepin County, JASS, and City of Corcoran staff attended an Open House to which all the property owners living in the Corcoran portion of the Study Area were invited. According to the sign-in sheets, attendance was approximately 50. Scattered at tables around the room were large-format aerial photos of each of the six management units as well as an overview aerial of the study area. Attendees were encouraged to mark up the figures with information about known problems and issues, and observations about conditions in their area. Staff circulated among the tables to discuss and answer questions. A comment sheet was provided for attendees to record their concerns and comments as well as to sign up to participate in future small group meetings or to get email updates about the project. They could also sign up to receive more information about residential or agricultural BMPs. About 20 sheets were filled out and eight attendees were interested in future small group meetings. Comments from the marked-up figures and the comment forms will be added to the “Problems and Issues” figure in the report.

Expected January-February 2018 activities include

1. Completing the second round of analysis with ACPF and PTMAApp tools to prioritize BMPs
2. Reviewing SWAT model runoff and loading data from Three Rivers Park District to estimate BMP load reductions
3. Meeting with Core Team in late January to review prioritization scheme and range of BMP costs and removals
4. Meeting with TAC in February to review prioritized BMPs
5. Preparing website content

**C.** The Federal Emergency Management Agency (FEMA) has awarded the Minnesota Department of Natural Resources (MnDNR) a **grant to update the Special Flood Hazard Areas (SFHAs)** in the Twin Cities HUC8 watershed. Pass-through grants will be provided so that WMOs can complete some or all of this work. FEMA would like to leverage existing data wherever possible so Twin Cities WMOs within the HUC8 watershed are being approached to see if they have any data that can support this effort. Since leveraged data will reduce overall project cost, WMOs that can provide data will be offered remaining funds allotted for that watershed for such activities as flood risk reduction or communication activities. All deliverables must be submitted to the MnDNR by April 2020.

Total funds for each HUC watershed have been established between FEMA and the DNR. The cost estimates are based on MnDNR staff developing new hydrologic and hydraulic models using HEC-HMS and HEC-RAS, delineating all floodplains and x-section shapefiles, and developing the depth grids. These cost estimates have not been provided to the WMOs and the amount of the grant will not exceed the FEMA-negotiated costs for each WMO. Any unused funds can be passed through to the WMO to complete other flood risk reduction activities pre-approved by MnDNR staff.

Technical Staff has been working with MnDNR to put together a scope of work and cost estimate. It will be brought back to the Commission at their February meeting for further discussion and a decision. Hennepin County staff have the capacity and would like to do the work. Swenson will be the lead and overflow project review work will be performed by Weiss.

**D.** Tuominen provided an update on the **Mill Pond Shoreline and Aquatic Habitat Restoration Project**, which is being funded in part by the Commission’s 2017 ad valorem levy. Recent subzero temperatures have helped freeze the pond bottom, providing access for heavy equipment to start the pond excavation work. 250,000 CY of silt and sand will be excavated from the Mill Pond and a large amount of this material will be hauled offsite. The schedule requires the contractor to complete the excavation work this winter season. Shoreland and planting restoration will be completed in the summer of 2018. The project will restore approximately 42 acres of aquatic and shoreland area, maintaining and enhancing the game fish population and attracting and supporting migratory and resident wildlife populations. The restoration work also includes removal of invasive plants.

**VI. Elm Creek Watershed-wide TMDL.** This item will be removed from the recurring agenda.

\*in meeting packet

## elm creek Watershed Management Commission

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**VII. Watershed Management Plan.****VIII. Education.****A.** Included in the packet was the **December WMWA (West Metro Water Alliance) update.\***

1. WMWA has switched its email distribution system for the **WaterLinks** e-newsletter from Hennepin County to MailChimp. In order to keep receiving WaterLinks (or to newly subscribe), go to [westmetrowateralliance.org/contact.html](http://westmetrowateralliance.org/contact.html) to sign up. The next issue of Water Links will be out in the first quarter of 2018 and will feature late winter, early spring-related content.

2. WMWA is currently discussing options for assisting property owners with **rain gardens and native plant conversions**. Two options being considered are 1) funding two hours of on-site technical assistance for owners who take the Metro Blooms Landscaping workshop; and/or 2) providing reimbursement for the cost of purchasing native plants, up to a certain amount, say \$100. These ideas are still under development.

3. The website **Google Analytics\*** for December 2017 and January-December 2017 for the Shingle Creek/West Mississippi Commissions are included in the update, as are the **Facebook insights\*** for the last 28 days for both Shingle Creek and WMWA.

4. The next **WMWA meetings** are scheduled for 8:30 a.m., Tuesday, January 16, 2018, and Tuesday, February 13, 2018, at Plymouth City Hall. Commissioners are encouraged to attend.

**B.** Staff will contact FLARA regarding their water quality education grant application. An approved final report must be submitted in order for FLARA to receive the grant proceeds.

**IX. Communications.****X. Other Business.**

**A.** A reminder that annual **Commissioner/Alternate appointments** are due. A copy of the minutes of the meeting when the individuals were appointed or an appointing resolution should be emailed to the Administrative Office.

**B. Nominations for 2018 officers** will be accepted at the February meeting. Elections will occur at the March meeting.

**C.** The following **projects** are discussed in the January Staff Report.\* ("W" denotes wetland project.)

1. 2013-046 Woods of Medina, Medina.
2. 2014-015 Rogers Drive Extension, Rogers.
3. 2015-004 Kinghorn Outlet A, Rogers.
4. 2015-030 Kiddiegarten Child Care Center, Maple Grove.
5. 2016-002 The Markets at Rush Creek, Maple Grove.
6. 2016-004 Park Place Storage Site Plans, Corcoran.
7. 2016-005W Ravinia Wetland Bank, Corcoran.
8. 2016-026 Faithbrook Church, Dayton.
9. 2016-040 Kinghorn 4th Addition, Rogers.
10. 2016-047 Hy-Vee Maple Grove #1, Maple Grove.
11. 2016-052 The Woods at Rush Creek, Maple Grove.
12. 2017-002 RDO Site Plan, Dayton.\*
13. 2017-014 Laurel Creek, Rogers.
14. 2017-016 Territorial Woods, Maple Grove.
15. 2017-017 Mary Queen of Peace Catholic Church, Rogers
16. 2017-019 Medina Senior Living Community, Medina.
17. 2017-021 Hindu Society of MN Staff Housing, Maple Grove.
18. 2017-028W Fehn Meadows Wetland Bank, Corcoran.
19. 2017-029 Brayburn Trails, Dayton.
20. 2017-030 Brindle Path, Medina.

\*in meeting packet

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21. 2017-031 Bass Lake Crossing, Corcoran.
22. 2017-034 Plymouth Memory Care, Plymouth.
23. 2017-035 Weston Woods of Medina PUD.
24. 2017-036 Enclave at Elm Creek, Plymouth.
25. 2017-037 L-80 Lift Station MCES, Corcoran.
26. 2017-038 Bass Lake Estates, Corcoran.
27. 2017-039 Rush Creek Apartments, Maple Grove.
28. 2017-040 Capitol Beverage, Rogers.\*
29. 2017-044 Reserve at Medina 2nd Addition, Medina.
30. 2017-045 Fish Lake Estates, Maple Grove.
31. 2017-046W Wessell Wetland Delineation, Corcoran.
32. 2017-048W Ebert Parcel Wetland Delineation, Corcoran.
33. 2017-049W Rolling Hills Wetland Delineation, Corcoran.
34. 2017-050W Ernie Mayer Wetland/floodplain violation, Corcoran.\*
35. 2017-051 Mallard South 2nd Addition, Rogers.\*
36. 2017-052 John Meister Wetland Exemption, Corcoran.\*
37. 2017-053 Sunrise Solar Garden, Corcoran.\*

**XI. Adjournment.** There being no further business, motion by Weir, second by Jullie to adjourn the meeting. Motion carried unanimously. The meeting was adjourned at 12:36 p.m.

Respectfully submitted,



Judie A. Anderson, Recording Secretary

JAA:tim

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\*in meeting packet

# elm creek

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### STAFF REPORT February 7, 2018

**2013-046 Woods of Medina, Medina.** This is two parcels totaling 9.5 acres located east of CR 116 and south of Hackamore Road. The site is proposed to be developed into 16 single-family residential lots. On January 13, 2015, the Commission approved this project with two conditions. Although this project has not been constructed, it is still active with the City of Medina and remains approved by the Commission until it becomes inactive with the City.

**2014-015 Rogers Drive Extension, Rogers.** This project involves improvements along Rogers Drive from Vevea Lane to Brockton Lane. The project is located east of I-94, south of the Cabela development. The total project area is 8.0 acres; proposed impervious surfaces total 5.6 acres. Site plans received July 1, 2014 meet the requirements of the Commission with the exception of the nutrient control. Due to limited options to treat the nutrient loads on the east 1.7 acre portion of Rogers Drive, the Commission approved the site plan contingent upon the City deferring 4.6 lbs. of phosphorus for treatment in future ponding opportunities as the easterly corridor of Rogers Drive develops. 2.3 lbs. will be accounted for in the Kinghorn Spec. Building site plan with 2.3 lbs. still outstanding. This item will remain on the report until the total deferral is accounted for.

**2015-004 Kinghorn Outlot A, Rogers.** This is a 31 acre site located between the Clam and Fed Ex sites in Rogers on the west side of Brockton Road and I-94. The proposed site will have two warehouse buildings, 275,000 and 26,000 SF in size, with associated parking and loading facilities. The Commission standards require review of stormwater management, grading and erosion controls and buffers. In June 2015 the Commission approved this project with three conditions. Revisions have yet to meet the Commission's approval conditions. This project was extended by the City of Rogers earlier this year. It will remain active on the Staff Report.

**2016-002 The Markets at Rush Creek, Maple Grove.** This is a proposal to develop 40 acres of a 123-acre planned unit development located in the southwest quadrant of the intersection of CSAH 101 and CSAH 10. County Ditch 16 (Maple Creek) runs along the south property line on this project. The 40-acre project area includes a Hy-Vee grocery store (16.8 acres), a Hy-Vee gas station (2.5 acres) and 11 outlots (18.76 acres). Right-of-way accounts for 2.3 acres. The remaining acreage (83 acres) consists of 5 outlots and right-of-way. The additional outlot areas are not part of the stormwater review for this project but will be reviewed for compliance with the Commission's buffer and floodplain requirements. In May 2016 the Commission granted Staff authority to administratively approve the project and report any updates. This project has been placed on hold by Hy-Vee. As long as it remains active with the City, the Commission's approval with conditions remains in place. A temporary pipe to drain excess water on the west side of CSAH 101 will be installed by the City of Maple Grove through this site. The permanent pipe was installed under CSAH 101 at the time the road was constructed in 2007, but it was bulk headed on both ends of the ROW. This is being completed because a new development in the northwest corner of this intersection is being considered by the City. (See project 2017-039.)

**2016-004 Park Place Storage Site Plans, Corcoran.** The applicant is developing a 22-acre site in the southwest portion of the city into a multi-unit storage facility with associated access roads, utilities, and stormwater features. This is an addition to the existing storage facility located west of the proposed project. New wetland permit revisions were approved by the Commission at their July 2016 meeting. New site plan information was received and approved by the Commission in October 2016. All approval contingencies have been met with the exception of wetland banking withdrawals for 0.24 acres from bank account #15560. Staff gave the applicant 45 days (until November 17, 2017) to secure the additional 0.24 acre

RULE D - STORMWATER MANAGEMENT  
RULE E - EROSION AND SEDIMENT CONTROL  
RULE F - FLOODPLAIN ALTERATION

RULE G - WETLAND ALTERATION  
RULE H - BRIDGE AND CULVERT CROSSINGS  
RULE I - BUFFERS

*Italics indicates new information*

*indicates enclosure*

credits. The applicant has requested some additional time to secure these credits due to a specific bank site expected to be certified by BWSR in the next 60 days. Staff approved the request. They are working toward an agreement with the Murray Ball Wetland Bank in Greenfield.

**2016-005W Ravinia Wetland Replacement Plan, Corcoran.** In February 2016, Lennar Corporation submitted a Wetland Banking Concept Plan for Phase II of the Ravinia Development. This plan was withdrawn in favor of an onsite wetland replacement plan. At their December 2016 meeting the Commission approved Staff's findings and recommendations dated January 10, 2017. Final wetland impacts will be 1.22 acres. Wetland credits created on site will be 4.01 acres. Excess credits of 0.11 acres are proposed to be used on Lennar's Laurel Creek development in Rogers (2017-014). All contingency items that were part of Commission's approval have been met. Construction on the site began last spring. Vegetation planting and management took place throughout 2017. Barr Engineering was contacted by the Commission to provide monitoring to ensure the replacement meets the performance standards of the approved plans. Monitoring will begin in 2018.

**2016-040 Kinghorn 4th Addition, Rogers.** This is a 13.7-acre parcel located in the northwest corner of the intersection of Brockton Lane and Rogers Drive. An industrial warehouse with 8.8 acres of new impervious area is proposed for the site. The plan includes the use of a NURP pond and a biofiltration basin to meet Commission requirements for rates, water quality and abstraction. The adjacent site is likely to be developed in the near future and some of the stormwater features were oversized to accommodate future development. In November 2016 the Commission approved the project with the following conditions: 1) approval of only this phase; future phases will need additional review and approval; 2) final modifications to the hydrologic modeling; 3) additional details are provided for a proposed water re-use system; 4) an O&M Plan for the pond and biofiltration basin is completed and recorded on the final plat; 5) modification of the storm sewer system to maximize the area draining to the NURP pond; and 6) receipt and review of wetland-related documentation if wetlands are present. Condition #1 required no action, so has been met. Condition #2 has been met for the current design; however, any future modifications to the design will require additional review. Conditions #3-6 remain outstanding and are expected to be addressed during final design. Staff has *discussed the project with the City* and been in contact with the project engineer to receive an update, but no new information has been provided.

**2016-047 Hy-Vee North Maple Grove.** The applicant is proposing to disturb 13 acres of a 20.4-acre site located at the northeast corner of Maple Grove Parkway and 99th Avenue for the purpose of constructing a grocery store, fuel station, convenience store and parking facilities. Staff sent preliminary review comments and requested revisions on December 14. In their findings dated January 10, 2017, Staff recommended approval of this project subject to 1) receipt, approval, and recordation of an Operations and Maintenance Plan for the pond and the iron-enhanced filtration system, 2) revisions for items relating to buffer requirements and erosion and sediment control as enumerated in the findings, and 3) receipt of a signed and dated final plan set. The Commission approved Staff's recommendations at their January 11, 2017 meeting with the additional requirement that the Commission receive and comment on a WCA impact notice. No new information has been received to date.

**2017-030 Brindle Path, Medina.** This is a 40-acre site proposed for 68 single family lots. It is located just north of the Polaris Headquarters. Staff provided preliminary comments to the City. This item will remain on the report as a placeholder until an application is received.

**2017-031 Bass Lake Crossing, Corcoran.** This is two parcels, 48.5 total acres, located north of the intersection of CR 10 and Larkin Road. M/I Homes is proposing to develop the two parcels into 97 single-family residential homes. As proposed, the project will require 0.3303-acre of jurisdictional wetland fill within 5 separate wetland locations. The review will be for compliance with the Commission rules D, G, and I. The Commission approved this project and wetland replacement plan per Staff and TEP recommendations at their November meeting. All the contingent recommendations have been met. A \$75,000 escrow has been placed with the Commission until all the wetland credits have been purchased per the approved wetland replacement plan.

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**2017-035 Weston Woods, Medina.** This is an 80 acre townhome development located northeast of Chippewa Road and Mohawk Drive. Staff will provide preliminary comments to the City and this item will remain on the report as a placeholder until plans are received.

**2017-036 Enclave at Elm Creek, Plymouth.** This is a 73-acre parcel located on CSAH 101 and Prairie Creek Road, about 3/4 miles north of TH 55. The property will be developed into 111 residential lots and a new school site. Stormwater, grading and erosion control plans were submitted for the residential portion of the property. Only stormwater management plans for the future school site were submitted for review. The residential portion of this development looks good. But, a large component of the stormwater management (2.1 lbs/year of phosphorus removals and 46,452 CF of abstraction) for this 73-acre area is dependent on construction of the school site on the south 1/3 portion of the property. The school site grading and stormwater management system was provided as a concept only. Staff is working with the City of Plymouth to provide assurance to the Commission that the limiting stormwater components will be handled by the City if the school site is not constructed to meet Commission standards. An alternative to meet the Commission's requirements has been proposed, but not preferred by the applicant. The applicant and city agreed to an escrow submittal in lieu of meeting the City and Commission's stormwater management requirements at this time. The escrow will be held until the applicant meets said requirements or the school site is developed. This item was approved by the Executive Committee of the Commission in October 2017. It will remain on the report until the stormwater management requirements are met by the school district or the applicant.

**2017-038 Bass Lake Estates, Corcoran.** This is a proposed residential development consisting of 55 single family lots and one commercial lot on a 40-acre site. The project is located west of the intersection of Bass Lake Road (CR 10) and County Road 101. 55 villa-style homes are proposed for the residential portion of the site and a storage facility is proposed for the commercial portion of the site. The Commission will review this site for conformance to rules D, E, F, and I. There are several large items remaining for the applicant to address before Staff will make a recommendation, including the submittal of abstraction calculations and water quality calculations. *A revised set of plans was submitted on January 17, 2018. Staff continues to review the revised plans for conformance to the Commission's requirements and, if available, Staff will provide a recommendation at the meeting.*

**2017-039 Rush Creek Apartments, Maple Grove.** This project is located in the southwest quadrant of the intersection of Bass Lake Road (CSAH 10) and Troy Lane (CSAH 101). The project area is 8.2 acres in size and includes two phases of construction. Phase I is 236 apartment units on 6.0 acres located on Lot 1, Block 1, Southwest Crossroads 2nd Addition. Phase II is a future 76-unit apartment building located on 2.2 acres in Outlot C of this development. The Commission will review this project for conformance to rules D, E and I. Findings with no recommendations dated November 15, 2017, have been provided to the applicant and City. The applicant requested and was granted an extension of the deadline (per MN statute 15.99) to December 31, 2018.

**2017-044 Reserve at Medina 2nd Addition, Medina.** An erosion control review of the plans for the final buildout of this addition of the Reserve at Medina project originally approved under permit #2013-002. This addition is located southeast of Hackamore Road and Pinto Drive (CR116), immediately east of the First Addition, and will allow for the construction of 46 new single-family homes. The plans are in conformance with the previously approved project, and require small modifications in order for Staff to complete its administrative review. *Staff has not received updated plans as of this date and will be checking in with the applicant.*

**2017-045 Fish Lake Estates, Maple Grove.** This is a small subdivision located at the intersection of the Weaver Lake Road entrance ramp to east bound I94 and Fish Lake Road East. The application is considered incomplete at this time because the Commission has not received authorization from the City of Maple Grove to proceed with its review. The City has concerns with the lot layout, wetland impacts and stormwater management. *No new information has been received as of this report.*

**2017-046W Wessell Property Wetland Delineation, Corcoran.** This is a wetland delineation received for the Commission's review and decision for a 155-acre site located in the northwest quadrant of Hackamore Road and CSAH

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116. The WCA application notice has been issued. The application is considered incomplete at this time. Staff met with the delineator on the site and walked the wetland boundaries. Staff requested additional historic aerial photo reviews and the complete report prior to a final decision. *Neither have been received.*

**2017-048W Ebert Parcel Wetland Delineation, Corcoran.** This application is not considered complete. It was submitted without a final delineation report. The applicant requested the LGU look at the site prior to freeze up. Once a final report is received Staff will notice the delineation and move forward with the application.

**2017-049 Rolling Hills Road Wetland Delineation, Corcoran.** This application is not considered complete. It was submitted without the final delineation report. The applicant requested the LGU look at the site prior to freeze up. Once a final report is received Staff will notice the delineation and move forward with the application.

**2017-050W Ernie Mayer Wetland/floodplain violation, Corcoran.** It came to the Commission's attention that a potential wetland violation occurred on the following properties in Corcoran 1) 2811923410009, 2) 2811923130002, 3) 2711923220002 4) 2711923230002. All parcels appear to be operated by Mayer.

An initial site inspection appears to confirm the wetland violation. An access road was constructed from Larkin Road into these parcels. The road appears to be constructed in MN Wetland Conservation Act jurisdictional wetlands within the Rush Creek floodplain. A Technical Evaluation Panel (TEP) met on December 11 to visit the site and advise the Local Government Unit (ECWMC) as to the extent of the violation (if any) and the development of a restoration order for any violation that has occurred on this site.

*An informational meeting with the TEP and applicant was held on January 30, 2018. A summary of the meeting is included in the packet. Once conditions permit in the spring, additional site work will be done to determine the extent of the wetland fill and other impacts from the work.*

**2017-051 Mallard South 2nd Addition, Rogers.** This is a 1.5 acre parcel proposed to be replatted for a 9-unit townhome development. It was originally approved as 12 townhome units in 2001. Because of the change in platting, the site must conform to the Commission's Third Generation Stormwater Management Plan. The Commission approved this project at their January 2018 meeting. The only remaining condition for final approval is the easement and O&M plan recordings on the bio-filtration basin.

**2017-052 John Meister Wetland Exemption, Corcoran.** Meister requested and was granted an exemption to maintain an existing ditch system on the west side of CSAH 116 at Meister Road. This item will be removed from the report.

**2017-053 Sunrise Solar Garden, Corcoran.** The project proposes to construct a 5 Megawatt Solar Facility on an 80-acre site located northwest of the intersection of County Roads 50 and 19. Staff met with the applicant prior to the application to discuss the site on December 20. The project proposes to place solar panels across much of the site, including through several lower quality wetlands and their associated buffers. Otherwise, the site proposes minimal grading to install the panels and associated infrastructure. *At their January meeting the Commission approved this project contingent that 1) stormwater easements and buffers are provided over all stormwater features on the site, including a stipulation that no other structures other than the proposed solar panels are allowed for installation in the buffers and wetlands, that 2) an approved O & M agreement is recorded on the land title within 90 days after City approval, and that 3) final signed plans be submitted by the applicant's engineer.*

**2018-001 Rush Creek Commons, Maple Grove.** This project is located at the SW intersection of CSAH 10 and 101. It is 9.13 acres in size. It is part of the Markets at Rush Creek PUD. This portion of the PUD is proposed for 82 townhomes, creating 4.68 acres of new impervious area. Review of this site will be for consistency to the Commission's approvals for the Markets at Rush Creek PUD stormwater management plan (project 2009-004) and for compliance to the Commission's Third Generation Stormwater Management Plan Appendix O, Rules and Standards. Staff recommends approval of site plans dated January 25, 2018, contingent upon meeting the Commission's operation and maintenance requirements on the stormwater facilities.

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**2018-002 Highway 169 Pedestrian Bridge/Trail, Champlin.** *This project proposes the construction of a multi-modal pedestrian trail adjacent to the TH 169 corridor, along with several other improvements including parking improvements in two locations, changing the location of a boat launch proposed in permit 2017-027W, and modifying an existing trail. The total project area includes nearly 6 acres of disturbance. Impacts to the floodplain are part of the project, with both floodplain fill and mitigation being provided as part of the project. If available, an update will be provided to the Commission at the meeting.*

**2018-003 Rathburn Property, Rogers.** *This is a 40 acre parcel where the property owner is constructing a driveway and home site. It will be reviewed for compliance to the Commission's grading, floodplain and wetland buffer requirements. It was received too late to be included in this report. If available an update will be provided to the Commission at their meeting.*

**2018-004 Rush Creek Restoration Project, Maple Grove.** *The City is proposing to restore 2,400 feet of Rush Creek just north of Territorial Road adjacent to the Enclave on Rush Creek development. This is within the Three River Parks corridor that was obtained when the development was platted. It will be reviewed for compliance to the Commission's grading and floodplain requirements. It was received too late for a recommendation to be included in this report. If available an update will be provided to the Commission at their meeting.*

**2018-005 Sundance Greens, Dayton.** *This site consists of 7 parcels that total 310 acres. Approximately half is the Sundance Golf course and the other half is agricultural land. The applicant is proposing a long term, phased residential development with 665 residential units while maintaining a portion (9 of the 18 holes) of the golf course. Total new impervious area will be 71 acres. The site will be reviewed for the Commission's stormwater management, floodplain impacts, grading, and wetland buffer standards. It was received too late for a recommendation to be included in this report. If available an update will be provided to the Commission at their meeting.*

#### **FINAL RECORDINGS ARE DUE ON THE FOLLOWING PROJECTS:**

**2015-030 Kiddiegarten Child Care Center, Maple Grove.** This project was approved by the Commission at their December 9, 2015 meeting. If the City of Maple Grove does not take over the operation and maintenance of the underground system and the sump catch basins, an O&M agreement for the underground trench/pond system must be approved by the Commission and the City and recorded with the title.

**2016-026 Faithbrook Church, Dayton.** Approved August 10, 2016, with the stipulation that an approved O&M plan be recorded with the property within 90 days following final plat approval. Per his August 31, 2017 email, Jason Quisberg has indicated that construction is significantly complete, although some vegetation establishment remains. The City still has an escrow in place which will be held until the maintenance agreement is finalized and recorded.

**2016-052 The Woods at Rush Creek, Maple Grove.** At their March 2017 meeting, the Commission approved Staff's findings and recommendations dated February 15, 2017. Outstanding items are the biofiltration pond, O & M plans, and recording.

**2017-014 Laurel Creek, Rogers.** At their June 14, 2017 meeting the Commission approved Staff findings dated June 13, 2017, in which they recommended approval of this project with four conditions. All contingency items have been provided with the exception of the O&M agreement which is being negotiated by the City as to whether the City or the HOA will be responsible for the operation and maintenance of the stormwater management facility. In his August 31, 2017 email, Andrew Simmons responded that the O&M agreement is still being negotiated.

**2017-016 Territorial Woods, Maple Grove.** This is a 21 acre site located at 13763 and 14033 Territorial Road. The development is proposing to construct a 98-unit apartment building and 69 townhome units. Staff review is for compliance to the Commission's rules D, E and I. This item was approved at the September 2017 Commission meeting

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contingent upon receipt of an O & M agreement meeting the Commission's rules. *The agreement was approved by the City and is in the process of being recorded.*

**2017-017 Mary Queen of Peace Catholic Church, Rogers.** At their June 14, 2017 meeting the Commission granted Staff approval authority pending satisfactory compliance with Staff's findings dated June 16, 2017. All items from the findings have been completed with the exception of the operation and maintenance agreements for the stormwater facilities. In his August 31, 2017 email, Andrew Simmons responded that he has the O&M agreement in hand, just awaiting recordation.

**2017-019 Medina Senior Community, Medina.** *This item was approved at the Commission's September 2017 meeting subject to conditions. All of the conditions have been met with the submission of revised plans, with the exception of the final recordings of the O&M agreements and easements.*

**2017-021 Hindu Society of MN, Maple Grove.** At their June 14, 2017 meeting, the Commission approved this project per Staff's recommendations. All the recommendations have been met with the exception of the O&M plan agreements.

**2017-029 Brayburn Trails, Dayton.** At their August 2017 meeting the Commission approved Staff's findings dated August 2, 2017 with five conditions. *All of the conditions have been met with the submission of revised plans, with the exception of the final recordings of the O&M agreements and easements.*

**2017-034 Plymouth Memory Care, Plymouth.** This project is a new Senior Living Facility located on a 4.7 acre parcel located northwest of CR 101 and Medina Road. The project will replace one single family home located on the site. Stormwater, grading and erosion control plans were submitted for review. *This project was approved by the Commission at its September 2017 meeting subject to the receipt of an O&M agreement acceptable to the Commission.*

**2017-037 Corcoran L-80 Lift Station, Corcoran.** Staff recommended the Commission approve this project contingent upon the project meeting the Commission wetland buffer requirements. This item was approved by the Executive Committee of the Commission in October 2017. *Revised plans meet the Commission's buffer requirements with the exception of the final easment recordings.*



## Blue Thumb Planting for Clean Water®

### 2018 Partner Agreement

**Blue Thumb—Planting for Clean Water®** is a public/private partnership that promotes native plants, raingardens, and shoreline stabilization projects to reduce runoff and improve water quality. Our ***Finest on Earth™*** **Blue Thumb Partners** include local governmental units (watershed districts, conservation districts, cities and counties), non-profit organizations, and private companies such as nurseries, landscape design and build companies, and other companies that are working toward **Blue Thumb** goals. **Blue Thumb** is operated and managed by Metro Blooms.

### Where We Started

**Blue Thumb** began in 2006 as an outreach program of the Rice Creek Watershed District (located in Blaine, Minnesota) to help its cities meet mandated water quality goals set forth in the Clean Water Act. In 2017, Blue Thumb became a program of the nonprofit Metro Blooms to better reach and serve a broader geographical base.

### Our Challenge

The EPA defines runoff as the nation's number one threat to the water quality of our lakes and streams, however the general public is not aware of how runoff from their property impacts our clean water and ways they can make a difference.

### Our Shared Vision

Clean water resources supported by beautiful and ecologically functional landscapes that minimize runoff in cities, towns and suburbs.

### Our Impact

- Transformed properties that reduce runoff and improve ecological functions
- Community engagement bridging information and action to create behavior change
- Changes in the landscaping norms among professionals and property owners.





## Blue Thumb Partner Benefits

A warm welcome to the Blue Thumb family! As a ***Finest on Earth™*** Blue Thumb Partner, many wonderful opportunities and tools are at your fingertips.

### Website: A Helping Hand and Double Exposure

Use **bluethumb.org** as a helping hand and extension of your organization. You'll find it's a valuable resource designed to be a **"one-stop shop"** for all your information needs. We offer an online plant selector tool, how-to videos, grant and volunteer opportunities, landscaper, designer, speaker, and native plant nursery resources, along with an up-to-date event calendar and a partner finder tool that helps connect residents and potential clients with Blue Thumb partners.

### Education, Outreach and Marketing Expertise

Blue Thumb uses its large and growing presence on social media, through website traffic, and at events and workshops to call attention to: the problem of runoff and actions that residents can take to address it; clean water news and events; and the efforts of our Blue Thumb partners. We are helping shape the conversation about planting for clean water.

### Professional Development & The Finest On Earth Networking Opportunities

Last, and perhaps most importantly, as a **Blue Thumb Partner** you will be part of a robust and diverse partner network of like-minded organizations and professionals including:

- Local government units – cities, counties, and watershed districts and organizations
- Private sector landscape designers, contractors, native plant nurseries, and nonprofit organizations

Partners are invited to share in hands-on professional development on timely topics at partner meetings and other opportunities throughout the year. In 2017, these included Resilient Yards, Turf Alternatives, Stormwater Benefits of Trees, and Clean Water Communication and Strategic Planning.





## You'll Be Seen as Part of the Blue Thumb Brand Family

Your messaging and professionalism will be strengthened when presented alongside the creditable, well-recognized **Blue Thumb** brand.



### Engaging Display Materials

An array of displays is available for checkout to use at your events, including: **The Magic in the Roots**, pull-out roots display, **Pledge to Plant Banners**, other free-standing informational and educational banners and lake backdrop, and the ever-popular **Blue Thumb Flower Faces!**

### Shared Online Materials

**Blue Thumb Partners** enjoy high-quality shared print and presentation materials including:

- Printed materials are also available online to download, edit and distribute.
- Downloadable, editable and printable bookmarks, stickers, raingarden brochures, raingarden plant lists, etc.
- Raingarden Workshop Presentations on turf alternatives, native gardens, raingardens, shoreline plantings and maintenance of best management practices.

## Private Partners Especially Value:

- Blue Thumb workshops offer **Blue Thumb partners as local resources**. Workshop attendees receive a folder with partner materials and also meet with partner landscape designers to talk about their properties.
- Our online Partner Finder Tool refers hundreds of website visitors to partners each year.
- Blue Thumb's presence at the State Fair and other events throughout the year are all opportunities to meet potential clients interested in creating ecologically beneficial landscapes.
- Blue Thumb brand **helps set apart** companies that have an environmental focus and clean water and native plant expertise.
- Opportunities to learn new best practices in the field at quarterly partner meetings, workshops, and other events.

## Public Partners Especially Value:

- **New in 2018**, Blue Thumb Partners receive a discount on a Resilient Yards or Turf Alternatives workshop.
- Sharing partner resources and educational displays means that partners needn't reinvent the wheel, and makes public education and outreach events a breeze.
- Blue Thumb workshops for residents help **reach MS4 permitting requirements** and educational goals, and are demonstrated to help homeowners convert knowledge into action.
- Public partners want their residents to install BMPs, but cannot recommend specific companies. Blue Thumb's online partner finder is a great resource to direct their residents to.
- Extra help publicizing clean water events, programs, activities, and ways to get involved.

## Blue Thumb *Finest on Earth*™ Partner Fees

### Fee Structure

This fee structure will ensure that the **Blue Thumb – Planting for Clean Water®** program is able to achieve our vision and offer the partner benefits outlined.

In 2018 members may continue to fulfill up to **50% of fees with volunteer action hours**. The 2018 fee structure includes opportunities for partners to complete volunteer action hours to cover up to 50% of their partner fees.

However, in addition to optional volunteer hours a cash portion is also required. This fee is requested by February 1, 2018. The amount is defined by the size and type of your business in the chart at right.

### Volunteer Action Hours Equivalency

Each action hour is counted as a \$50 contribution. “**Volunteer Action Hours**” are limited to defined activities as listed in our 2018 Service Opportunities.

Any unfulfilled volunteer hours will be invoiced at year end. Your volunteer involvement is encouraged and greatly appreciated whether or not you provide the full cash contribution to the program.



### Partner Fee Categories

#### Profit & Non-Profit Businesses

	ANNUAL FEE
SMALL BUSINESSES (Gross volume under \$500,000)	\$250
MEDIUM BUSINESSES (Gross volume \$500,000 - \$1 million)	\$500
LARGE BUSINESSES (Gross volume over \$1 million)	\$1,000

#### Government

SMALL CITY (under 5,000)	\$250
MEDIUM CITY (over 5,000 / under 50,000)	\$750
LARGE CITY (over 50,000)	\$1,000
SWCD / COUNTY	\$500
Watershed Management Organizations	\$500
SMALL WATERSHED DISTRICTS (Taxable Market Value (TMV) under \$1 Billion)	\$1,000
MEDIUM WATERSHED DISTRICTS (TMV \$1-\$5 Billion)	\$1,750
LARGE WATERSHED DISTRICTS (TMV over \$5 Billion)	\$2,500

Sign up online to become a  
2018 Blue Thumb Partner!  
[bluethumb.org/about/become-a-partner](http://bluethumb.org/about/become-a-partner)



## Blue Thumb 2018 Program Calendar

### January

- **January 9** - Partner Summit Planning Committee tele-meeting, time TBD

### February

- **February 1** - Partner Fees Deadline to Receive all Benefits.
- **February 9** - 1st Quarter Partner Meeting: Partner Planning Summit: 9-12, Location TBD
- **February 17** - Design With Nature; Wild Ones Annual Conference
- *Remember to enter upcoming events on the **Blue Thumb** calendar!*

### March

- **March 6** - Steering Committee Meeting at RWMWD from 1-4 pm
- **Mid-March** - Train-the-trainer Resilient Yard Workshop, details TBD
- *Include **Blue Thumb** in your event press releases this spring.*
- *Sign up for a shift at the Waterfest*

### April

- **April 3** - 2019 Partner Agreement Committee tele-meeting
- **April 19** - 2nd Quarter Partner Meeting: (To be confirmed) Sustainable Landcare Maintenance Training, Location TBD

### May

- *Sign up for a shift at the Landscape Revival native plant sale or Waterfest*
- *Include **Blue Thumb Partner** fees in your 2017 budget plans.*

### June

- **June 2** - RWMWD Waterfest
- **June 2** - Landscape Revival: Shoreview
- **June 5** - Steering Committee Meeting at RWMWD from 1-4 pm
- **June 9** - Landscape Revival: Oakdale

### July

- **July 10** - State Fair Planning Committee tele-meeting
- **July 19** - 3rd Quarterly Partner Meeting. Time, Location and Subject TBD
- *Sign up for a shift at the State Fair!*

### August

- **August 23 - September 3** - MN State Fair

### September

- **September 8** - Monarch Festival

### October

- **October 2** - Steering Committee Meeting at RWMWD from 1-4 pm

### November

- **November 12** - 4th Quarterly Partner Meeting. Partner Recognition Event. Time and Location TBD

### December

- **December 4** - Steering Committee Meeting at RWMWD from 1-4 pm
- **December 31** - 2019 Partner Agreements due
- **December 31** - In-kind/financial reporting and contributions due



## Blue Thumb *Finest on Earth*™ Partner Promise

**Blue Thumb Partners** believe landscapes are at their best when designed to speak to the context, function and form of a place: when they acknowledge and sustain the soil underneath; the water and wildlife passing over and through; the people who use and maintain them; and the climate defining their limits. We work to strengthen the growing patchwork of properties that are beautiful, functional, and ecologically resilient.

### Better Landscapes

Better landscapes result from a **balanced mix** of turf grass lawns and/or other traditionally manicured portions with areas that can use plants that require less maintenance. How the balance is made depends on what is appropriate for the overall situation. Also, what is appropriate for one part of a property may be completely inappropriate in another part. Many factors should be considered in making planning decisions for any landscape project. Some of these are:

- **Site conditions** such as soil type and shade
- **Functional or use requirements** such as play areas and structures
- **Surroundings** such as shorelines, wetlands and/or neighborhood culture and environment;
- **personal tastes** and interests of the land owner(s)
- **local codes**, association covenants and other requirements placed by government agencies.

### Vegetative Buffers

Great places to use lower maintenance plantings include: shorelines, stream banks, and buffers along wetlands and natural areas.

There are various options for landscaping these areas. **Blue Thumb Partners** use some native plants in every planting plan. Native plants are important to use because of their low maintenance, soil stabilizing, stormwater retention abilities, and wildlife attracting characteristics. It is also very important to help reintroduce the hundreds of wonderful plant species that were “here first”.

### What is a “Native Plant”?

Generally speaking, all species are native to someplace. But, people have taken many plants with them as they have emigrated around the world. In landscaping terms, “**native**” refers to a plant species that is used in a location or region where it grew before people began moving plants around. In the midwest, this means before the time of settlement by Europeans around 1850.

Many species are known to occur across relatively wide ranges of geography, climate and environmental conditions. It is commonly understood that sub-groups of these species became adapted to various local conditions within these wider ranges. These are called “**local ecotypes**”. It is desirable to use the best adapted plants for a landscape project. Local ecotype native plants are clearly well adapted to local conditions. Therefore, Blue Thumb projects using native plants require local ecotype native plants. This means plant material propagated from original sources no farther than 200 miles (300 miles for trees and shrubs) from the project. Certain projects, such as ecological restorations, may require sources closer than this.



## What's the Difference Between a Native Plant and a "Cultivar"?

Many kinds of garden plants result from a breeding program or a deliberate process to select for certain desirable characteristics such as flower color. These plants are called "cultivars".

The word is derived from the words "cultivated" and "variety". They are usually given a unique name. Most turf grasses as well as annual and perennial bedding plants are cultivars. There are cultivars that have been selected and bred from species native to the U.S. too.

Their genetic make-up is considered to be somewhat narrowed and altered from the original source material. Therefore, cultivars may only be used in those Blue Thumb projects that specifically allow them.

Native gardens are encouraged to be native, but not required to be. Cultivar use is allowed in raingardens. Shoreline stabilization plantings, however, must use only local ecotype native plants. Regardless of their origin, cultivars and non-native plants should not be introduced to shoreland because they may invade existing native plant communities, their root systems may not adequately protect the shoreline from erosion, and they may not provide shelter and food for native animals.

## Why are Distinctive Regional Landscapes Important?

An intriguing aspect of landscaping and gardening is that **you have to work with what you have**. For the most part, soils and climate conditions are given. This means that a yard in Minnesota is fundamentally different from one in Arizona, or even Iowa. It should look like it too!

However, the cultural forces of uniformity that give us identical big box stores and fast food restaurants across the land also tend to create a bland sameness in the style of our landscapes.

While mass producers and marketers lower costs and broaden availability, they also turn something special into a bland commodity. The lowest possible up-front cost and standardization is fine for cars and electronic toys. It is questionable for food, a big threat for native plants and a disaster for regionally distinct, environmentally beneficial landscapes.

One size definitely does not fit all and lowest price is not always best. Time and money invested into a quality landscape that promotes clean water benefits everyone. **It's a lot less expensive to keep pollution out of our lakes and rivers by planting for clean water than it is to clean our waters up later.**





## Blue Thumb *Finest on Earth*™ Partner Service Opportunities

### Maintaining Our Success

To maintain **Blue Thumb's** success, we need dedicated partner time contributions as well as financial contributions to maintain our **Blue Thumb** program staff as well as **Finest on Earth**™ **Blue Thumb** marketing materials like an updated website, increased social media presence, e-blasts, and display and event resources.

Since not all partners have the same financial resources to contribute, the **Blue Thumb – Planting for Clean Water**® program is asking partners to help run various divisions of the program. Hours served go toward a reduction of membership fees at \$50 per hour. Up to 50% of the total fee may be paid in service hours. If you are interested in providing services to **Blue Thumb** in lieu of your organization's partner fees, please choose one of the volunteer options below. **Please note: Blue Thumb Partners may also fulfill their volunteer hours with their Master Water Stewards hours.**

### Service Opportunities

#### Guest Author/Writer (\$150-\$600)

- 1-12 partners, January-December 2018
- 3-12 hours for up to 4 articles

**Job description:** Write newsletter articles and/or blog posts about water-related topics. You will receive 3-4 hours of service hour credit for each month, plus recognition as author of the post.

#### Social Media Post Assistant (\$600)

- 1-12 partners, January -December 2017
- 1 hour/month for the rest of the year

**Job description:** Gather newsworthy events from partners and share posts, retweet partner posts, “like” partner posts, and otherwise expand social media presence.

#### Blue Thumb Display Host Site (\$250)

- 5 partners, January - December 2018
- 5 hours for the year

**Job description:** Coordinate with partners for display pickup and drop off.

#### Steering Advisory Committee (Nine Members - Five Meetings) (\$800)

- January-December 2018
- 16 hours

**Job description:** Comprised of partners representing the diverse scope of our work, the Steering Advisory Committee enhances organizational capacity, assures alignment with our shared vision, and helps develop partner meetings and trainings.

#### Sustainable Landcare and Weed ID Guide Advisory Panel (\$400)

- 6 partners, January - March 2018,
- 8 hours

**Job description:** Help guide the development of the Sustainable Landcare Guide.

### Wild Ones Annual Design with Nature Conference (\$200)

- 2-4 partners, February 17, 2018

**Job description:** Work a 4-hour shift at a **Blue Thumb** informational table.

### Workshop Landscape Designer (\$100/workshop)

- 1-3 partners, March-February 2018
- 2 hours per workshop

**Job description:** Provide advice to Resilient Yard Workshop attendees about their yards. Some partners use this as a way to find referrals.

### MN Landscape Revival-PR Volunteer (\$200-\$400)

- 2-4 partners, March - June 2018, 4-8 hours each

**Job description:** Help to plan or with promotions of the Landscape Revival.

### MN Landscape Revival Native Plant Sale-Exhibit (\$200)

- Volunteer 2-4 partners, June 2&9, 2018
- 4 hours each

**Job description:** Work a 4-hour shift at a **Blue Thumb** informational table.

### Ramsey Washington Metro Watershed District Water Fest (\$200)

- 2-4 partners, June 2, 2018

**Job description:** Work a 4-hour shift at a **Blue Thumb** informational table.

### MN State Fair-Exhibit Coordinators or Subcommittee (\$500-\$1000)

- 2-4 partners April-September 2017 (Most time will be needed in August)
- 10-20 hours

**Job description:** Help plan, set up and take down the exhibit in front of the Eco-Experience building. Amount of time spent will depend on how much you decide to change the exhibit.

### MN State Fair-Volunteer Coordinator (\$1000)

- 1 partner June to beginning of September 2018 (Most time will be needed in August)
- 20 hours

**Job description:** Recruit volunteers, send volunteers tickets and information about how to staff the **Blue Thumb** exhibit. Plan, set up and take down the exhibit in front of the Eco-Experience building.

### MN State Fair-Volunteer (\$150)

- 30 partners end of August, beginning of September
- 3 hours each

**Job description:** Engage with visitors in our outdoor exhibit full of native plants, interactive displays and partner materials (comes with free entrance to the fair).

### Thumbs Up Event Subcommittee (\$500-\$1000)

- 5 partners, August - November 2018
- 10-20 hours

**Job description:** Help plan and throw the end of the year partner recognition event.

Please contact John at [john@metroblooms.org](mailto:john@metroblooms.org) or [info@bluethumb.org](mailto:info@bluethumb.org) for more information. New opportunities are always arising—we'll keep you informed of them as they develop!

**From:** James C Kujawa

**Sent:** Wednesday, January 31, 2018 10:14 AM

**To:** 'Carlson, Ben (BWSR)' <[ben.carlson@state.mn.us](mailto:ben.carlson@state.mn.us)>; Stacey L Lijewski <[Stacey.Lijewski@hennepin.us](mailto:Stacey.Lijewski@hennepin.us)>; 'Spiegel, Jason (DNR)' <[jason.spiegel@state.mn.us](mailto:jason.spiegel@state.mn.us)>

**Cc:** 'ernieMayer@comcast.net' <[ernieMayer@comcast.net](mailto:ernieMayer@comcast.net)>; Kevin Mattson <[kmattson@ci.corcoran.mn.us](mailto:kmattson@ci.corcoran.mn.us)>; Jason Swenson ([Jason.Swenson@hennepin.us](mailto:Jason.Swenson@hennepin.us)) <[Jason.Swenson@hennepin.us](mailto:Jason.Swenson@hennepin.us)>; 'Deric Deuschle' <[ddeuschle@sehinc.com](mailto:ddeuschle@sehinc.com)>; Hauser, J R (Paul) CIV (US) <[Paul.R.Hauser@usace.army.mil](mailto:Paul.R.Hauser@usace.army.mil)>; [judie@jass.biz](mailto:judie@jass.biz); Maass, Timothy (DNR) <[timothy.maass@state.mn.us](mailto:timothy.maass@state.mn.us)>

**Subject:** Ernie Mayer 1/30/18 TEP meeting summary

TEP and all,

Here is a summary of the TEP meeting held at the Corcoran City Hall on January 30, 2018. Those in attendance were; Ben Carlson- BWSR, Stacey Lijewski-Hennepin SWCD, James Kujawa-ECMWC, Jason Spiegel- DNR, Tim Maass- DNR, Deric Deuschle-SEH, Kevin Mattson-City of Corcoran and Jason Swenson-ECWMC. The meeting was requested by the ECWMC for information sharing and to provide an update to all concerned parties. Discussions centered around three main topics.

1. The road construction work and its impacts to wetlands and floodplains. Preliminary estimates during the site visit in December show 4 areas of wetland impacts.
  - a. The furthest south impact (3,081 sq. ft. area) could have past cropping and drainage history that could affect the extent and amount of impacts.
    - i. Additional historic information is needed before this determination can be made.
    - ii. Newly excavated ditching along the east side of the road was also done during construction. This ditch drains the water east and then under the road in a culvert into an existing wetland. There was evidence of a ditch in the area prior to this work. The extent of the new ditching and whether it was considered maintenance will need to be determined.
  - b. The second impact (3435 sq. ft. area) was an existing access drive to the upland area west of it. Additional fill was placed over the field drive. There was an old culvert that was removed and a new culvert installed during construction. No culvert invert elevations before or after construction were provided.
    - i. A determination whether the area was wetland prior to construction will be necessary.
    - ii. A determination whether the new culvert elevations facilitated additional drainage will be necessary.
  - c. The third impact (6,706 sq. ft. area) is an area that was disturbed during the road construction. Freshly excavated soil and soil piles were evident. Mayer let the TEP view a wetland delineation done by Anderson Engineering in 2016 for this area. The delineation shows most of the disturbed area being in upland, not wetland. The delineation map and its supporting documents were not provided to the TEP. The TEP requested the information from Mayer.
  - d. The fourth impact (3,862 sq. ft. area) is a newly constructed access drive to an upland island in the Rush Creek wetland/floodplain complex. According to Mayer, the area was a stock water pond constructed in the late 1960's. Whether the area was wetland prior to the construction of the stock water pond needs to be determined.
2. The newly constructed ditch just east of the power lines that extends between the far north property line down to the area marked 'potential wetland drainage impacts'.
  - a. The main topic centered around if there was a ditch in that area prior to the newly constructed ditch. Mayer provide a document (attached) from Anderson Engineering with a historic ditch review in the vicinity of drainage ditch he excavated. Mayer believes the ditch was part of the original County Ditch 3 construction from 1907. None of our county ditch records indicate this to be the case (see attached historic plan view from our records).



- Based on the Anderson Engineering review, they conclude a ditch had been located in the area where he dug the new ditch.
- b. LGU preliminary work indicated if there was a ditch in this area it was not a significant ditch and it terminated approximately 500 feet south of where the new ditch was constructed.
  - c. This ditch is adjacent to a DNR public waters wetland, the DNR stated they may have jurisdiction on parts of this ditch system where it impacts areas below the OHWL of their wetland. No OHWL has been determined on this wetland by the DNR.
  - d. Historic research is needed to make a determination. The question is, what is the extent of the historic ditch if any and the impacts, if any from the new ditch on any adjacent wetlands or even to the 'potential wetland drainage impacts' area.
3. The 'potential wetland drainage impacts' areas (see impact overview map). The TEP was questioning if this area has been drained in violation of the MN WCA.
- a. This area appears to have been converted from pasture and wetland to cropland between 2012 and 2015. The site is on the NWI maps as a PEM1A wetland.
  - b. Preliminary work done by the LGU shows this area not cropped between 1981 and 2012 with some type of activity that may have been ditching or tiling evident in 2009 (see attached 2009 photo).
  - c. We requested additional historic information from Mayer on this area. We were hoping there was some prior determinations from the NRCS/FSA office for these areas or he had information on the date any drain tile was installed and the construction information on it. He did not have the information.
  - d. Mayer did say that a draintile installed by the City of Corcoran along Kalk Road in 1996 added additional water to this area and that he installed a drain tile to help remove this excess water. No details on when this was done or size and elevations of the tile was provided.
  - e. One document (attached) from NRSC was provided, but that seems to be for an area north of the 'potential wetland drainage impacts' area. It states it is for the north edge of field 2. The 'potential wetland drainage impacts' from our issue is on the south edge of field 2.

The TEP came to the conclusion we will have to make a site visit this spring to determine; 1) the extent of the road impacts on the wetlands based on soil borings, vegetation, ditch and culvert work and historic information, 2) investigate the ditch cleanout areas and make a wetland determination based on the extent of prior drainage and soils investigations and 3) investigate the 'potential wetland drainage impacts' area and make a determination based on historic information, soil investigation and drainage investigation.

The ECWMC also brought up the fact that the road fill work was done in the 100 year floodplain of Rush Creek. Any new fill placed within the 100-year floodplain must be mitigated in the same proximity. The ECWMC floodplain elevation in this area is 966.75 (1929 NGVD). The FEMA floodplain elevation is 965.0 (1929 NGVD). The ECWMC regulates at the higher of the two, or (966.75 NGVD).

In the meantime we requested Mayer to provide us with any prior determinations done by NRCS/FSA for the areas in question or any other documentation that could help with our investigation.

Please let me know if you have any questions or believe something is missing.

Jim  
James C. Kujawa  
Hennepin County Public Works  
Department of Environment and Energy  
701 Fourth Avenue South, Suite 700  
Minneapolis, MN 55415  
Direct Phone: 612-348-7338

ADMINISTRATIVE OFFICE  
3235 Fernbrook Lane  
Plymouth, MN 55447  
PH: 763.553.1144  
E-mail: [judie@jass.biz](mailto:judie@jass.biz)

TECHNICAL OFFICE  
Hennepin County Public Works  
Department of Environment and Energy  
701 Fourth Ave. South, Suite 700  
Minneapolis, MN 55415  
PH: 612.348.7338  
E-mail: [james.kujawa@hennepin.us](mailto:james.kujawa@hennepin.us)

### **Rush Creek Commons** **Maple Grove, Project #2018-001**

**Project Overview:** This project is located at the SW intersection of CSAH 10 and 101 in Maple Grove. It is a 9.13 acres in size. It is part of the Markets at Rush Creek PUD. This portion of the PUD is proposed for 82 townhomes, creating 4.68 acres of new impervious area. The areas adjacent to the CSAH 101/10 corridor improvements were rough graded during construction of the intersection and their approaches in 2009/2010. All other areas were not graded at that time. The Commission's review of this site will for consistency to the ECWMC approvals for the Markets at Rush Creek PUD stormwater management plan (project 2009-004) and for compliance to the Commissions 3<sup>rd</sup> Generation Stormwater Management Plan Appendix O, Rules and Standards

**Applicant:** Cal Atlantic Homes, Attn. Drew Hageman, 7599 Anagram Drive, Eden Prairie, MN 55344. Phone; 952-229-6046.

**Agent/Engineer:** Alliant Engineering, Attn. Dave Nash, 233 Park Avenue South, Suite 300, Minneapolis, MN 55415. Phone: 612-767-9327. Email: [dnash@alliant-inc.com](mailto:dnash@alliant-inc.com)

**Exhibits:**

- 1) ECWMC Request for Plan Review and Approval with review fee, received January 9, 2018.
- 2) Rush Creek Commons Stormwater Management Hydrologic and Hydraulic Study, by Alliant Engineering, dated December 28, 2017.
- 3) Rush Creek Commons Concept & Development Stage Plan by Alliant Engineering dated January 25, 2018.
  - a. Sheet 1 of 20, Cover Sheet
  - b. Sheet 2 of 20, Existing Conditions Survey
  - c. Sheet 3 of 20, Preliminary Plat
  - d. Sheet 4 of 20, Overall PUD
  - e. Sheets 5 and 6 of 20, Site Plan
  - f. Sheets 7, to 9 of 20, Grading, Drainage Erosion Control Plans, Notes, Details.
  - g. Sheet 10 of 20, Filtration Basin Detail
  - h. Sheet 11 of 20, Street Profiles
  - i. Sheets 12 to 17 of 20, Utility Plans, Sanitary Sewer, Watermain, Storm Sewer Plans and details.
  - j. Sheet 18 to 20, of 20, Landscape Plan, Notes and Schedule.
- 4) ECWMC Project file 2009-004, Markets at Rush Creek.

**Findings:**

- 1) A complete application was received on January 9, 2018. The initial 60-day period for a decision, per MN Statute 15.99, expires March 6, 2018.
- 2) This section of the project is 9.13 acres located in the far NW corner of the PUD. It is proposed for 82 townhomes which will create 4.68 acres of new impervious areas.
- 3) The project must conform to project 2009-04 rate and nutrient control approvals (with pond 5 amendments). It must also conform to the Commission's 3<sup>rd</sup> Generation abstraction requirements (Rule D.3.c)
- 4) Prior projects approved by the ECWMC on this site include;
  - a. 2009/2010; Markets at Rush Creek development and CSAH 101 & 10 intersection. This project (2009-004) was approved to meet the Commission's 2<sup>nd</sup> Generation Plan. Grading was completed to accommodate CSAH 10 and 101 intersection. Site grading and the remaining stormwater utility work outside of the ROW was not done in the vicinity of this project.
  - b. In 2017 the developer of this site was granted approval to install pond 5 and a temporary outlet pipe from Wetland C to County Ditch 16 that were part of the original PUD approvals. This area of the PUD had not been graded during the original road work and runoff water was landlocked behind CR 101.

**Stormwater Management**

Stormwater is being managed by regional pond #5 (1.73 ac.at NWL), a proposed bio-filtration basin (0.33 ac.at surface) and a small NURP basin (0.1 ac at NWL)

- 5) **Rate Controls;** Rate controls on this project are consistent with past approvals by the ECWMC
  - a. The majority of this site drains to regional ponds 5. It was approved as mentioned in item 4 above.
  - b. Based on project 2009-004 stormwater plans, this subwatershed was designed for rate and nutrient controls based on 70% impervious area.
  - c. Actual impervious % from the new townhome project is 53%. This is consistent with the past on-site regional pond 5 approvals.
  - d. A small area of this site will not be controlled by pond 5. It will discharge to the NW under CR 10 and run to Cook Lake. The proposed discharge rates from this project will be 2.67, 4.71 and 9.55 cfs for the 2, 10 and 100 (7.32" storm) respective storm events. The proposed discharge from the approved plan in 2009 were 3.91, 6.2 and 9.95 cfs for the 2, 10 and 100 (5.9") year events. This is consistent with our 2009 approval.
- 6) **Nutrient Controls;** Nutrient controls are consistent with past approvals by the Commission.
  - a. Total phosphorus loads discharged from this site based on past approvals are 11.5 lbs/year. Actual loads based on the townhome hydrology will remain essentially the same.
- 7) **Abstraction/Volume Controls;**
  - a. There is 4.68 acres of new impervious areas proposed from this project. This translates into 18,697 cubic feet of volume to meet the Commissions abstraction rule (1.1" of runoff from the new impervious areas).
    - i. Actual filter basin storage will be approximately 38,000 cubic feet.

- ii. Based on a discharge rate of 0.25 cfs (conservative for a 6" pipe at 0.6% slope) the volume will draw down within 42 hours.
  - iii. Biofiltration basin plans ;
    - We recommend a 3-5 year vegetation maintenance plan on the native seed mix areas.
- 8) All ponds and biofiltration basins must have drainage & utility easements and operation & maintenance agreements over them. These must be recorded on the property title. A copy of the recorded O&M agreements must be provided to the Commission within 90 days after final plat approval.

### STORMWATER MANAGEMENT SUMMARY

**Development Name:** Rush Creek Commons, Maple Grove  
**Total Parcel Area:** 9.13 acres  
**Total Lot Area:** 9.13 acres  
**Total Buildable Area:** ~8.2 acres  
**Total New Impervious Area:** 4.68 Acres  
**Review Month/Year:** January 2018  
**Nearest Downstream Surface Water:** East to Maple Creek 1,000 ft. to Elm Creek, ~1.5 miles northeast.

Condition	TP Load (lbs./yr)* Regional pond	TP Load (lbs./yr)** Townhomes	TSS Load (lbs./yr)* Townhomes	Abstraction Volume Credit (ac-ft.)	Filtered Volume Credit (sq. ft.) Townhomes
Pre-development (baseline) Load	26	11.5	205	0.0	18,697
Post-development Without Mitigation	N/A	N/A	3686		N/A
Post-development With Mitigation	26	12	159		38,000
Net Change ("baseline" compared to "post-development with mitigation")	0	+0.5	-46		+19,303

- 9) Wetland buffers meet the Commission standards of 10' minimum, 25' average.  
10) Erosion and sediment control plans meet the Commission's standards.

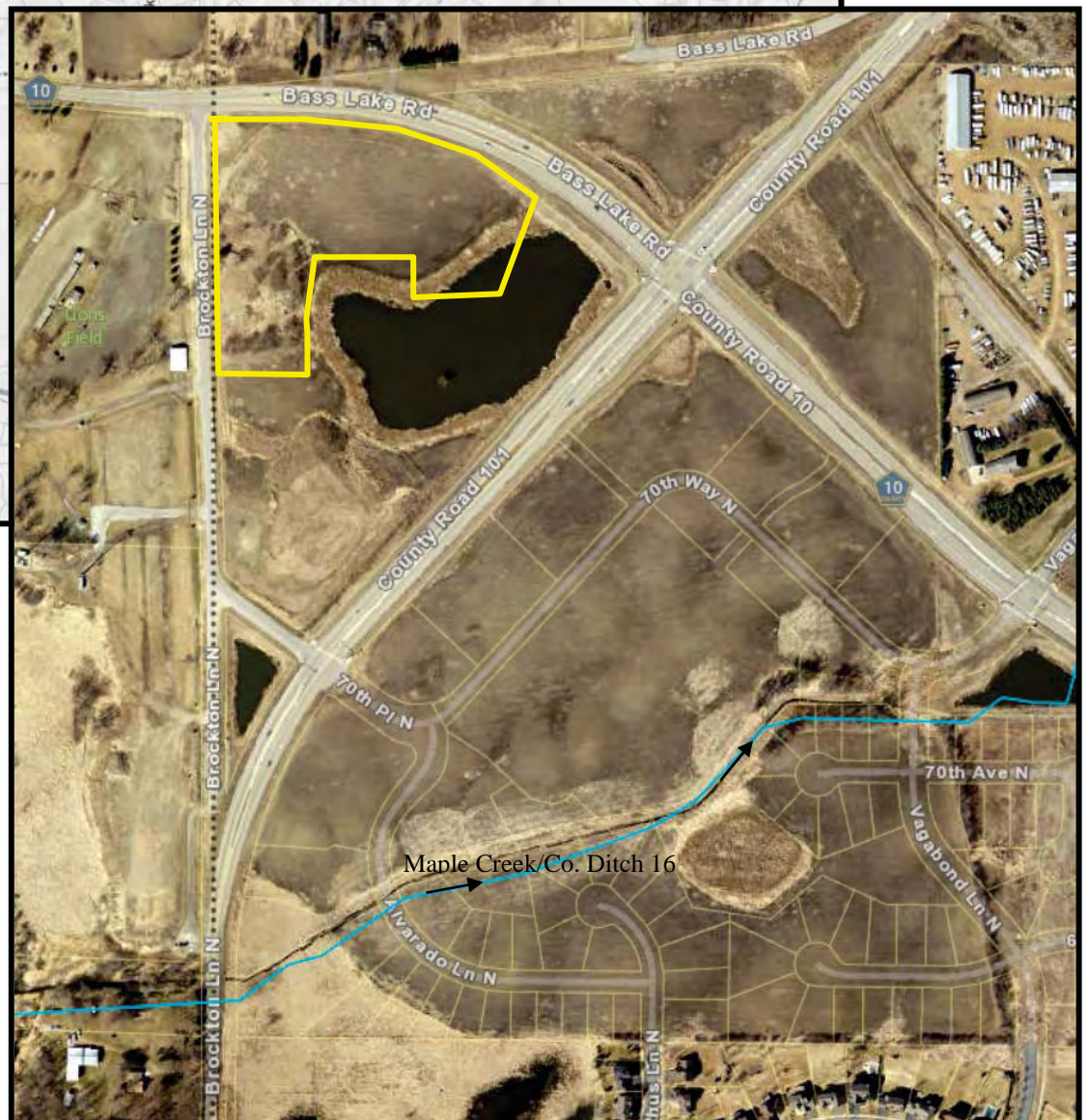
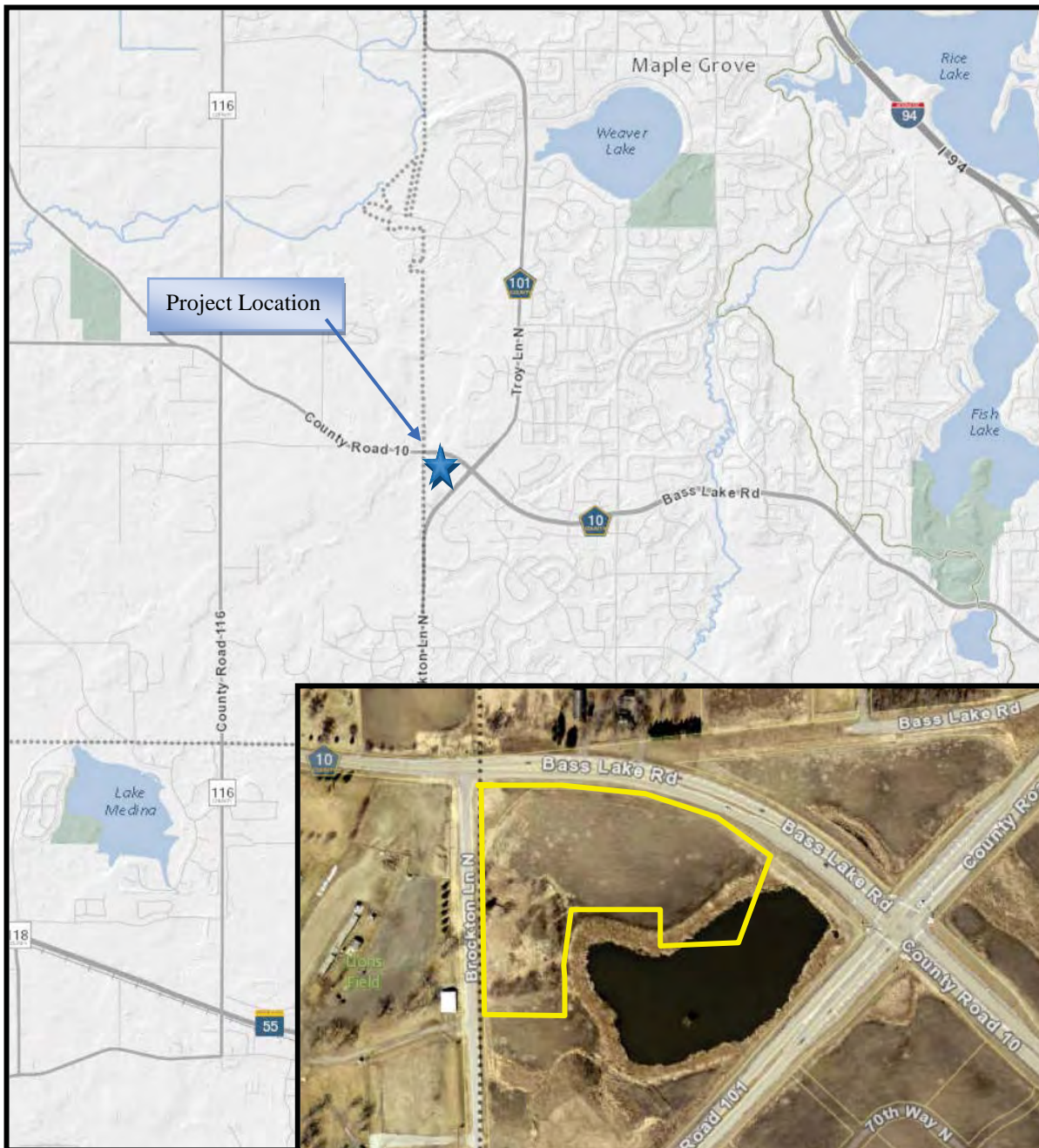
**Recommendation:** Approval contingent upon O & M agreement (item 8).

Hennepin County  
Department of Environment and Energy  
Advisor to the Commission



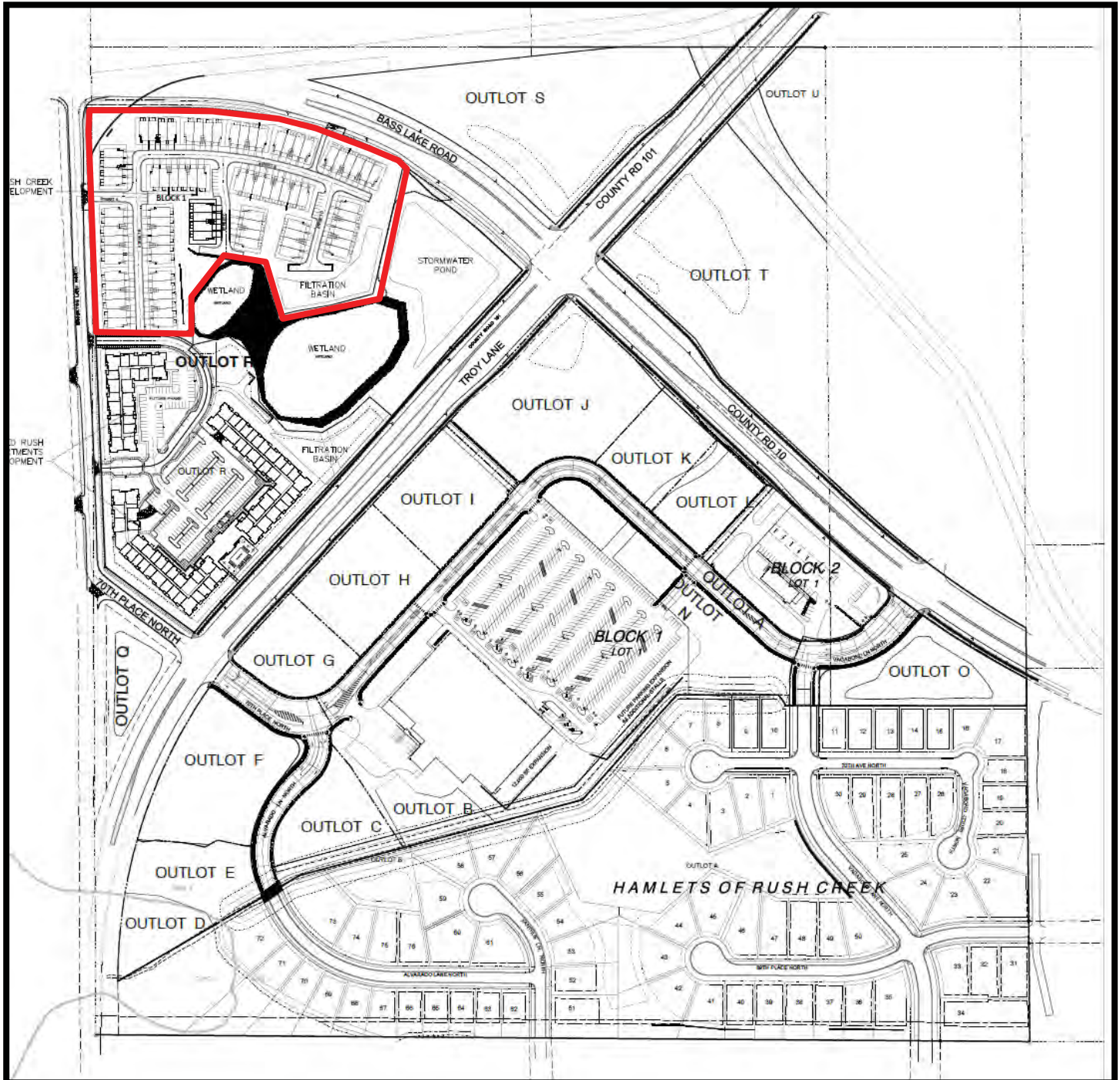
January 26, 2018  
Date







**Overall PUD**





[illegible]

Contract No:188604

## COOPERATIVE AGREEMENT

THIS AGREEMENT made and entered into by and between the COUNTY OF HENNEPIN, STATE OF MINNESOTA, (COUNTY), A-2300 Government Center, Minneapolis, Minnesota 55487, on behalf of the Hennepin County Environment and Energy Department, 701 Fourth Avenue South, Suite 700, Minneapolis, Minnesota 55415-1600, (DEPARTMENT) and the Elm Creek Watershed Management Commission, a joint-powers board organized under the Laws of the State of Minnesota, 3235 Fernbrook Lane, Plymouth, Minnesota, 55447, (COMMISSION).

### RECITALS:

WHEREAS, the COMMISSION and the COUNTY, wish to protect natural resources within the Elm Creek watershed in Hennepin County, and

WHEREAS, the COMMISSION and the COUNTY benefit from a cooperative effort to protect these resources, and

WHEREAS, the COMMISSION wishes to retain the DEPARTMENT to provide technical services related to conservation promotion and education, technical assistance, monitoring, inventory and assessment and administrative services as set forth in the attached Exhibits, and

WHEREAS, the COMMISSION wishes to contribute to the volunteer monitoring programs and educational services performed by the DEPARTMENT in the Elm Creek watershed, and

NOW, THEREFORE, in consideration of the mutual undertakings and agreements hereinafter set forth, the COUNTY, on behalf of the DEPARTMENT, and the COMMISSION agree as follows:

#### 1. TERM AND COST OF THE AGREEMENT

The DEPARTMENT agrees to furnish technical services set forth in the attached Exhibits to the COMMISSION commencing January 1, 2018 and terminating December 31, 2018.

The DEPARTMENT, in collaboration with the COMMISSION, will designate qualified staff to serve as technical advisors to the COMMISSION. Other DEPARTMENT personnel will be called upon as appropriate to the nature of the work.

In full consideration for services under this Agreement, the DEPARTMENT shall charge the COMMISSION for actual wages and personnel costs as set forth in Section 2. Costs for services for activities detailed in the attached Exhibits include:

**Exhibit A: Technical Services: Not-to-exceed \$110,000**

**Exhibit B: Volunteer Monitoring/Educational Programs: Not-to-exceed \$10,000**

**Total 2018 Technical Service Agreement: Not-to-exceed \$120,000**

Any additional costs for extended work load after the "not-to-exceed" limit has been reached, special studies, or capital projects, must be set forth in a written amendment to this Agreement and will be billed on an hourly basis set forth in Section 2.

#### 2. BILLING RATES AND PAYMENT FOR SERVICES

- a) Services in Exhibit A are billed on an hourly basis at the rate of \$24.20 - \$71.09 per hour, based on personnel and task.

Professional Engineer, Water Resources	\$71.09 per hour
Sr. Environmentalist, Water Resources	\$62.71 per hour
Environmentalist, Information Writer & Tech. Asst.	\$57.00 per hour
Planning Analyst	\$33.32 per hour
Engineering Technician	\$24.20 per hour

- b) Payment for services shall be made directly to the DEPARTMENT after completion of the services upon the presentation of a claim in the manner provided by law governing the COUNTY'S payment of claims and/or invoices. The DEPARTMENT shall submit an invoice for services provided in Exhibit A on a quarterly basis, while services in Exhibit B will be billed on an annual lump sum basis in December. Payment shall be made within thirty-five (35) days from receipt of the invoice.
  - i. Any capital equipment or material expenses purchased as part of this Agreement shall be pre-approved by the COMMISSION, be billed as they are accrued, and shall be the property of the COMMISSION.

### 3. EQUAL EMPLOYMENT OPPORTUNITY- CIVIL RIGHTS

During the performance of this Agreement, the COUNTY agrees to the following:

No person shall, on the grounds of race, color, religion, age, sex, disability, marital status, public assistance, criminal record, creed or national origin, be excluded from full employment rights in, be denied the benefits of, or be otherwise subjected to discrimination under any program, service, or activity under the provisions of and all applicable federal and state laws against discrimination including the Civil Rights Act of 1964.

### 4. STANDARDS

The COUNTY shall comply with all applicable Federal and State statutes and regulations as well as local ordinances now in effect or hereafter adopted. Failure to meet the requirements of the above may be cause for cancellation of this contract effective the date of receipt of the Notice of Cancellation.

### 5. INDEPENDENT CONTRACTOR

It is mutually understood that the DEPARTMENT acts as an independent contractor. The DEPARTMENT shall select the means, method, and manner of performing the services herein. DEPARTMENT employees shall not be considered to be either temporary or permanent employees of the COMMISSION.

### 6. INDEMNIFICATION

The COUNTY and the COMMISSION mutually agree, to the fullest extent permitted by law, to indemnify and hold each other harmless for any and all damages, liability or cost (including reasonable attorneys' fees and costs of defense) arising from their own negligent acts, errors or omissions in the performance of their services under this agreement, to the extent each party is responsible for such damages and losses on a comparative basis of fault. Parties agree to provide proof of contractual liability insurance upon request. This paragraph does not diminish, with respect to any third party, any defense, immunity or liability limit that the COUNTY or the COMMISSION may enjoy under law.

7. DATA PRACTICES

All data collected, created, received, maintained, or disseminated, or used for any purpose in the course of the COUNTY's performance of the Agreement is governed by the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13 (MGDPA) and all other applicable state and federal laws, rules, regulations and orders relating to data privacy or confidentiality, which may include the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and/or the Health Information Technology for Economic and Clinical Health Act (HITECH), adopted as part of the American Recovery and Reinvestment Act of 2009. The COUNTY agrees to abide by these statutes, rules and regulations and as they may be amended.

18. MERGER AND MODIFICATION

- a) The entire Agreement between the parties is contained herein and supersedes all oral agreements and negotiations between the parties relating to the subject matter. All items that are referenced or that are attached are incorporated and made a part of this Agreement. If there is any conflict between the terms of this Agreement and referenced or attached items, the terms of this Agreement shall prevail.
- b) Any alterations, variations, modifications, or waivers of provisions of this Agreement shall only be valid when they have been reduced to writing as an amendment to this Agreement signed by the parties. The express substantive legal terms contained in this Agreement including but not limited to the License, Payment Terms, Warranties, Indemnification and Insurance, Merger and Modification, Default and Cancellation/Termination or Minnesota Law Governs may not be altered, varied, modified or waived by any change order, implementation plan, scope or work, development specification or other development process or document.

9. DEFAULT AND CANCELLATION

Either the COUNTY or the COMMISSION may terminate this Agreement with or without cause by giving the other party forty-five (45) days written notice prior to the effective date of such termination. If the COMMISSION terminates this Agreement, it may specify work to be performed by the COUNTY before termination is effective and shall pay the COUNTY for services performed by the COUNTY up to the time specified for termination. If the COUNTY terminates the Agreement, it will not be compensated for part completion of a task except to the extent part completion has value to the COMMISSION.

10. OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

All property of the COMMISSION used, acquired or created in the performance of work under this Agreement, including documents and records of any kind, shall remain the property of the COMMISSION. The COMMISSION shall have the sole right to use, sell, license, publish, or otherwise disseminate any product developed in whole or in part during the performance of work under this Agreement.

11. CONTRACT ADMINISTRATION

In order to coordinate the services of the DEPARTMENT with the activities of the COMMISSION so as to accomplish the purposes of this Agreement, Karen Galles, Supervisor, Land and Water Unit, or his/her successor, shall manage this Agreement on behalf of the Department and serve as liaison between the COUNTY and the COMMISSION. COMMISSION



will designate in writing to the DEPARTMENT the name and telephone number of the person responsible for managing this contract on behalf of the COMMISSION.

12. AMENDMENTS TO AGREEMENT

This Agreement may be amended as agreed to by the COMMISSION and COUNTY in the form of an agreement amendment executed by both parties.

13. NOTICES

Any notice or demand which must be given or made by a party hereto under the terms of this Agreement or any statute or ordinance shall be in writing, and shall be sent registered or certified mail. Notices to the COUNTY shall be sent to the County Administrator with a copy to the originating Department at the address given in the opening paragraph of the Agreement. Notice to the COMMISSION shall be sent to the address stated in the opening paragraph of the Agreement.

14. MINNESOTA LAWS GOVERN

The Laws of the State of Minnesota shall govern all questions and interpretations concerning the validity and construction of this Agreement and the legal relations between the herein parties and their performance. The appropriate venue and jurisdiction for any litigation hereunder will be those courts located within the County of Hennepin, State of Minnesota. Litigation, however, in the federal courts involving the herein parties will be in the appropriate federal court within the State of Minnesota. If any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions will not be affected.

## COUNTY ADMINISTRATOR AUTHORIZATION

Reviewed by the County Attorney's  
Office

COUNTY OF HENNEPIN  
STATE OF MINNESOTA

\_\_\_\_\_  
Assistant County Attorney

By: \_\_\_\_\_  
David J. Hough, County Administrator

By: \_\_\_\_\_  
Assistant County Administrator - Public Works

Date: \_\_\_\_\_

### Recommended for Approval

By: \_\_\_\_\_  
Director, Environment and Energy Department

Date: \_\_\_\_\_

### ELM CREEK WATERSHED MANAGEMENT COMMISSION

The COMMISSION certifies that the person who executed this Agreement is authorized to do so on behalf of the COMMISSION as required by applicable articles, bylaws, resolutions or ordinances.\*

Printed Name: \_\_\_\_\_

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

\* COMMISSION shall submit applicable documentation (articles, bylaws, resolutions or ordinances) that confirms the signatory's delegation of authority. This documentation shall be submitted at the time COMMISSION returns the Agreement to the County. Documentation is not required for a sole proprietorship.



## **EXHIBIT A**

### **2018 WATERSHED GENERAL TECHNICAL ASSISTANCE**

#### **TASKS**

The Hennepin County Environment and Energy Department (DEPARTMENT) will provide Elm Creek Watershed Management Commission (COMMISSION) with a variety of technical assistances in support of its Watershed Management Plan and the eventual Elm Creek TMDL.

Services are delivered on a time and materials basis, with a not-to-exceed amount of listed in Section 1 of this Agreement, except as may be authorized via separate work order or agreement amendment approved prior by both parties.

**1. Meeting attendance**

As requested by the COMMISSION, DEPARTMENT staff will attend regular Board and technical advisory committee (TAC) meetings and advise the COMMISSION regarding other technical issues that may come before the COMMISSION.

**2. Site plan reviews**

Per the request of the COMMISSION, DEPARTMENT staff will review site development plans for compliance with Elm Creek watershed, state and federal requirements for erosion and sediment control, stormwater management, wetlands and floodplain protection. Prepare and present recommendations regarding plan approvals for the COMMISSION.

**3. Respond to inquiries from the public**

The DEPARTMENT staff will provide applicants with information regarding COMMISSION requirements.

In addition, at the request of the COMMISSION, DEPARTMENT staff will assist landowners within the Elm Creek watershed who contact COMMISSION for conservation program information and/or technical assistance.

**4. Design and contractor assistance**

At the request of the COMMISSION, DEPARTMENT staff will provide technical assistance regarding the design, implementation and performance of projects and practices initiated by the COMMISSION and oversee work performed by the COMMISSION engineering consultants.

## EXHIBIT B

### 2018 VOLUNTEER MONITORING PROGRAMS AND EDUCATIONAL SERVICES

#### TASKS

The Hennepin County Environment and Energy Department (DEPARTMENT) will provide Elm Creek Watershed Management Commission (COMMISSION) with a variety of volunteer monitoring and environmental education and outreach oversight in support of its Watershed Management Plan and the eventual Elm Creek TMDL.

Services are delivered on a time and materials basis, with a not-to-exceed amount listed in Section 1 of this Agreement, except as may be authorized via separate work order or agreement amendment approved prior by both parties.

#### 1. Coordination of volunteer monitoring programs

The DEPARTMENT staff will coordinate the following volunteer water quality monitoring programs in the Elm Creek Watershed: River Watch; Wetland Health Evaluation Program (WHEP);

#### 2. Volunteer Outreach

The DEPARTMENT staff, in collaboration with COMMISSION, will work to find school groups and/or adult volunteers to monitor up to six (6) designated stream sites for the River Watch program.

In addition, DEPARTMENT staff, in collaboration with COMMISSION, will work to find a team of adult volunteers to monitor up to five (5) designated wetland sites within the Elm Creek Watershed.

#### 3. Volunteer monitor training and oversight

As part of the volunteer programs, DEPARTMENT staff will coordinate and offer training for each programs' monitoring and provide continual assistance in sample collection and identification.

#### 4. Data quality assurance

The DEPARTMENT staff will provide all quality assurance checks on invertebrate and vegetative data for the Wetland Health Evaluation Program (WHEP), and all quality assurance checks on field and invertebrate data for the River Watch.

#### 5. Reporting

Following the year's monitoring and compilation of collected data, DEPARTMENT will prepare an annual report of monitoring results and to COMMISSION.

#### 6. Costs

- a) ***River Watch Program:*** The COMMISSION shall pay the DEPARTMENT \$1,000.00 per River Watch site for stream monitoring up to six (6) sites as part of the 2018 River Watch Program for data and educational services. Fees will be used to cover all training, equipment and transportation for the students to and from the site, Quality Assurance/Quality Control, reporting and presentations as requested. The total amount of work authorized by this Agreement for stream monitoring and educational services associated with the River Watch Program shall not-exceed six thousand dollars (\$6,000.00).
- b) ***Wetland Health Evaluation Program:*** The COMMISSION shall pay \$1,000.00 per monitored wetland site and \$1,000.00 per quality assurance re-check in 2018 for data and educational services related to the WHEP. The total amount of work authorized by this

Agreement for wetland monitoring and educational services associated with the WHEP shall not-exceed four thousand dollars (\$4,000.00).

In 2018 the total for providing a variety of volunteer monitoring and environmental education and outreach oversight shall not-exceed ten thousand dollars (\$10,000).



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February 6, 2018

To: Elm Creek Commissioners

DRAFT

Fr: Judie Anderson

Re: Status of 2017 Work Plan

Minnesota Rule 8410.0150 requires the Commission to submit to the Board of Water and Soil Resources a financial report, activity report and audit report for the preceding fiscal year. 8410.0150 Subp. 3 outlines the content of the annual activity report. It includes an assessment of the previous year's annual work plan and development of a projected work plan for the following year.

Following is a summary of the work undertaken by the Elm Creek Watershed Management Commission in 2017 to meet the goals, objectives, and projected work plan outlined in its *2016 Annual Report*. The Commission identified the following activities in 2016:

- ☑ Continued to review local development/redevelopment plans for conformance with the standards outlined in the Commission's third generation Watershed Management Plan. *Fifty-three projects were reviewed by the Commission in 2016. The Commission does not have a permit program.*
- ☑ Served as the local government unit (LGU) for administering the Wetland Conservation Act (WCA) for the cities of Champlin and Corcoran. *The Commission continued to serve as the LGU for Champlin and Corcoran. In 2017 Technical staff assisted approximately 50 landowners/agency/developer contacts with wetland-related questions. On behalf of the Commission they reviewed the following types of wetland applications: 25 wetland boundary/type; eight no-loss, two exemptions, three sequencing, and two wetland replacement plans. Wetland impacts totaled 14,765 SF; wetland replacement totaled 28,775 SF. Five WCA violations were investigated and resolved. Two others were determined to not be WCA/Commission violations. The Commission was involved in 12 Technical Evaluation Panels (TEPs) throughout the watershed. The Elm Creek Commission does not have a wetland banking program.*

*At year-end, the City of Champlin agreed to take over full LGU responsibility for WCA on January 1, 2018. Further, the Commission voted to invoice back to the affected city(ies) all costs related to its role as the LGU for WCA, effective January 1, 2019.*

- ☑ Conducted lake and stream monitoring programs to track water quality and quantity conditions. *The Commission monitored Diamond, Fish, and Weaver Lakes, and Rice Lake Main Basin in cooperation with Three Rivers Park District. Abbreviated monitoring occurred on Lake Jubert through Metropolitan Council's Citizen Assisted Monitoring Program (CAMP) in 2017.*
- ☑ Continued to operate the monitoring station in Champlin in cooperation with the United States Geological Survey (USGS). *Stream monitoring continued at the Champlin monitoring station where both grab samples and storm runoff samples were collected and analyzed for various parameters. In cooperation with Three Rivers Park District, the Commission conducted a dissolved oxygen longitudinal survey for Diamond Creek and a nutrient and dissolved oxygen longitudinal survey in upper Rush Creek at five locations in 2017.*

- ☒ Promote river stewardship through the River Watch program. *Four sites on Elm and Rush Creeks were monitored in 2017.*
- ☒ Participate in the Minnesota Wetland Health Evaluation Program (WHEP). *Five wetlands located in the Crow Hassan Park Reserve and the Elm Creek Park Reserve were monitored in 2017.*
- ☒ Assist member communities in preparing and adopting their local water management plans. *The City of Medina submitted, and the Commission approved, Chapter 11 of its 2040 Comprehensive Plan. The City's Surface Water Management Plan was revised, updated and included in their Comprehensive Plan as Chapter 11. It is anticipated the remaining communities will submit their local plans for approval by the deadline of December 31, 2018.*
- ☒ Complete informal and formal reviews of the Elm Creek TMDL and WRAPS reports. Obtain US EPA approval of the TMDL document and MPCA approval of the WRAPS report. *The WRAPS report was approved by the Minnesota Pollution Control Agency on December 16, 2016 and the TMDL was approved by the US Environmental Protection Agency on June 26, 2017. Both documents have been uploaded to the MPCA and Commission websites.*
- ☒ Use results of WRAPS study to establish priority areas and complete subwatershed assessments to identify specific BMPs that feasibly and cost-effectively reduce nutrient and sediment loading to impaired water resources. *The Commission was awarded a \$50,280 Clean Water Fund (CWF) Accelerated Implementation Program grant to complete a subwatershed assessment in four key subwatersheds in the headwaters of Rush Creek and North Fork Rush Creek.*
- ☐ Develop model manure management ordinance to regulate placement of new small non-food animal operations, require member cities to adopt that or other ordinances and practices to accomplish its objectives. *This task is being undertaken by the Technical Advisory Committee and will be a priority in 2018.*
- ☒ Continue as a member of the West Metro Water Alliance (WMWA). *The Commission continued to support the WMWA Educator Program and contribute articles to its e-newsletter Water Links. The Commission promoted the Watershed PREP (Protection, Restoration, Education, and Prevention) program to reach every 4th grade science class in the watershed. 846 students in 30 classes in the Elm Creek watershed participated in Lesson 1: What is a Watershed and Why do we Care? and 442 students in 15 classes participated in Lesson 2: The Incredible Journey.*

*The Watershed Prep educators also presented at the Basswood Science Night, the Plymouth Home Expo and the Plymouth Kids Fest.*

*In 2017 the Commission also collaborated on the Pledge to Plant for Pollinators and Clean Water project and further development of the new WMWA website.*
- ☒ Participate as an exhibitor at Plymouth's Home Expo. *The Commission participated in the Expo on April 7-8, 2017.*
- ☒ Continue as a member of Blue Thumb and WaterShed Partners and a partner in the NEMO (Nonpoint Education for Municipal Officials) program. *The Commission continues to support these organizations/programs with their financial and in-kind contributions.*
- ☒ Co-sponsor Rain Garden Workshops in conjunction with the Commission's Education and Public Outreach Program. *Raingarden workshops were conducted in the cities of Champlin and Plymouth on April 6 and April 11, respectively.*
- ☒ Work in partnership with Hennepin County to help build relationships with the agricultural community in the watershed in order to encourage TMDL implementation. *Karl Hakanson, U of M Extension Educator, Kirsten Barta, Rural Conservationist, and Jim Kujawa, Surface Water Resource Specialist, presided over a field*



day in August to inform about a dozen horse stable managers how one of their neighbors, along with County resources, redesigned a stable and pasture system for improved horse health, ease of management, and water quality.

☒ In addition, Barta worked with local landowners to assist them in becoming compliant with the 2015 Minnesota Buffer Law. Prior to the November 1, 2017 deadline, when buffers are required to be in place on all public waters, the following was determined:

<u>Parcel Status</u>	<u>No. of parcels</u>
Compliant	46
Pending site visit	3
Plan in place/pending installation	14
Non-Compliant/No Response	30
<b>TOTAL</b>	<b>93</b>

Landowners who have not responded or gotten their property into compliance will be referred to the Board of Water and Soil Resources (BWSR) for enforcement.

☒ Seek grant funding to assist with the costs associated with projects identified on the Commission's CIP. Four CIP projects - Phase 3 of the Fox Creek Streambank Stabilization Project in Rogers, Phase 2 of the Rush Creek Main Stem Restoration project in Maple Grove, the Mill Pond Fishery and Habitat Restoration project in Champlin, and the Rain Garden at Independence Avenue Construction project in Champlin; were certified through the ad valorem taxing process for funding by Hennepin County.

In conjunction with this effort, the Commission adopted two resolutions in 2017. Resolution 2017-01 adopted a Minor Amendment to the Third Generation Watershed Management Plan to add two projects to the Commission's CIP, remove one project from the Commission's CIP, and shift the timing of funding of four projects currently listed on the Commission's CIP. Resolution 2017-02 ordered the four projects certified above, designated the members responsible for construction, and designated the Commission cost-share funding.

Grant-related funding through the Commission was not sought for these four projects.

☒ Continue to support City-sponsored projects as they are identified. The Commission continues to identify projects on its CIP for funding either through the Commission's CIP budget or grant funding. In 2016 the Commission applied for, and received, a BWSR Competitive Grant (Projects and Practices) in the amount of \$200,000 for the Internal Phosphorus Loading Control Project on Fish Lake and a BWSR Competitive Grant (Accelerated Implementation Grant) in the amount of \$50,280 for the Rush Creek Headwaters Subwatershed Assessment Project.

The alum treatment of Fish Lake took place on September 18-21, 2017. A total of 95,349 gallons of alum was applied to 120 acres of the lake at depths greater than 20 feet. The next steps include collecting sediment cores to determine the alum dosage calculations in 2018 and continuing to monitor the lake to determine the effectiveness of the first treatment.

On December 7, 2017, Wenck Associates, Commission staff, and City of Corcoran staff attended an Open House to which all the property owners living in the Corcoran and Rogers portion of the Rush Creek Subwatershed study area were invited. After reviewing runoff predictions with local landowners, the end result will be a series of detailed maps showing recommended best management practices, and a set of actions, costs, and pollutant reductions expected.

☒ Adopt a 2018 operating budget. At its May 10, 2017 regular meeting, the Commission approved a 2018 operating budget totaling \$910,445, with assessments to the member cities totaling \$225,000.

☒ Continue to populate and maintain the Commission's website [www.elmcreekwatershed.org](http://www.elmcreekwatershed.org) to provide news to residents of the watershed. *In 2016 the Commission transferred its current website to a new mobile-ready platform.*

*In 2017, there were 2,001 new visitors and 44 repeat visitors that resulted in 3,290 individual sessions and 7,448 page views. The average pages viewed per session is 2.26. 1,188 visitors came to the site through search engines like Google, Yahoo, and Bing. 535 visitors directly entered the website. 354 visitors came through "referrals" from other websites like Hennepin County, member cities, WMWA, and other local watersheds. 18 visitors came to the site through Facebook.*

*The website is regularly updated with meeting and project information, and articles and information about projects and studies undertaken by the Commission.*

☒ Publish an annual activities report summarizing the Commission's yearly activities and financial reporting. *The 2016 Annual Activity Report was accepted by the Commission at its April 12, 2017 meeting.*



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February 7, 2018

To: Elm Creek Commissioners

Fr: Judie Anderson

**DRAFT**

Re: Draft 2018 Work Plan

Minnesota Rule 8410.0150 requires the Commission to submit to the Board of Water and Soil Resources a financial report, activity report and audit report for the preceding fiscal year. 8410.0150 Subp. 3 outlines the required content of the annual activity report. It includes an assessment of the previous year's annual work plan and development of a projected work plan for the following year. The 2017 Work Plan accomplishments were accepted at the \_\_\_\_\_ 2018 meeting.

The Commission's Third Generation Watershed Management Plan identifies issues, priorities and goals for the ten-year period 2015-2024. As a reminder, they are enumerated on the last page of this memo.

Following is a projected work plan for 2018. Please review and be prepared to make modifications at the March meeting.

### **2018 Work Plan**

1. Continue to review local development/redevelopment plans for conformance with the standards outlined in the Commission's Third Generation Watershed Management Plan. Review the current project review fee schedule for fiscal conformity.
2. Continue to serve as the local government unit (LGU) for administering the Wetland Conservation Act (WCA) for the City of Corcoran.
3. Enter into a new five-year cooperative agreement with Three Rivers Park District to share in the costs of conducting lake and stream monitoring in the watershed.
4. Conduct lake and stream monitoring programs to track water quality and quantity conditions. The Commission will undertake stream monitoring, both flow and water quality, at monitoring sites DC on Diamond Creek, RT on Rush Creek main stem, and EC77 on Elm Creek above Rice Lake. In addition, four sentinel lakes (Fish, Weaver, Diamond, and Rice Lake-main basin) will be monitored on a bi-weekly basis. Finally, longitudinal surveys will be continued, dependent on the results of the 2017 DO monitoring on Diamond Creek and at locations within the Upper Rush Creek subwatershed. All monitoring outlined in this section will be conducted in cooperation with Three Rivers Park District.
5. Fund the monitoring of one lake through Metropolitan Council's Citizen Assisted Monitoring Program (CAMP).
6. Continue to operate the monitoring station in Champlin in cooperation with the United States Geological Survey (USGS).
7. Promote river stewardship through Hennepin County's River Watch program with three sites in 2018.
8. Participate in the MN Wetland Health Evaluation Program (WHEP) with four wetlands in 2018.

9. Assist member communities in preparing and adopting their local water management plans. Advise member cities who have not completed their local plans of the revised requirements under Rule 8410.0160, subp. 6.
10. Conduct the biennial solicitation of interest proposals for administrative, legal, technical and wetland consultants. This task is not required in 2018.
11. Continue as a member of the West Metro Water Alliance (WMWA). Continue to support the WMWA Educator Program and contribute to its e-newsletter *Water Links*. Promote the Watershed PREP program to reach every 4th grade science class in the watershed. Participate in the Planting for Clean Water project. Conduct native plant sales at various city events around the watershed.
12. Participate as an exhibitor in the Plymouth Home Expo. As of this date, the Expo has not been scheduled for 2018.
13. Continue as a member of Blue Thumb and WaterShed Partners and a partner in the NEMO (Nonpoint Education for Municipal Officials) program.
14. Co-sponsor Rain Garden Workshops in conjunction with WMWA as part of the Commission's Education and Public Outreach Program. Metro Blooms will host two different workshops in 2018, *Resilient Yards* and *Turf Alternatives*. The WMWA watersheds will host four *Resilient Yard* workshops, one in each watershed, as well as one *Turf Alternatives* workshop. Workshops will be held in the following cities: Plymouth (Shingle Creek), Crystal/New Hope/Golden Valley (Bassett Creek), Brooklyn Center/Brooklyn Park (West Mississippi), and Champlin (Elm Creek).
15. Develop a model manure management ordinance regulating the placement of new small nonfood animal operations using the City of Medina ordinance as a reference. Require member cities to adopt that ordinance or other ordinances and practices that will accomplish its objectives. The Technical Advisory Committee will continue to work on development of this ordinance/policy.
16. Work in partnership with Hennepin County's agriculture specialist to help build relationships with the agricultural community in the watershed in order to encourage TMDL implementation.
17. Work with the Hennepin County Rural Conservation Specialist in assisting cities with incorporation of the manure management ordinance/policy into their own ordinances/working with landowners. Assist landowners as they identify BMPs for implementation as part of the Rush Creek Subwatershed Assessment.
18. Seek grant funding to assist with the costs associated with projects identified on the Commission's CIP. A call for CIPs went out to the cities in January 2018. Proposed CIPs and CIP updates will be reviewed for inclusion on the Commission's CIP by the Technical Advisory Committee at their March meeting. The TAC's recommendations will be forwarded to the Commission. This activity will most likely require a Minor Plan Amendment.
19. Undertake the Internal Phosphorus Loading Control Project on Fish Lake. This project spans the years 2017-2019. An initial alum treatment occurred in September 2017. The next steps include collecting sediment cores to determine the alum dosage calculations and continuing to monitor the lake to determine the effectiveness of the first treatment. The second treatment will occur in spring 2019.
20. Undertake the Rush Creek Headwaters Subwatershed Assessment Project. This project also spans the years 2017-2019. In December 2017 an Open House was held for property owners living in the Corcoran portion of the Study Area. The approximately 50 folks who attended the Open House shared information about known problems and issue, and observations about conditions in their area. Wenck Associates and the Core Team will review this information as they move forward with the assessment.

In 2018 the following tasks will be undertaken:

Desktop prioritization and feasibility analysis of the structural BMPs sited using Agricultural Conservation Planning Framework (ACPF) GIS model/tool.

Produce final list of proposed structural BMPs, evaluate their cost-benefit

Identify non-structural (cultural) BMPs to include in final report

Produce final report describing study area, water quality issues/concerns, and proposed list of structural and cultural BMPs to improve water quality.

Work with willing landowners and begin identifying BMPs for grant funding opportunities in 2018

21. Continue to support City-sponsored projects using the ad valorem funding mechanism. CIPs included on the Commission's CIP schedule will be considered for ad valorem funding recommendation by the Technical Advisory Committee.
22. Adopt a 2019 operating budget.
23. Continue to populate and maintain the Commission's website [www.elmcreekwatershed.org](http://www.elmcreekwatershed.org) to provide news to residents, students, developers and other individuals interested in the water resources of the watershed. Using the tool Weebly, continue to update and enhance the website, adding links to other websites as well as to other useful information.
24. Publish an annual activities report summarizing the Commission's yearly activities and financial reporting. The *2017 Annual Activity Report* will be available at the Commission's April 11, 2018 meeting.
25. The Commission will continue to meet with representatives from the Board of Water and Soil Resources, other water management organizations, counties, and cities regarding a possible move from a competitive funding model towards a more systematic Clean Water Funding model for local water management authorities on a watershed basis. If all watershed organizations in Hennepin County choose to create a collaborative group for the watershed-based funding, that share of funds is available for Hennepin County projects. If the WMOs choose to remain with competitive-based grant funding, that money will be pooled with counties who also choose to remain competitive-based. This decision must be made by June 30, 2018.
26. Others???



**Issues.** The Commission, along with the Citizen and Technical Advisory Committees (CAC and TAC), identified the following issues during the planning process:

**Water quality**—numerous lake and stream impairments, impact of land use changes, stream stability issues

**Agricultural impacts on water quality**—need to increase agricultural BMPs, develop effective mechanisms to encourage voluntary adoption, more effective outreach

**Funding**—maintaining a sustainable funding level; funding capital projects

**Other issues**—lack of information and knowledge of water quality issues and actions by multiple stakeholders; need to be realistic and prioritize actions; increase member city involvement; foster collaboration with other agencies

**Priorities.** Through the identification of these issues, the Commission developed the following priorities to guide water resources planning and management functions:

**Begin implementing priority projects** in 2015, providing cost-share to member cities to undertake projects to help achieve WRAPS lake and stream goals

**Use results of WRAPS study to establish priority areas**, complete subwatershed assessments to identify specific BMPs that feasibly and cost-effectively reduce nutrient and sediment loading to impaired water resources

**Develop model manure management ordinance** to regulate placement of new small non-food animal operations using the City of Medina ordinance as a guide; require member cities to adopt that or other ordinances and practices to accomplish its objectives

**Partner with other organizations to complete pilot project** for targeted fertilizer application, increase and focus outreach to agricultural operators

**Continue participating in joint education and outreach activities** with WMWA and other partners

## Goals

### Water Quantity

Maintain post-development 2-year, 10-year, and 100-year **peak rate of runoff** at pre-development level for the critical duration precipitation event.

Maintain post-development **annual runoff volume** at pre-development volume.

Prevent **loss of floodplain storage** below the established 100-year elevation.

Reduce **peak flow rates** in Elm, Diamond, and Rush Creeks and tributary streams to the Crow and Mississippi and preserve conveyance capacity.

### Water Quality

Improve **Total Phosphorus concentration** in the impaired lakes by 10% over the 2004-2013 average by 2024.

Maintain or improve **water quality** in the lakes and streams with no identified impairments.

Conduct a **TMDL/WRAPS progress review** every five years following approval of the TMDLs and WRAPS studies.

Use information in the WRAPS to **identify high priority areas** where the Commission will partner with cities and other agencies to provide technical and financial assistance.

### Groundwater

Promote **groundwater recharge** by requiring abstraction/infiltration of runoff from new development/ redevelopment.

Protect **groundwater quality** by incorporating wellhead protection study results into development and redevelopment Rules and Standards.

### Wetlands

Preserve the existing **functions and values** of wetlands within the watershed.

Promote the **enhancement or restoration** of wetlands in the watershed.

### Drainage Systems

Continue current Hennepin County jurisdiction over **county ditches** in the watershed.

### Operations and Programming

Identify and operate within a **sustainable funding level** that is reasonable to member cities.

Foster **implementation of priority TMDL and other implementation projects** by sharing in their cost and proactively seeking grant funds.

Operate a **public education and outreach program** to supplement NPDES Phase II education requirements for member cities.

Operate a **monitoring program** sufficient to characterize water quantity, water quality, and biotic integrity in the watersheds and to evaluate progress toward meeting goals.

Maintain **rules and standards for development and redevelopment** consistent with local and regional TMDLs, federal guidelines, source water and wellhead protection requirements, nondegradation, and ecosystem management goals.

Serve as a **technical resource** for member cities.

January 26, 2018

Dear CAMP Sponsors:

This is an update on the work we have been doing to improve the value and sustainability of the Citizen-Assisted Monitoring Program (CAMP). Last summer I asked the CAMP sponsors and volunteers to participate in a survey of the CAMP to help gather information and feedback, so we could address areas that need improving and enhance areas that are going well. We sent out the survey to 30 sponsor representatives, and we received 21 responses. We sent the survey to 121 volunteers, and we received 45 responses.

An encouraging result from the survey is that most sponsors who responded to the survey are satisfied or highly satisfied with the program (18 out of 21). Similarly, most volunteers are satisfied or very satisfied with the program (37 out of 45 respondents).

A common comment in the sponsor and volunteer surveys was that the timeliness of the reports and availability of the finalized data need to be greatly improved. Our goal then is to improve the timeliness of the availability of the finalized data and the reports, where:

- The finalized monitoring data for a particular year will be available the following January 31<sup>st</sup>. For example, finalized monitoring data for samples collected in 2018 will be available by January 31, 2019.
- The annual Lake Water Quality Summary Report, including the lake grade map, will be published by mid-February of the year following the monitoring.
- The annual lake report will be published by April 1 of the year following the monitoring.

Changes will be implemented in the CAMP to help us achieve this timeline. Many of these changes focus on improving the efficiency of 3 important processes:

- Kit restocking, delivery, and pickup.
- Picking up the samples and lake monitoring forms and delivering them to the lab.
- Volunteer training.

Some of these changes also are geared towards:

- Improving the rate of volunteer participation.
- Improving the maintenance of the monitoring kits.
- Updating the CAMP price structure.

The changes are as follows. Some of you already have been doing some of these tasks, so those won't be a much of a change for you.

1. The Sponsor will be responsible for maintaining, storing, and restocking their monitoring kits. For monitoring kits that are currently stored at a Council facility, Council staff will restock and deliver these kits to their respective Sponsor-owner in the spring of 2018. After this spring, monitoring kits will no longer be stored at Council facilities. As a friendly reminder, the kits are owned by the Sponsor once purchased.
2. The Council will provide and deliver to the Sponsor the expendable monitoring items (e.g. sample containers, labels, filters, aluminum sheets, zip-style plastic bags, and lake monitoring forms). The expendable monitoring items will be delivered in the weeks preceding the start of the monitoring season. The cost of the expendable monitoring items is included in the annual CAMP participation fee.
3. For durable items in the monitoring kit (e.g. thermometers, Secchi disks, filter holders, hand pumps, etc.), the Council will provide and deliver these items upon request from the Sponsor. The Sponsor will be billed for replacing durable equipment, which will be in addition to the participation fee. The purpose of this change is to improve the maintenance practices of the durable items.
4. The CAMP program manager will send out an annual request to the Sponsors asking if they plan to participate in the CAMP for that year (as usual). The request will also ask for a list of lake site(s) and the quantity of items (expendable and durable) needed for restocking the monitoring kits.
5. The Sponsor will be responsible for delivering and picking up the monitoring kits to and from their volunteers.
6. The Sponsor will be responsible for providing a central storage location for their volunteers' samples and lake monitoring forms until pick up by Council staff. Sponsors will be responsible for picking up the samples and the lake monitoring forms from their volunteers and delivering those items to Sponsor's central storage location. The samples are required always to be frozen, which is the same requirement as before. The central storage location can be a Council facility.
7. The Council will be responsible for picking up the samples and lake monitoring forms from the Sponsor's central storage location and delivering them to the laboratory.
8. The CAMP has not raised its participation fee for over 16 years (\$550 for 14 monitoring events per lake site). As with most everything else, the costs of operating the program have increased since then. To bring the pricing structure of the CAMP in line with current costs, the annual CAMP participation fee will increase to \$760 for 14 monitoring events per lake site. This increase generally reflects the inflation rate (Consumer Price Index) over the same time period. The participation fee will be raised to \$380 for 7 monitoring events per lake site.
9. The Council will no longer offer the monitoring frequency option of 1 to 5 monitoring events per monitoring season.
10. The CAMP participation fee will be billed for the contracted amount regardless whether the volunteer samples a lake site fewer times than the contracted quantity.
11. The cost to purchase a monitoring kit will increase to \$225.

12. Payment of the total amount owed to the Council will be due by October 30 each year. An invoice will be sent in September of each year.
13. The Council plans to develop an on-line web-based training program to train new volunteers and to be a source of information for veteran volunteers. Written content, videos, and knowledge exams are planned for the web-based program to provide thorough training and document that volunteers understand CAMP methods and procedures.

If you have any questions about these changes or the survey, please contact me.

Sincerely,

Brian Johnson  
Senior Environmental Scientist | Water Resources

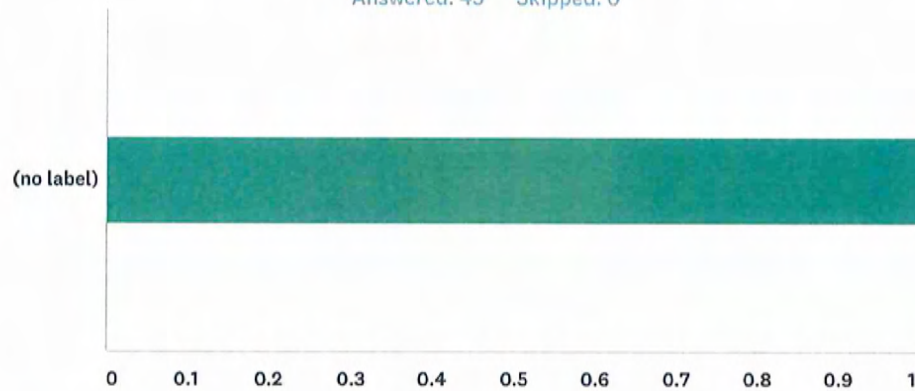
brian.johnson@metc.state.mn.us  
P. 651.602.8743



## Citizen-Assisted Monitoring Program (Volunteers)

# Q1 How satisfied are you with the Citizen-Assisted Monitoring Program (Program)?

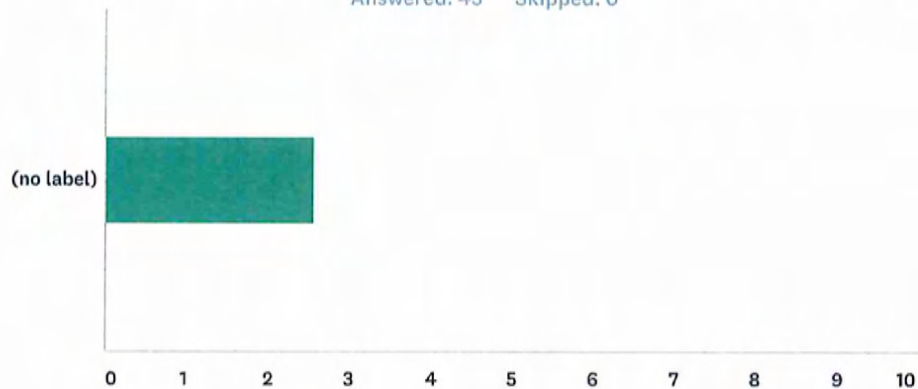
Answered: 45 Skipped: 0



	Very Unsatisfied	Unsatisfied	Somewhat Unsatisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Total	Weighted Average
(no label)	2.22% 1	0.00% 0	4.44% 2	11.11% 5	62.22% 28	20.00% 9	45	1.00

## Q2 How helpful do you find the annual lake reports?

Answered: 45 Skipped: 0



	Unhelpful	Somewhat Helpful	Very Helpful	Not Applicable	Total	Weighted Average
(no label)	4.44% 2	24.44% 11	51.11% 23	20.00% 9	45	2.58

#	Please tell us why you find the reports to be Unhelpful, Helpful, or Not Applicable.	Date
1	I'm not sure of how the data is used from our lake.	7/7/2017 12:00 PM
2	It's nice to see the results, and to reflect on the conditions that I observed.	7/6/2017 3:22 PM
3	Provides info on whether (a few) BMOs are making any difference in the lake. Also provides feedback on my collections -- just seeing results.	7/5/2017 7:59 AM
4	I haven't received one for my lake	7/4/2017 3:13 PM
5	haven't seen them	7/3/2017 9:50 AM
6	This is my first year and I have not seen them	7/2/2017 2:24 PM
7	I am new to this work and program, need to see more reports.	6/30/2017 6:27 PM

## Citizen-Assisted Monitoring Program (Volunteers)

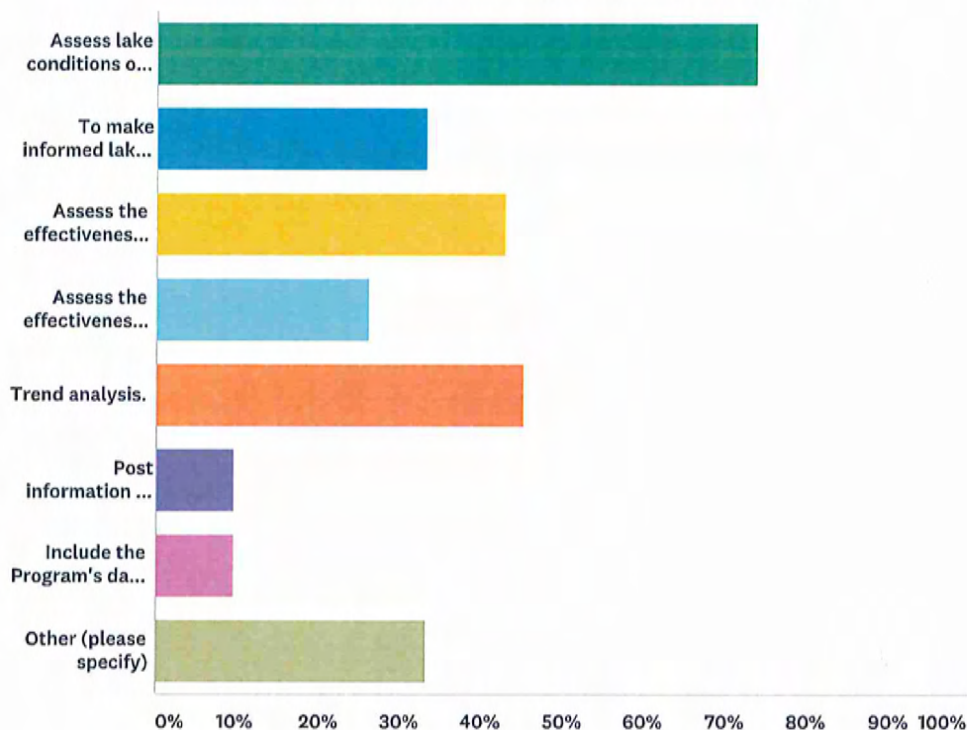
8	It's nice to know that Sunset Lake is clean.	6/28/2017 3:29 PM
9	I have only collected information up to this point and passed it along.	6/27/2017 1:59 PM
10	Too long of a delay between collecting data a getting reports. Are we sent the reports? I just searched on your website for specific reports on our waterbody, and wasn't able to find anything.	6/27/2017 12:45 PM
11	It is important to understand the quality of the water in our lake. My family has lived on the lake since 1899. Water quality is important.	6/26/2017 12:08 PM
12	It helps to know where the lake stands as far as being safe to swim in. It is a recreational lake, so fishing and swimming in safe water is essential.	6/26/2017 11:57 AM
13	We occasional use the result in educational programs	6/26/2017 11:19 AM
14	never seen one	6/26/2017 9:18 AM
15	I don't receive this report, how could I get it?	6/26/2017 9:07 AM
16	I have'nt seen any results yet on Parkers Lake	6/26/2017 8:47 AM
17	I like to see the data but as a volunteer I'm not doing anything with it.	6/25/2017 8:40 PM
18	We don't get reports without requesting them. Annual automatic reports would be nice.	6/24/2017 5:06 PM
19	Explaining water quality to follow it lake members	6/24/2017 4:26 PM
20	I am new to the program and have not dug into reports very much so far.	6/24/2017 9:05 AM
21	The reports do not indicate what the causes are for the lakes deteriorating conditions. Haas lake has only one family living on it, but the runoff into the 2 holding ponds built by the Wilds golf course appear to be the cause of the lakes deteriorating conditions . Also, runoff from the road (mainly salt) goes into the lake. During the construction of the Wilds Course, 200 to 300 feet of silt was dumped into Haas Lake because of the lack of silt fence and dams on the gulley that drained into the lake. The DNR and Prior Lake were advised of this situation but nothing was done to undo this contamination. My Family has lived on Haas Lake since 1972 (45 yrs) and The lake has not been this bad with excess vegetation.	6/24/2017 8:59 AM
22	Shows how work we are doing to clean up Burnsville's waters is having an affect	6/24/2017 7:44 AM
23	THE REPORTS I SEE ARE STRICTLY CARVER WEBSITE DATA. AM I SUPPOSED TO RECEIVE SUPPLEMENTAL REPORTS? IF SO I HAVE NOT RECEIVED.. THE WEBSITE DATA IS EXCELLENT. - WRITTEN FOR THE LAY PERSON	6/24/2017 6:42 AM
24	It's not that they're unhelpful; they're not published in a timely fashion. MN Wetlands Health Evaluation Program produces a detailed annual report within about 6 months after season's end. Why can't CAMP?	6/24/2017 6:38 AM
25	I find it very helpful as it is the only way the City has of monitoring its stewardship of this environmental asset. I bring the results to the City Administration and Council annually.	6/23/2017 11:28 PM
26	They help monitor the water quality trends/problems/issues	6/23/2017 10:24 PM
27	They are interesting. It's nice to see our efforts in a larger picture.	6/23/2017 9:36 PM
28	I like to see how the lake has changed over the years.	6/23/2017 9:22 PM
29	Helpful, but I have not seen a copy in several years. Maybe you send it to the city (of Mendota Heights)? I am the volunteer for Rogers Lake in the city, and I would like to see the annual report and share it with the property owners association for the lake.	6/23/2017 9:17 PM
30	I've never viewed this report or know where to find it	6/23/2017 8:58 PM
31	Provides a base line for analyzing changes	6/23/2017 8:53 PM
32	Didn't get one	6/23/2017 8:52 PM

**Q3 Indicate how you use the Program's Lakes reports. (Check all that apply)**

Answered: 42 Skipped: 3



## Citizen-Assisted Monitoring Program (Volunteers)



Answer Choices	Responses	
Assess lake conditions or water quality.	73.81%	31
To make informed lake management decisions.	33.33%	14
Assess the effectiveness of lake or watershed improvement efforts/activities.	42.86%	18
Assess the effectiveness of storm water best management practices.	26.19%	11
Trend analysis.	45.24%	19
Post information on a public website.	9.52%	4
Include the Program's data and information in publicity available published documents.	9.52%	4
Other (please specify)	33.33%	14
Total Respondents: 42		

#	Other (please specify)	Date
1	Provide info to other lake shore homeowners who care about the lake.	7/5/2017 7:59 AM
2	Do not recall receiving these reports; if we have, perhaps I have confused them with other reports received from other sources. Check points are hat we hope to do	7/3/2017 9:50 AM
3	personal interest	6/30/2017 10:22 PM
4	Lake association updates	6/26/2017 11:51 AM
5	education primarily for elementary students	6/26/2017 11:19 AM
6	have not seen a report	6/26/2017 9:18 AM
7	I have to see reports first.	6/26/2017 8:47 AM
8	As a resident, just use it for general comparative analysis. How would a citizen be able to analyze anything?	6/24/2017 5:06 PM

## Citizen-Assisted Monitoring Program (Volunteers)

9	I TAKE THE INFORMATION AND PUBLISH IN A SPREADSHEET COMPARING CARVER LAKES AND PRESENT THEM TO OUR ASSOCIATION. VERY INFORMATIVE. LAKE RESIDENTS APPRECIATE THE DATA - LAKE KNOWLEDGE IS ALWAYS USEFUL IN PRESERVING AND IMPROVING WHAT WE HAVE.	6/24/2017 6:42 AM
10	See comment above.	6/24/2017 6:38 AM
11	See above comment.	6/23/2017 11:28 PM
12	Again, I could do more with the information if I received an annual copy of the report.	6/23/2017 9:17 PM
13	I've never seen the report	6/23/2017 8:58 PM
14	Didn't get one	6/23/2017 8:52 PM

## Q4 How helpful do you find the data produced by the Program?

Answered: 44 Skipped: 1



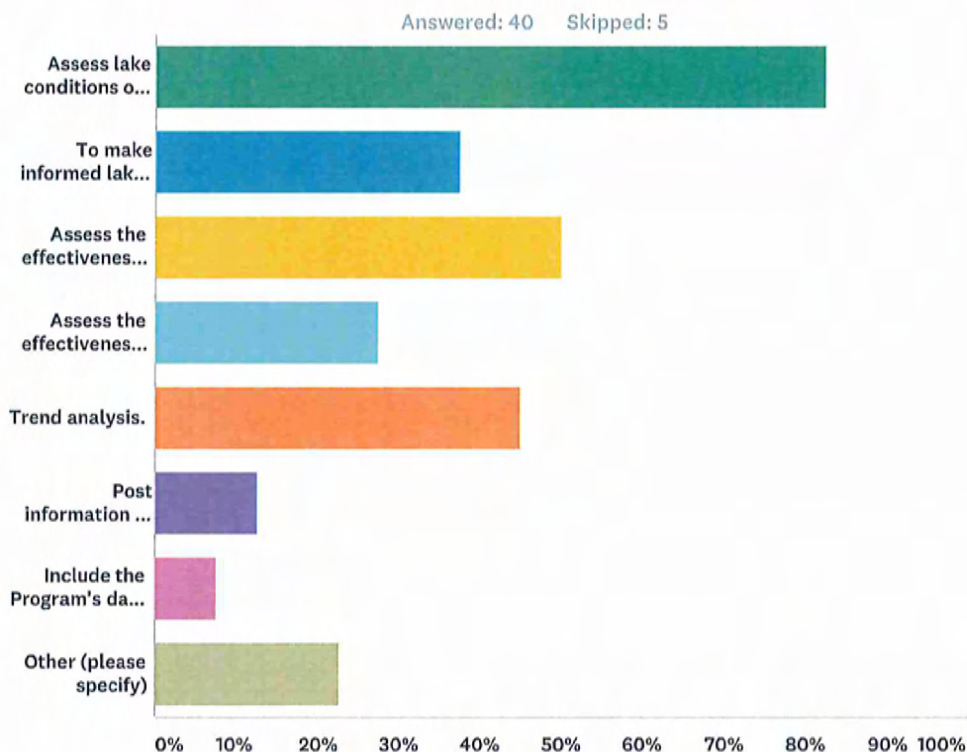
	Unhelpful	Somewhat Helpful	Very helpful	Not Applicable	Total	Weighted Average
(no label)	2.27% 1	20.45% 9	52.27% 23	25.00% 11	44	3.67

#	Please tell us why you find the data to be Unhelpful, Helpful, or Not Applicable.	Date
1	Not sure how the data is used	7/7/2017 12:00 PM
2	See above.	7/5/2017 7:59 AM
3	I haven't used the data	7/4/2017 3:13 PM
4	See above	7/3/2017 9:50 AM
5	I don't use the data, I collect it. I hope someone else uses it.	6/30/2017 10:22 PM
6	Data is important to track lake status/health over time.	6/30/2017 6:27 PM
7	The watershed does the same monitoring. Don't see a need/cost for CAMP.	6/29/2017 10:14 AM
8	Again, I have only collected data and passed it along.	6/27/2017 1:59 PM
9	As a homeowner on this lake, it gives me confidence that the programs that we have in place are working.	6/26/2017 12:08 PM
10	Gives us a general impression of the lakes water quality and how it compares to other area lakes	6/26/2017 11:19 AM
11	I don't receive any of the data that I help produce. It would be very motivating if I did.	6/26/2017 9:07 AM
12	No data	6/26/2017 8:47 AM
13	I like to see the data but as a volunteer I'm not doing anything with it.	6/25/2017 8:40 PM
14	Explain lake quality and compared to other lakes	6/24/2017 4:26 PM
15	Not enough specific chemical and biological data.	6/24/2017 8:59 AM

## Citizen-Assisted Monitoring Program (Volunteers)

16	Facts are good!	6/24/2017 7:44 AM
17	IN ORDER TO EFFECT CHANGE WE NEED CONSISTENT DATA. THIS PROGRAM ALLOWS CONSISTENT DATA GATHERING ALLOWING THE WATERSHED DISTRICT TO MONITOR, OBSERVE AND RECOMMEND CHANGE.	6/24/2017 6:42 AM
18	It's not timely enough to be particularly useful.	6/24/2017 6:38 AM
19	It is the only current data we have. Its value as an historical record is extremely valuable to measure our own stewardship and check general climate change impacts.	6/23/2017 11:28 PM
20	helps to focus management efforts/reveal trends	6/23/2017 10:24 PM
21	It doesn't affect what I do, but shows in from a different perspective.	6/23/2017 9:36 PM
22	See references above.	6/23/2017 9:17 PM
23	I've never seen the report	6/23/2017 8:58 PM
24	It provides a baseline analysis. However , it is disturbing to see the volunteer reportings to be consistently different than the DNR readings. This is true for not only first lake , fores lake but the other 2 lake basins also.I ama graduate Chem Eng and have extensive experience in Lab /sampling techniques. If the Std deviation is that high between the readindgs , one has to doubt the validity of the overall program.	6/23/2017 8:53 PM

### Q5 Indicate how you use the Program's data. (Check all that apply)



Answer Choices	Responses
Assess lake conditions or water quality.	82.50% 33
To make informed lake management decisions.	37.50% 15
Assess the effectiveness of lake or watershed improvement efforts/activities.	50.00% 20
Assess the effectiveness of storm water best management practices.	27.50% 11

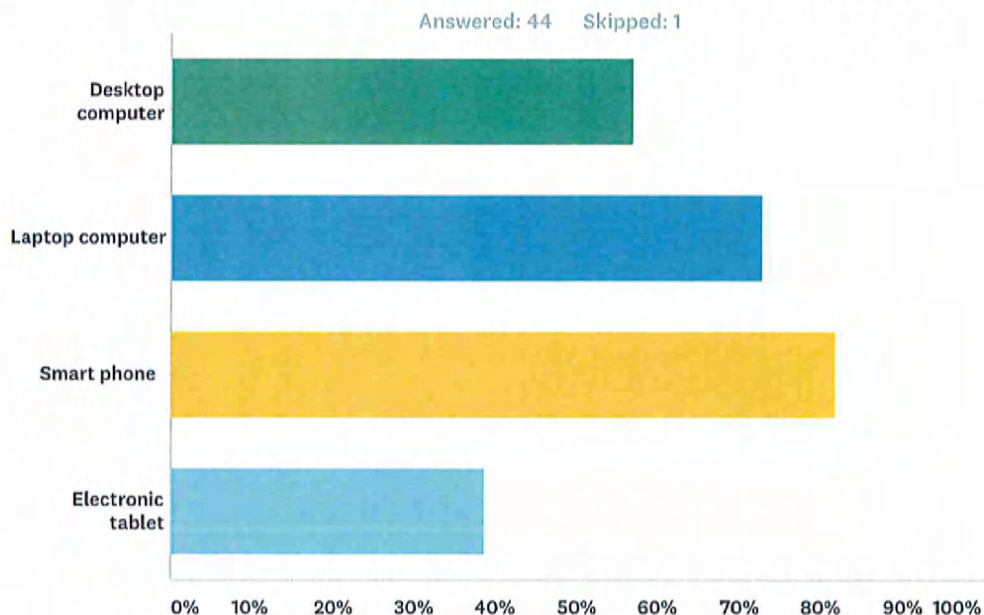


## Citizen-Assisted Monitoring Program (Volunteers)

Trend analysis.	45.00%	18
Post information on a public website.	12.50%	5
Include the Program's data and information in publicity available published documents.	7.50%	3
Other (please specify)	22.50%	9
Total Respondents: 40		

#	Other (please specify)	Date
1	Provide info to other lake shore homeowners who care about the lake.	7/5/2017 7:59 AM
2	see above comments	7/3/2017 9:50 AM
3	same as above	6/30/2017 10:22 PM
4	I would like to view the reports	6/26/2017 9:18 AM
5	The information I generate (Clarity/Temp/Observations) I share with our lake association via e-mail.	6/26/2017 9:07 AM
6	If there were data	6/26/2017 8:47 AM
7	Personal interest. The city has not indicated that the information means anything to them. Continued development and access around what used to be a natural environment lake.	6/24/2017 5:06 PM
8	Explain the lakes Water quality to fellow residents	6/24/2017 4:26 PM
9	I've never seen it	6/23/2017 8:58 PM

### Q6 Indicate if you have internet access using one or more of the following devices. (Check all that apply)

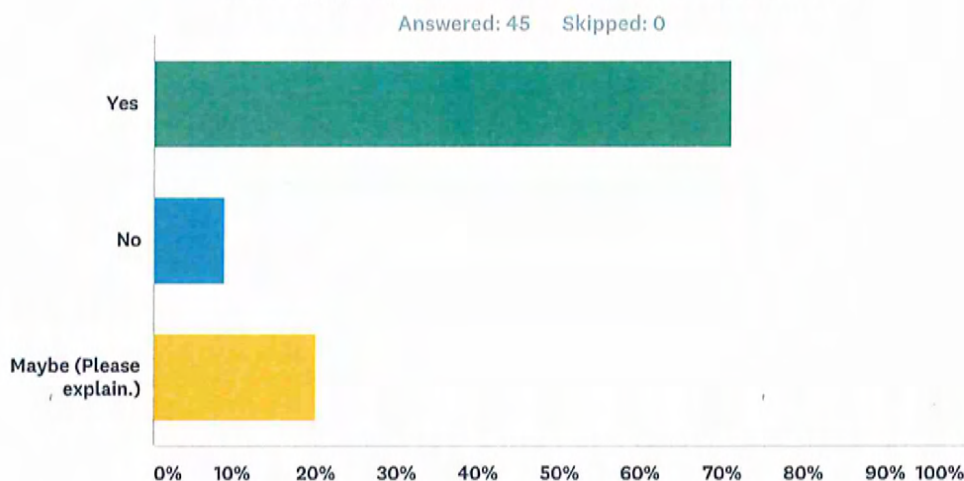


Answer Choices	Responses	
Desktop computer	56.82%	25
Laptop computer	72.73%	32
Smart phone	81.82%	36

## Citizen-Assisted Monitoring Program (Volunteers)

Electronic tablet	38.64%	17
Total Respondents: 44		

**Q7 If you checked at least one device in the question above, would you be willing to enter field data electronically instead of using paper field data sheets?**



Answer Choices	Responses	
Yes	71.11%	32
No	8.89%	4
Maybe (Please explain.)	20.00%	9
Total		45

#	Maybe (Please explain.)	Date
1	Want to hear more details. I don't want to take electronics out on the lake so I'm still filling out the paper data sheets. Another step.	7/5/2017 8:14 AM
2	The sunshine can be cumbersome with the screen, may be hard to see.	6/26/2017 12:01 PM
3	It would probably have to be a personal device	6/26/2017 11:21 AM
4	yes- how about the petrie sample?	6/26/2017 8:49 AM
5	Depends on how user-friendly you make it.	6/24/2017 5:08 PM
6	too easy to make mistakes. Time it takes	6/24/2017 7:32 AM
7	I could do that if it was important to the program. The sheet is easy as I take it to the lake and then simply include it in the bag with the samples. However, if you continue to provide the sheets, I would be willing to enter the data into a simple form provided by the program.	6/23/2017 11:40 PM
8	I do not want to bring my laptop onto the lake.	6/23/2017 9:37 PM
9	Using a device supplied to me	6/23/2017 9:01 PM

**Q8 Please share what motivates you to be a lake monitoring volunteer.**

Answered: 40 Skipped: 5



## Citizen-Assisted Monitoring Program (Volunteers)

#	Responses	Date
1	Mostly for tracking ongoing water quality.	7/7/2017 12:03 PM
2	I feel like the lake needs to have an advocate, and someone willing to obtain the data so that if there is an issue it can be identified and addressed.	7/6/2017 3:24 PM
3	It's like changing the oil on your car: forces me to interact and pay attention to the lake ... to look at it. Also it's something I can contribute to the neighborhood.	7/5/2017 8:14 AM
4	To learn more about the lake, assist research, and see nature	7/4/2017 3:14 PM
5	Live on the lake and have concern over its future	7/3/2017 9:52 AM
6	I am concerned about the effect new construction will have on the lake I live on	7/2/2017 2:29 PM
7	I have interest in the lake water quality. Regularly monitoring the lake keeps me well in tuned with the lake.	6/30/2017 10:24 PM
8	Need for close management of the lake relative to water quality, and especially weed control needed to keep the lake healthy for fishing, boating, and swimming.	6/30/2017 6:29 PM
9	It's one of the ways to feel like I'm a steward of the environment.	6/30/2017 6:27 PM
10	I believe in volunteerism	6/30/2017 6:25 PM
11	Concerned about water quality	6/30/2017 6:16 PM
12	To ensure the water quality of Sunset Lake remains excellent	6/28/2017 3:30 PM
13	I live on the lake and it's my home.	6/27/2017 2:02 PM
14	Keeping our lake clean.	6/27/2017 12:45 PM
15	Love our lake, and want to help keep it great	6/26/2017 2:17 PM
16	I no longer monitor after having monitored for about 10 years. I could see trends such as the effects of invasive plants and heat upon the entire lake ecosystem.	6/26/2017 12:50 PM
17	I am very interested in understanding the quality of the water in the lake that I live on and sustaining that water quality.	6/26/2017 12:12 PM
18	I use the lake a lot and want to see a clean lake. Being on the lake is my passion.	6/26/2017 12:01 PM
19	it is an important function that needs to be done	6/26/2017 9:21 AM
20	The opportunity to better manage our lake and contribute to public understanding of what is happening with our watersheds.	6/26/2017 9:08 AM
21	try to help gain knowledge for the area	6/26/2017 8:49 AM
22	Not very many people have easy access to the lake so it is the right thing for me to do.	6/25/2017 8:42 PM
23	Personal interest and concern for the environment.	6/24/2017 5:08 PM
24	We use the lake quite a bit and want the best water quality possible.	6/24/2017 4:29 PM
25	Care for the lake and in general water quality.	6/24/2017 9:11 AM
26	We live here.	6/24/2017 9:01 AM
27	Helping the community, and getting out on the water.	6/24/2017 7:45 AM
28	care about the lakes and understand the value of long term data.	6/24/2017 7:32 AM
29	I feel I'm contributing important information that leads to better understanding of the condition of our Metro area lakes and thereby to planning for improving a vital resource.	6/24/2017 6:49 AM
30	LAKE RESIDENTS NEED TO BE INVOLVED WITH THE BODY OF WATER THEY ENJOY. MONITORING THE LAKE ON A BIWEEKLY BASIS CONNECTS ME TO MY SURROUNDS. I REALLY ENJOY TAKING PART IN THE PROGRAM.	6/24/2017 6:44 AM
31	I am a long-time environmental activist and have been involved in the protection of this particular lake for many years. It is a natural resource and natural habitat for songbirds, waterfowl, muskrats, turtles,....	6/23/2017 11:40 PM
32	I live on the lake and hope to maintain/improve the water quality for multiple uses; swimming, fishing, kayaking, etc	6/23/2017 10:29 PM

## Citizen-Assisted Monitoring Program (Volunteers)

33	Trying to help preserve our lakes and rivers.	6/23/2017 9:56 PM
34	Assist in the lake health	6/23/2017 9:37 PM
35	It's easy to do and, if it is helpful, I can contribute my time to this effort.	6/23/2017 9:37 PM
36	Interested in lake quality.	6/23/2017 9:19 PM
37	I want to see our lake healthy.	6/23/2017 9:18 PM
38	To be knowledgeable and active in the improvement of my lake's water quality	6/23/2017 9:01 PM
39	Dedication to improvement in Water quality	6/23/2017 8:56 PM
40	Interest in the lake health	6/23/2017 8:52 PM

## Q9 Please share any additional comments regarding the Program (what you like, dislike, and improvement ideas).

Answered: 24 Skipped: 21

#	Responses	Date
1	My lake (Lac Lavo) is small (55 acres) and shared by two cities: Apple Valley and Burnsville. All the residents on the lake live in Apple Valley. I'd like to know if the cities are using the data collected, the trends noticed and how they are informing the residents about water conditions.	7/7/2017 12:03 PM
2	I would like to take part in discussions about the watershed for Pickerel Lake, and see if there are options for implementing water quality devices upstream to intercept excess nutrients, and improve the lake quality.	7/6/2017 3:24 PM
3	I'd like to see faster turn around of the test results. The wait is now over a year. More government management/improvement efforts. "All water matters." More programs are available to the bigger recreational lakes than to Little Johanna, yet our water flows into Johanna and beyond.	7/5/2017 8:14 AM
4	1-Collection of data questions could be clearer-eg-how to interpret perception of water color, conditions, etc at site versus on the shore. 2-shoreline information impact seems discounted-is there any use for that information? 3--very friendly program with sense of gratitude to volunteers-welcome the reminders from Gael. 4-readable reports annually would be helpful-still not sure I do or do not get reports-but since I'm not sure, I can comment that something more apparent should be sent.	7/3/2017 9:52 AM
5	I am wondering if a syringe would be easier to measure water more accurately with than the cylander provided	7/2/2017 2:29 PM
6	Could save some costs associated with testing and administrating the CAMP program on lakes where the watershed is doing the same monitoring.	6/29/2017 10:14 AM
7	Everything so far has been good.	6/27/2017 2:02 PM
8	Emailed responses from the coordinator would be helpful "thanks" "got it" "thank you for providing this information"	6/27/2017 12:45 PM
9	n/a	6/26/2017 2:17 PM
10	Ultimately, I was put off by Diane Spector, staff for the Shingle Creek Watershed who delivered monitoring equipment late and seemed to disrespect volunteer data.	6/26/2017 12:50 PM
11	I really like the idea of electronic submittal of data, it seems much more efficient. The only suggestion I might have would be to use a container larger enough to siphon water through the paper filter with one fill, that way the filter is not subject to damage or contamination emptying the reservoir 3 times. The other option would be to be able to empty the reservoir without having to remove the paper filter.	6/26/2017 12:12 PM
12	The volunteer time is long. April to Oct. sometimes it is hard getting out every 2 weeks...not sure why this needs to be done so much, sometimes the data does not change from week to week.	6/26/2017 12:01 PM



## Citizen-Assisted Monitoring Program (Volunteers)

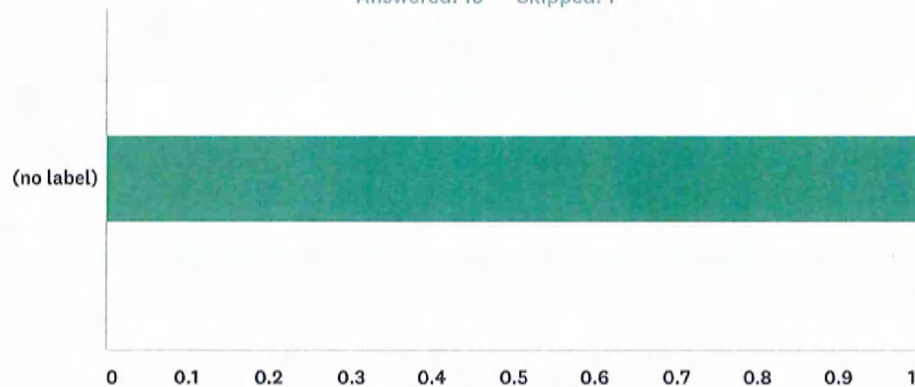
13	If we are to test a 1000ml of water we should have a container that holds 1000ml. Most people have electronic "Smart" devices. a calendar invitation with sample dates would be nice.	6/26/2017 9:21 AM
14	The people who manage this program do a GREAT job. They are easy to reach, are timely and provide me all the resources I need to do this.	6/26/2017 9:08 AM
15	getting the right labels would help.	6/26/2017 8:49 AM
16	Our point of contact person could communicate more with us	6/24/2017 4:29 PM
17	One was electronic recording data, I am a secchi disc volunteer also and I do all of that recording electronic also. Would be nice if you and DNR were in synch, they record in inches. Metric is OK for me, would be nice if they were the same. It would be nice and more efficient if the filter device could handle 1000 ml in one shot rather than 4 times.	6/24/2017 9:11 AM
18	The data is collected too early in the season. The Secchi data doesn't match the MPCA CLMP data period.	6/24/2017 7:32 AM
19	As indicated previously, I would like to see more timely reporting and analysis of the data. I enjoy being part of this team and think the work is important. Getting this out to the general public would help.	6/24/2017 6:49 AM
20	I WOULD LIKE TO GET REGULAR UPDATES ON LAKE QUALITY. I RECEIVED THE WEBSITE DATA ONLY BECAUSE I REQUESTED. IF I HAD NOT REQUESTED I WOULD NOT RECEIVE. ARE WE SUPPOSED TO GET UPDATES - YEARLY - QUARTERLY OR WHAT. LOVE THE PROGRAM.	6/24/2017 6:44 AM
21	It runs pretty smoothly, but it would be nice if others that are closer to the lake and who receive more benefit would also participate. I do not live on or near this lake, but have collected samples there for 12 years. I would also like to have a bit more feeling that the watershed cares about the lake as much as I do. I would like to be informed of any city/metro wide trends that the program sees. This spring I wrote about the condition of this lake in the early spring. I hope that at the end of the summer or whenever the data is all fully analyzed, we volunteers could receive a report on any larger changes. I believe I am seeing the effects of climate change on shallow, urban lakes. I would like that confirmed or denied. I would also appreciate a report from the Camp Program and the watershed of an assessment of our City's stewardship of our lakes and ponds. I have tried to talk to individuals about the excessive number of water lilies in this lake, but have not received any discussion regarding this issue. Are there too many? Should we remove some? Are they actually a problem? And so on. Thanks, and I really do believe in the program and would be very appreciative of any addition information that is gleaned by the program in general.	6/23/2017 11:40 PM
22	As noted above, I would appreciate receiving the annual reports for Rogers Lake. Could you mail me copies going back as early as 2010? My names Doug Hennes, 2351 Swan Drive, Mendota Heights, MN 55120. Thanks!	6/23/2017 9:18 PM
23	When I found out met council was involved I list interest in the program. I don't trust met council's decision making.	6/23/2017 9:01 PM
24	Big concern on the differences between my readings and the assigned DNR/Met council rep... after 8 yrs of reporting . Why havew volunteers if you don't use their data???	6/23/2017 8:56 PM



### Citizen-Assisted Monitoring Program Survey (Sponsor A)

## Q1 How satisfied are you with the current Citizen-Assisted Monitoring Program (Program)?

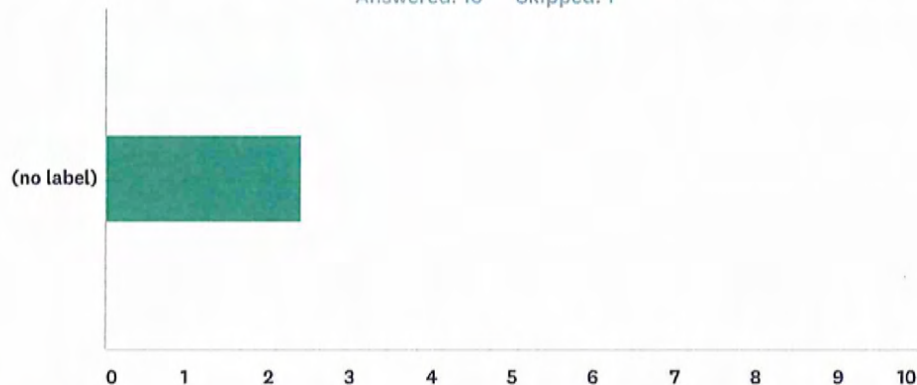
Answered: 16 Skipped: 1



	Very Unsatisfied	Unsatisfied	Somewhat Unsatisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	12.50% 2	6.25% 1	68.75% 11	12.50% 2	16	1.00

## Q2 How helpful do you find the Program's annual lake reports?

Answered: 16 Skipped: 1



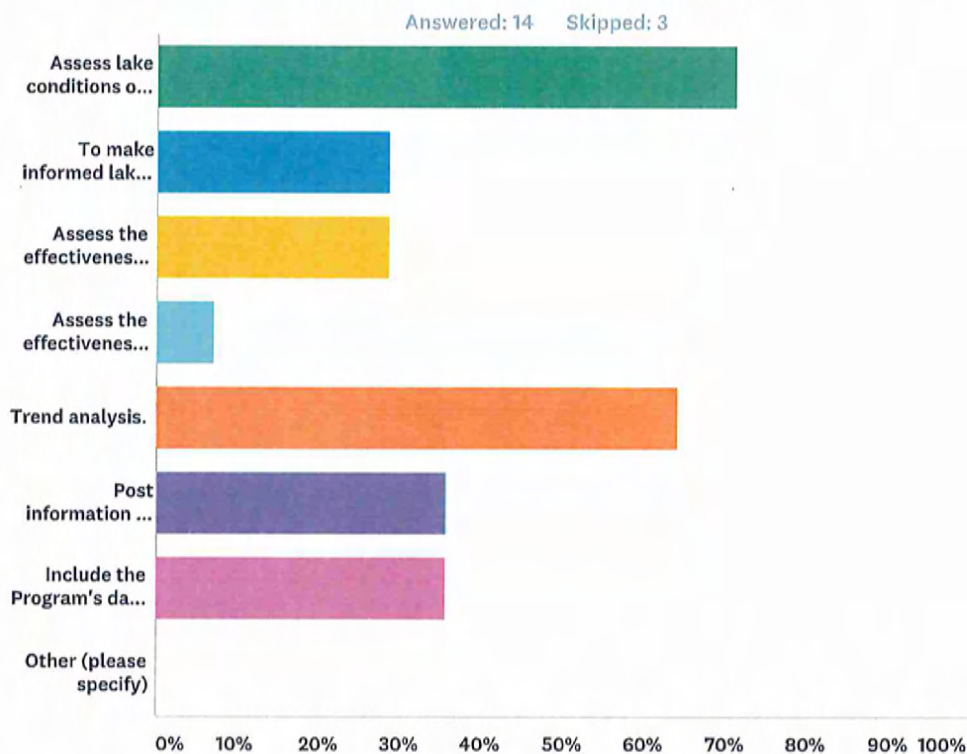
	Unhelpful	Somewhat Helpful	Very Helpful	Not Applicable	Total	Weighted Average
(no label)	6.25% 1	43.75% 7	43.75% 7	6.25% 1	16	2.40

#	Please tell us why you find the reports to be Unhelpful, Helpful, or Not Applicable.	Date
1	Way too late to get the data from the previous year.	6/28/2017 1:37 PM
2	I am unaware of the annual lake reports.	6/28/2017 12:07 PM
3	I dont believe we have received a report every year.	6/27/2017 9:06 AM
4	It is not prepared in a timely enough manner to be useful during the decision making process by LGUs and WMOs	6/26/2017 8:33 AM
5	I wish the reports were published sooner. In fact right now I can only find 2014 reports on your website!	6/21/2017 3:44 PM

## Citizen-Assisted Monitoring Program Survey (Sponsor A)

6	It would be nice if you could find a way to get the report out earlier than the current timeframe so we can make decisions the same year as the sampling.	6/21/2017 2:31 PM
7	The electronic data is more useful than the actual written report for our purposes.	6/21/2017 2:26 PM
8	Have not used CAMP reports yet	6/21/2017 1:38 PM
9	Would like to receive reports in time for me to incorporate results into our Annual Reports which are due to BWSR by April 30.	6/21/2017 9:11 AM
10	It would be nice if they came out sooner	6/21/2017 8:28 AM
11	Simple to understand	6/21/2017 7:21 AM
12	it's a good overview of the lake health	6/21/2017 7:21 AM

### Q3 Indicate how you use the Program's annual lake reports. (Check all that apply.)



Answer Choices	Responses	
Assess lake conditions or water quality.	71.43%	10
To make informed lake management decisions.	28.57%	4
Assess the effectiveness of lake or watershed improvement efforts/activities.	28.57%	4
Assess the effectiveness of storm water best management practices.	7.14%	1
Trend analysis.	64.29%	9
Post information on a public website.	35.71%	5
Include the Program's data and information in publicity available published documents.	35.71%	5
Other (please specify)	0.00%	0
Total Respondents: 14		

## Citizen-Assisted Monitoring Program Survey (Sponsor A)

#	Other (please specify)	Date
	There are no responses.	

**Q4 How helpful do you find the data produced by the Program?**

Answered: 16 Skipped: 1



	Unhelpful	Somewhat Helpful	Very Helpful	Not Applicable	Total	Weighted Average
(no label)	0.00% 0	37.50% 6	62.50% 10	0.00% 0	16	2.63

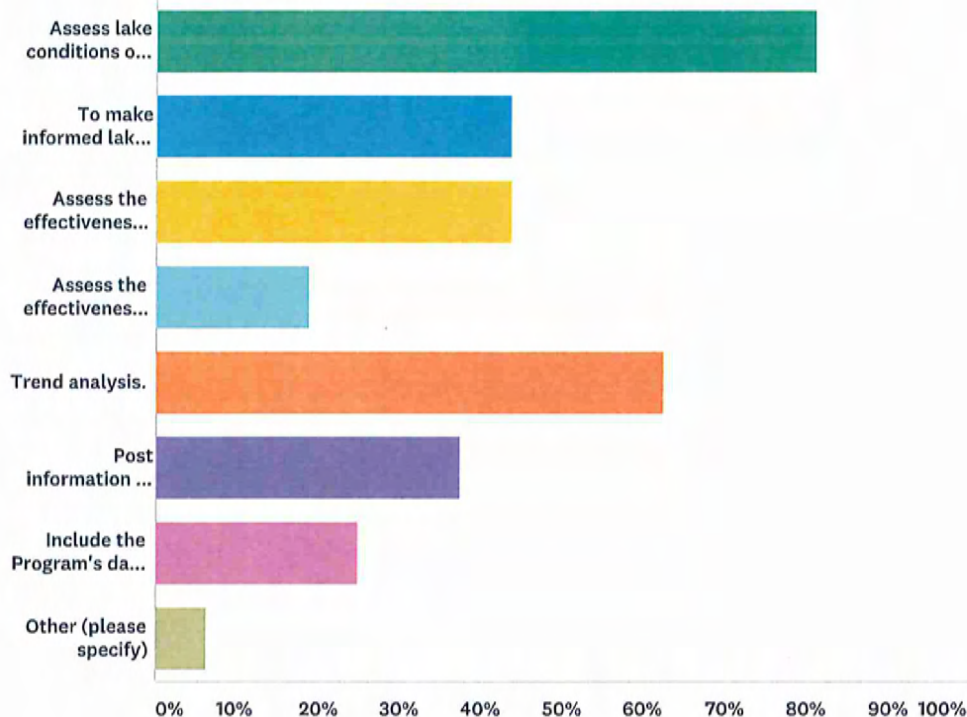
#	Please tell us why you find the data to be Unhelpful, Helpful, or Not Applicable.	Date
1	Very helpful is an over statement but 'helpful' wasn't an option.	6/28/2017 1:37 PM
2	If these were the only data we collected the data would be very helpful. However, we're fortunate to have a robust monitoring program so the CAMP data are used only as supplemental data.	6/21/2017 3:44 PM

**Q5 Indicate how you use the Program's data. (Check all that apply.)**

Answered: 16 Skipped: 1



## Citizen-Assisted Monitoring Program Survey (Sponsor A)



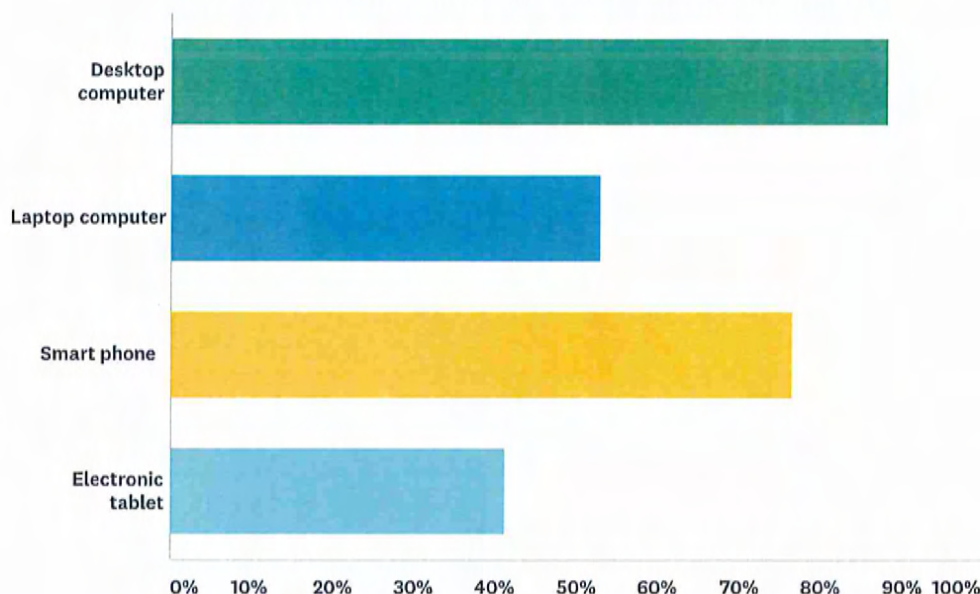
Answer Choices	Responses	
Assess lake conditions or water quality.	81.25%	13
To make informed lake management decisions.	43.75%	7
Assess the effectiveness of lake or watershed improvement efforts/activities.	43.75%	7
Assess the effectiveness of storm water best management practices.	18.75%	3
Trend analysis.	62.50%	10
Post information on a public website.	37.50%	6
Include the Program's data and information in publicity available published documents.	25.00%	4
Other (please specify)	6.25%	1
Total Respondents: 16		

#	Other (please specify)	Date
1	Include the data in our annual report	6/21/2017 2:31 PM

**Q6 Indicate if you have internet access using one or more of the following devices. (Check all that apply.)**

Answered: 17 Skipped: 0

Citizen-Assisted Monitoring Program Survey (Sponsor A)



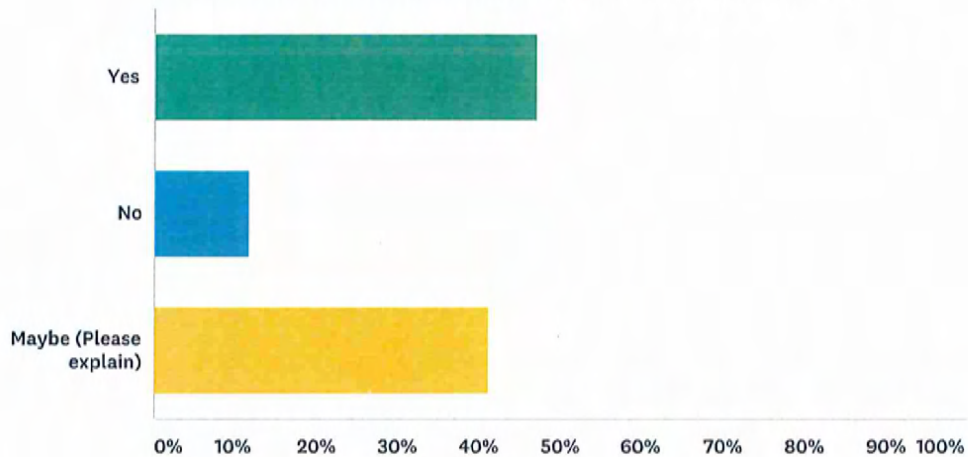
Answer Choices	Responses	
Desktop computer	88.24%	15
Laptop computer	52.94%	9
Smart phone	76.47%	13
Electronic tablet	41.18%	7
Total Respondents: 17		

**Q7** We are considering having volunteers enter field data electronically using a remote technology application rather than submitting paper field data sheets. However, if one or more of your volunteers cannot do this, would you be willing to enter their field data (as recorded on their paper field data sheets) by using at least one of the devices you checked in question 6?

Answered: 17 Skipped: 0



## Citizen-Assisted Monitoring Program Survey (Sponsor A)



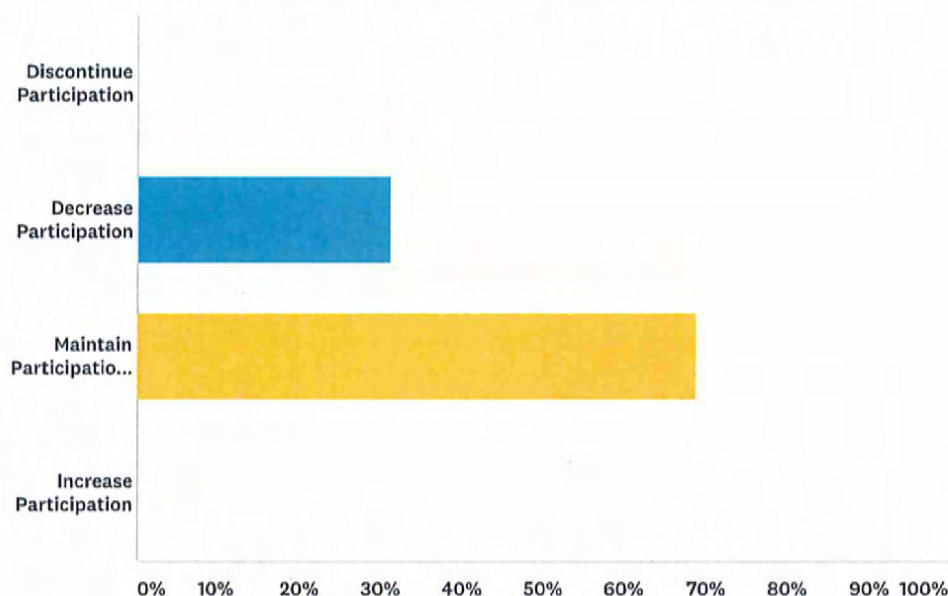
Answer Choices	Responses
Yes	47.06% 8
No	11.76% 2
Maybe (Please explain)	41.18% 7
Total	17

#	Maybe (Please explain)	Date
1	It would depend on the workload.	6/28/2017 1:45 PM
2	depends on time it takes	6/28/2017 1:37 PM
3	Depending on how many man hours it takes yes.	6/27/2017 9:06 AM
4	Depends on the funding from the WMO for time to do data entry	6/26/2017 8:33 AM
5	Depends on how they record field data (neat, concise, typed or written?) How much data?	6/21/2017 1:38 PM
6	depending on complexity / time requirement	6/21/2017 9:01 AM
7	depends on time constraints	6/21/2017 7:21 AM

**Q8 Require sponsors to manage the storage and restocking of their monitoring kits. Sponsors may choose to have their kits stored by their volunteers. Kits will not be stored at Council facilities. The Council will provide and deliver restocking materials to the sponsor.**

Answered: 16 Skipped: 1

## Citizen-Assisted Monitoring Program Survey (Sponsor A)

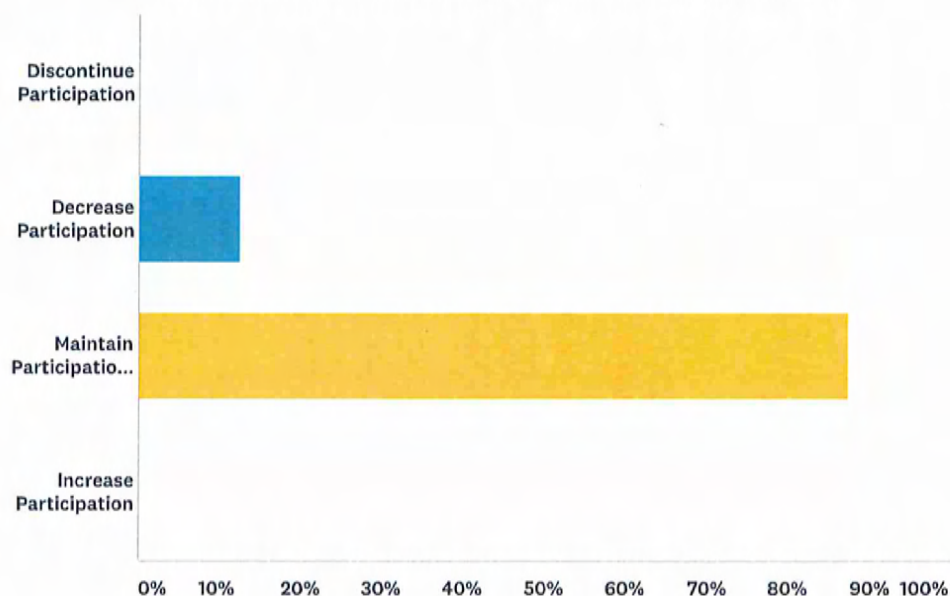


Answer Choices	Responses
Discontinue Participation	0.00% 0
Decrease Participation	31.25% 5
Maintain Participation Level	68.75% 11
Increase Participation	0.00% 0
Total	16

**Q9 Reduce the number of in-person volunteer training sessions from 15 to 4 per year, and add an online training option. Require new volunteers to either attend one of the four training sessions or take the online training.**

Answered: 16 Skipped: 1

## Citizen-Assisted Monitoring Program Survey (Sponsor A)

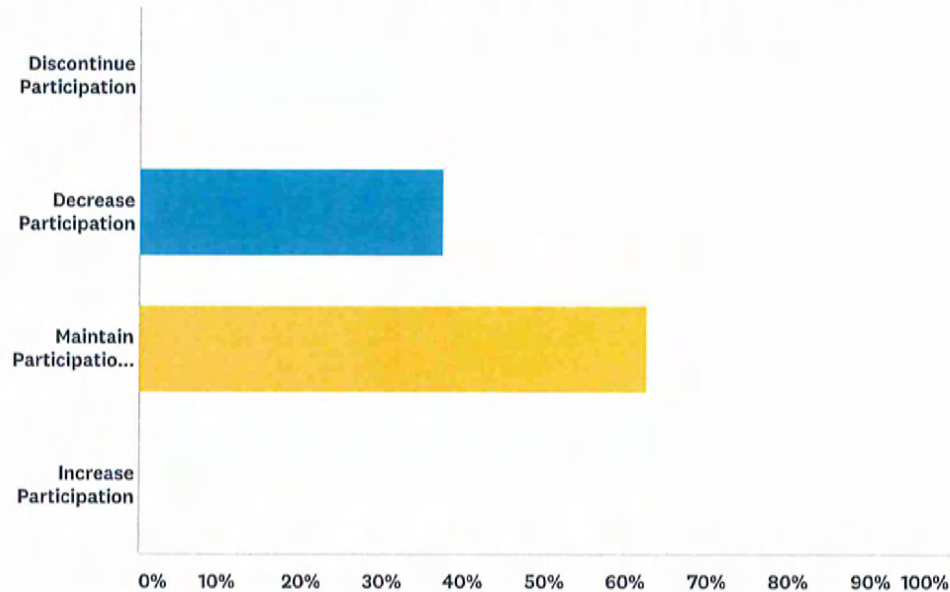


Answer Choices	Responses
Discontinue Participation	0.00% 0
Decrease Participation	12.50% 2
Maintain Participation Level	87.50% 14
Increase Participation	0.00% 0
Total	16

**Q10 Charge a sponsor the participation fee based on the contracted quantity of sampling dates regardless of whether a volunteer monitors their lake site fewer times than the contracted quantity.**

Answered: 16 Skipped: 1

## Citizen-Assisted Monitoring Program Survey (Sponsor A)



Answer Choices	Responses	
Discontinue Participation	0.00%	0
Decrease Participation	37.50%	6
Maintain Participation Level	62.50%	10
Increase Participation	0.00%	0
Total		16

**Q11 Please share any additional comments regarding the Program and proposed changes (what you like, dislike, and improvement ideas).**

Answered: 3 Skipped: 14

#	Responses	Date
1	Data needs to get out by end of year collected. The length of getting data at current timing is beyond ridiculous.	6/28/2017 1:44 PM
2	Update the training manual to include a bulleted protocol that is easy to follow (many volunteers have issues with the current format). List training dates online so that local sponsors know what is happening in their area (and can attend or send interested volunteers to learn more). Online refresher training for repeat volunteers. Improve accessibility to and timeliness of monitoring data and annual reports.	6/26/2017 8:38 AM
3	The program actually works very smoothly for me	6/21/2017 8:30 AM

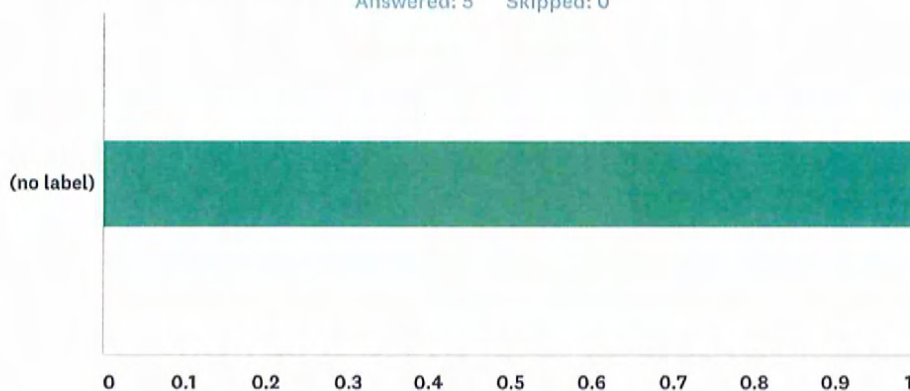




## Citizen-Assisted Monitoring Program Survey (Sponsor B)

# Q1 How satisfied are you with the current Citizen-Assisted Monitoring Program (Program)?

Answered: 5 Skipped: 0



	Very Unsatisfied	Unsatisfied	Somewhat Unsatisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	0.00% 0	0.00% 0	60.00% 3	40.00% 2	5	1.00

## Q2 How helpful do you find the Program's annual lake reports?

Answered: 5 Skipped: 0



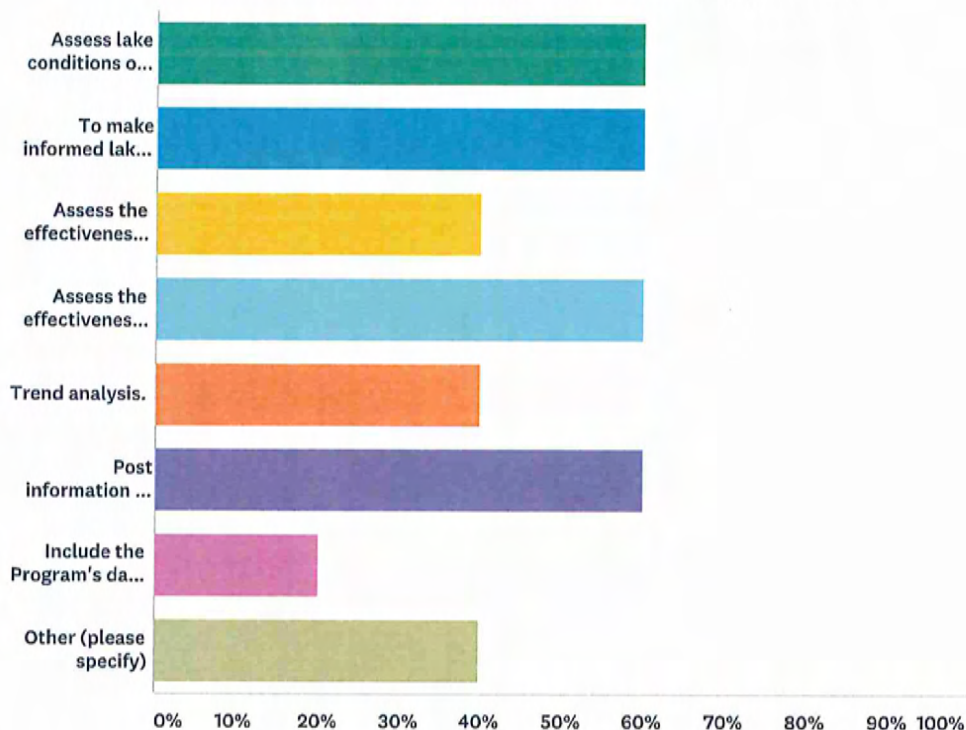
	Unhelpful	Somewhat Helpful	Very Helpful	Not Applicable	Total	Weighted Average
(no label)	20.00% 1	20.00% 1	60.00% 3	0.00% 0	5	2.40

#	Please tell us why you find the reports to be Unhelpful, Helpful, or Not Applicable.	Date
1	Historic data on the lakes is valuable	6/26/2017 11:50 AM
2	The reports come out way to late to adjust the upcoming monitoring year program.	6/21/2017 11:22 AM
3	They provide basic information on the health of the lake	6/21/2017 10:46 AM
4	We generate our own reports, but the CAMP report is beneficial for guidance	6/21/2017 8:18 AM

## Q3 Indicate how you use the Program's annual lake reports. (Check all that apply.)

Answered: 5 Skipped: 0

## Citizen-Assisted Monitoring Program Survey (Sponsor B)



Answer Choices	Responses	
Assess lake conditions or water quality.	60.00%	3
To make informed lake management decisions.	60.00%	3
Assess the effectiveness of lake or watershed improvement efforts/activities.	40.00%	2
Assess the effectiveness of storm water best management practices.	60.00%	3
Trend analysis.	40.00%	2
Post information on a public website.	60.00%	3
Include the Program's data and information in publicity available published documents.	20.00%	1
Other (please specify)	40.00%	2
Total Respondents: 5		

#	Other (please specify)	Date
1	We don't use them at all because they come out way to late. We get the data and do our own analyses and reporting.	6/21/2017 11:22 AM
2	Information provided in an annual lake report for City Council	6/21/2017 10:46 AM

## Q4 How helpful do you find the data produced by the Program?

Answered: 5 Skipped: 0

## Citizen-Assisted Monitoring Program Survey (Sponsor B)

(no label)

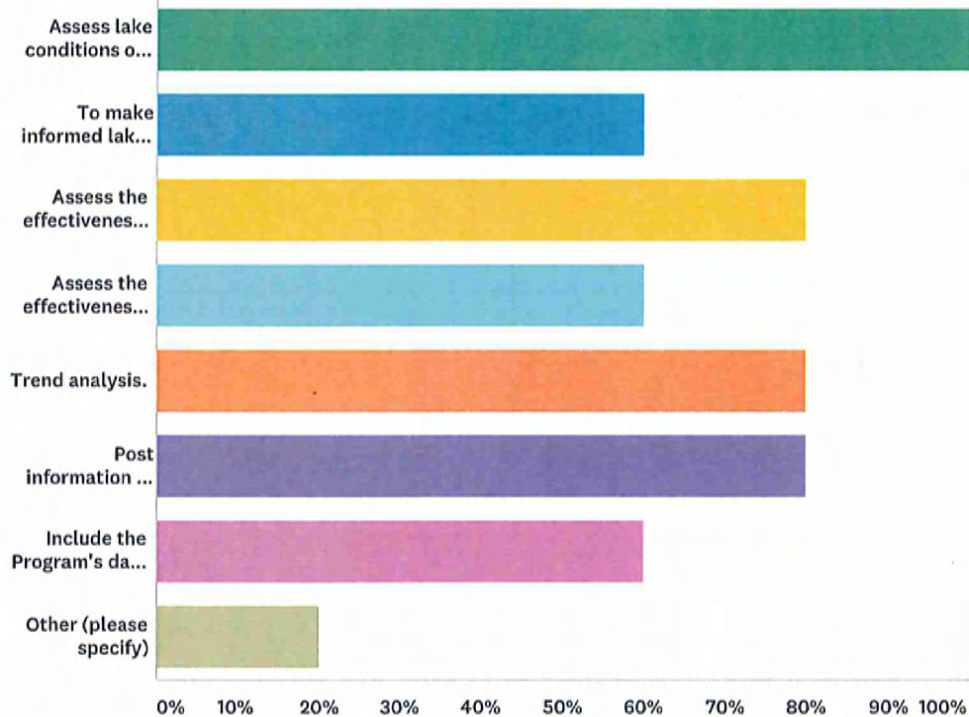
0 1 2 3 4 5 6 7 8 9 10

	Unhelpful	Somewhat Helpful	Very Helpful	Not Applicable	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	100.00% 5	0.00% 0	5	3.00

#	Please tell us why you find the data to be Unhelpful, Helpful, or Not Applicable.	Date
1	Useful to inform residents living adjacent to the lake	6/26/2017 11:50 AM
2	Local watershed districts use the data as an intricate part in their planning and management processes	6/21/2017 8:18 AM

### Q5 Indicate how you use the Program's data. (Check all that apply.)

Answered: 5 Skipped: 0



Answer Choices	Responses
Assess lake conditions or water quality.	100.00% 5

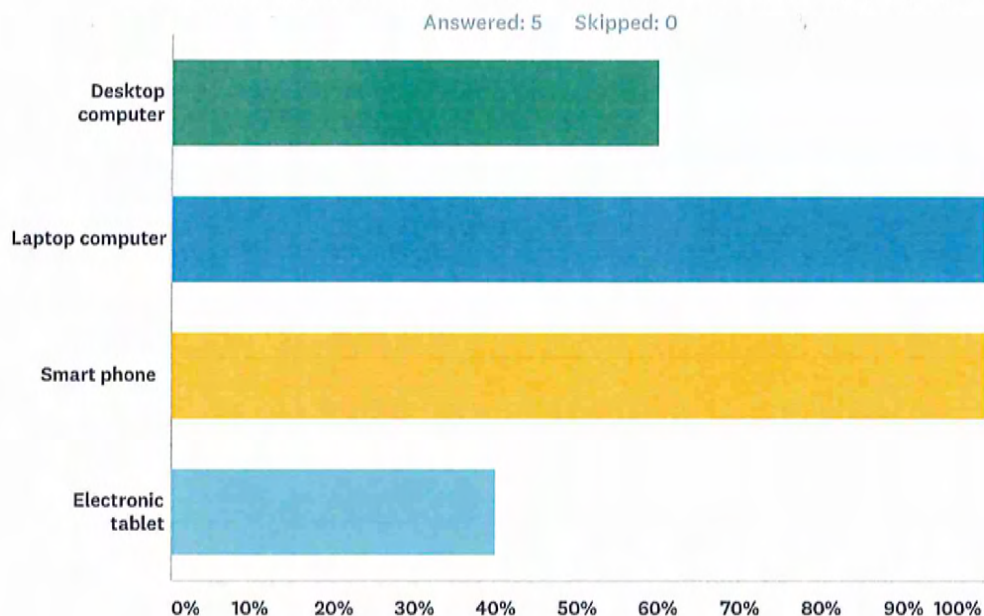


## Citizen-Assisted Monitoring Program Survey (Sponsor B)

To make informed lake management decisions.	60.00%	3
Assess the effectiveness of lake or watershed improvement efforts/activities.	80.00%	4
Assess the effectiveness of storm water best management practices.	60.00%	3
Trend analysis.	80.00%	4
Post information on a public website.	80.00%	4
Include the Program's data and information in publicity available published documents.	60.00%	3
Other (please specify)	20.00%	1
Total Respondents: 5		

#	Other (please specify)	Date
1	Summarized in an annual spreadsheet for local lakes	6/21/2017 10:46 AM

### Q6 Indicate if you have internet access using one or more of the following devices. (Check all that apply.)



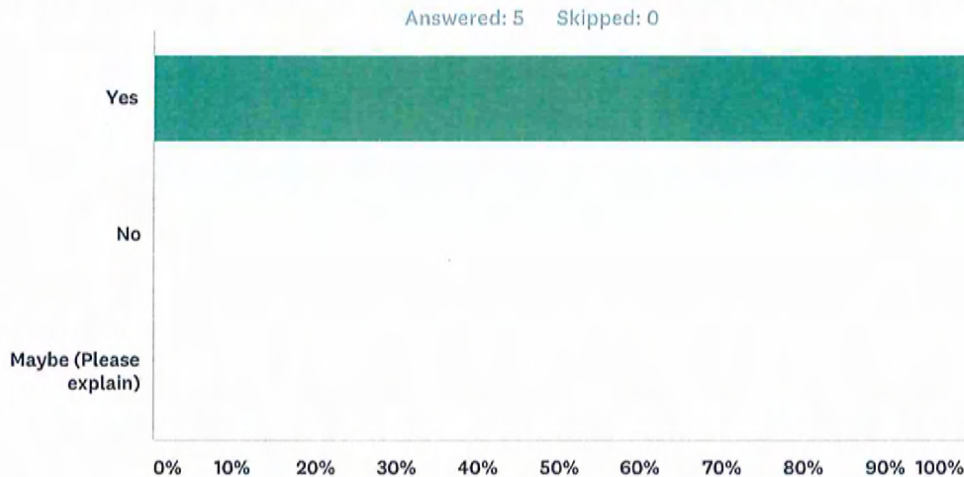
Answer Choices	Responses	
Desktop computer	60.00%	3
Laptop computer	100.00%	5
Smart phone	100.00%	5
Electronic tablet	40.00%	2
Total Respondents: 5		

**Q7 We are considering having volunteers enter field data electronically using a remote technology application rather than submitting paper field data sheets. However, if one or more of**



## Citizen-Assisted Monitoring Program Survey (Sponsor B)

**your volunteers cannot do this, would you be willing to enter their field data (as recorded on their paper field data sheets) by using at least one of the devices you checked in question 6?**



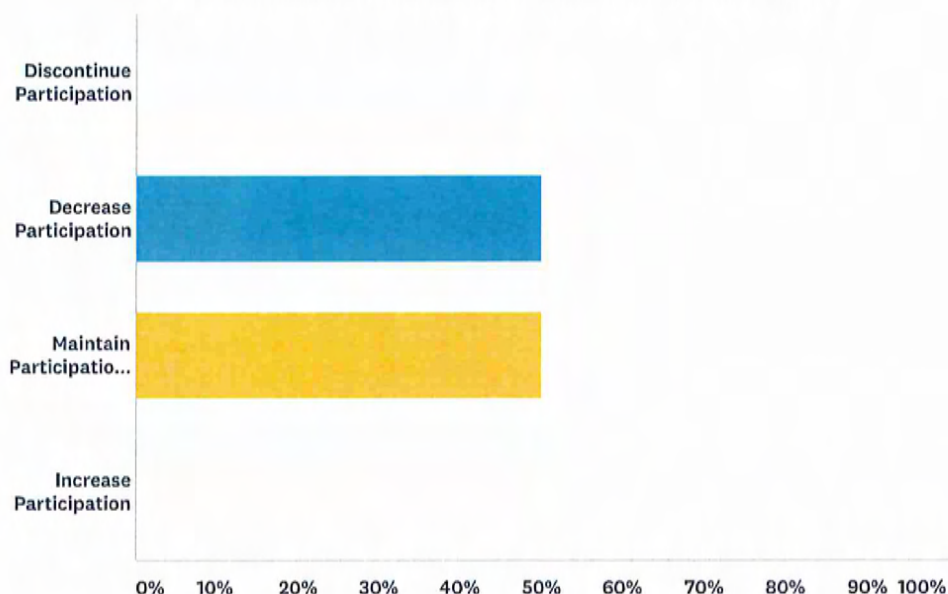
Answer Choices	Responses
Yes	100.00% 5
No	0.00% 0
Maybe (Please explain)	0.00% 0
Total	5

#	Maybe (Please explain)	Date
	There are no responses.	

**Q8 Require sponsors to select and use one central storage and pick up location, of their choosing, for their volunteers' samples and field data sheets. This location could be a Council location. Samples must remain frozen while in delivery and storage.**

Answered: 4 Skipped: 1

## Citizen-Assisted Monitoring Program Survey (Sponsor B)

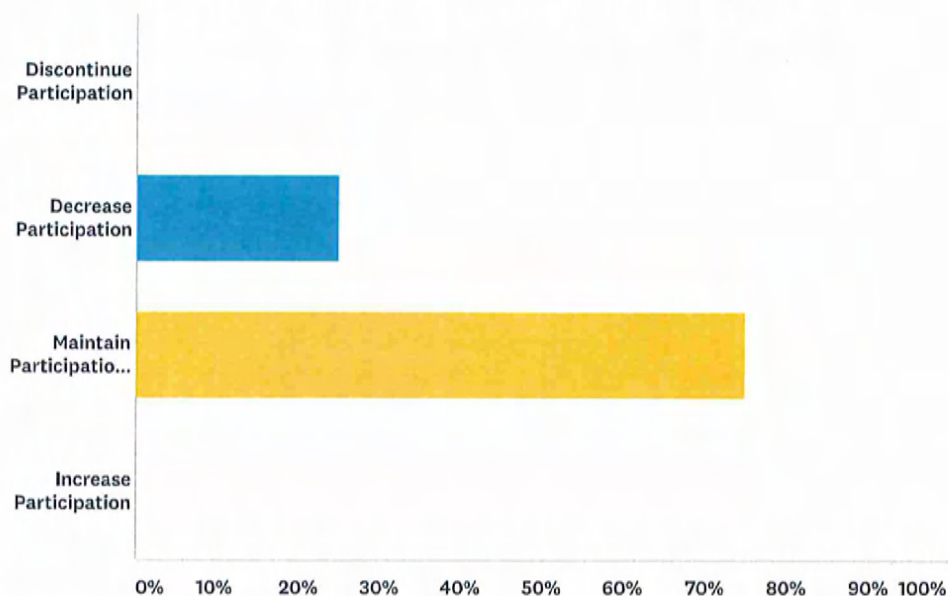


Answer Choices	Responses
Discontinue Participation	0.00% 0
Decrease Participation	50.00% 2
Maintain Participation Level	50.00% 2
Increase Participation	0.00% 0
Total	4

**Q9 Require sponsors to manage the storage and restocking of their monitoring kits. Sponsors may choose to have their kits stored by their volunteers. Kits will not be stored at Council facilities. The Council will provide and deliver restocking materials to the sponsor.**

Answered: 4 Skipped: 1

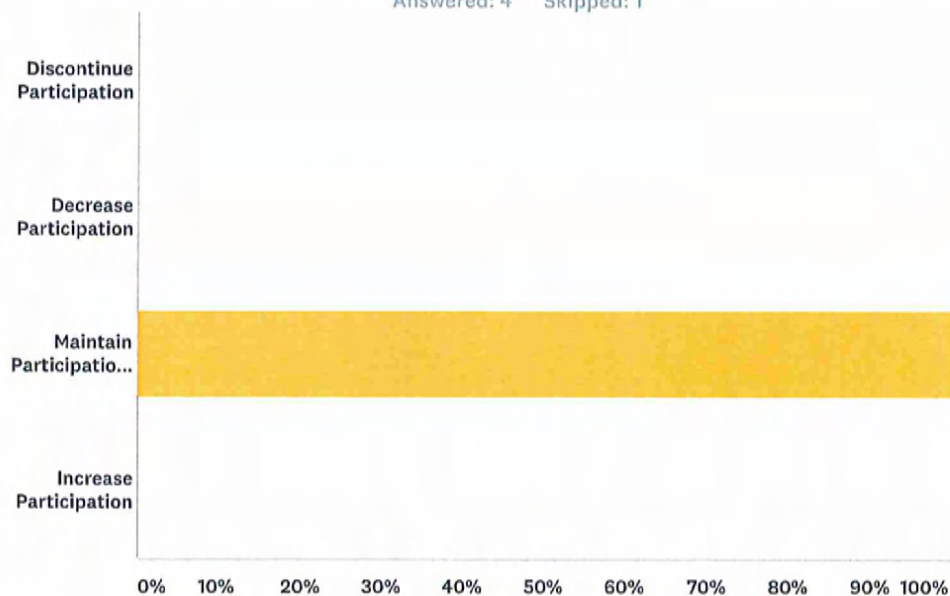
## Citizen-Assisted Monitoring Program Survey (Sponsor B)



Answer Choices	Responses
Discontinue Participation	0.00% 0
Decrease Participation	25.00% 1
Maintain Participation Level	75.00% 3
Increase Participation	0.00% 0
Total	4

### Q10 Require sponsors to deliver the monitoring kits to their volunteers.

Answered: 4 Skipped: 1

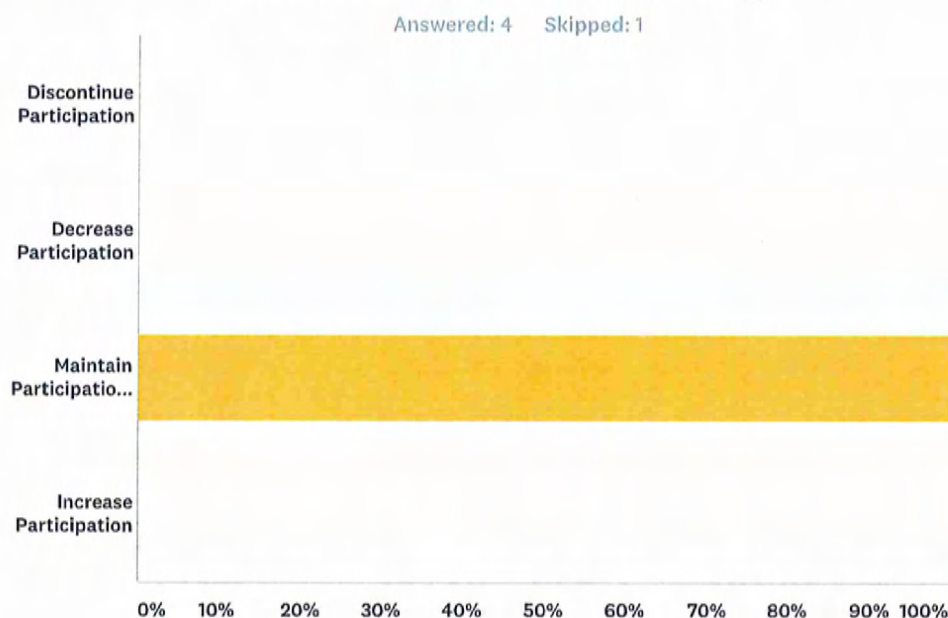


Answer Choices	Responses
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## Citizen-Assisted Monitoring Program Survey (Sponsor B)

Discontinue Participation	0.00%	0
Decrease Participation	0.00%	0
Maintain Participation Level	100.00%	4
Increase Participation	0.00%	0
Total		4

**Q11 Reduce the number of in-person volunteer training sessions from 15 to 4 per year, and add an online training option. Require new volunteers to either attend one of the four training sessions or take the online training.**



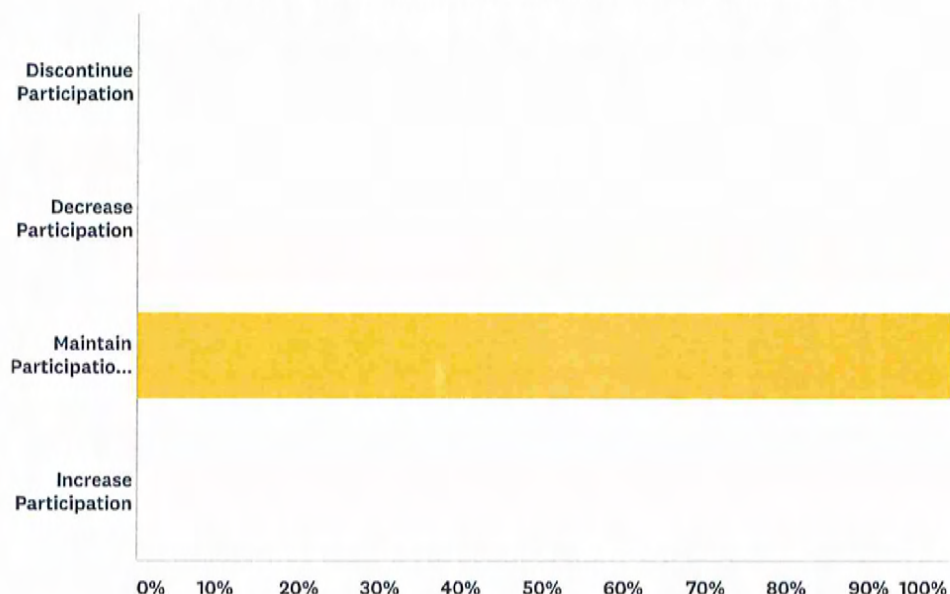
Answer Choices	Responses
Discontinue Participation	0.00% 0
Decrease Participation	0.00% 0
Maintain Participation Level	100.00% 4
Increase Participation	0.00% 0
Total	4

**Q12 Charge a sponsor the participation fee based on the contracted quantity of sampling dates regardless of whether a volunteer monitors their lake site fewer times than the contracted quantity.**

Answered: 4 Skipped: 1



## Citizen-Assisted Monitoring Program Survey (Sponsor B)



Answer Choices	Responses
Discontinue Participation	0.00% 0
Decrease Participation	0.00% 0
Maintain Participation Level	100.00% 4
Increase Participation	0.00% 0
Total	4

**Q13 Please share any additional comments regarding the Program and proposed changes (what you like, dislike, and improvement ideas).**

Answered: 3 Skipped: 2

#	Responses	Date
1	The City of Sunfish Lake would continue the program with any changes but has some concern if the participation fees are increased substantially.	6/26/2017 11:55 AM
2	If #12 is implemented we would want the option for the city to pick up a sampling date. I would prefer a lump sum cost for the summer regardless of number of samples. The Council should determine the best amount to make sure the costs are covered adequately and go from there.	6/21/2017 10:48 AM
3	The program runs pretty smoothly for us and we have the means to handle additional workload that might come with the changes	6/21/2017 8:23 AM

Elm Creek Watershed Management Commission  
Internal Phosphorus Load Control for  
Fish Lake, Hennepin County  
Annual Progress Report  
2017



Submitted  
To



Submitted  
By



## **Fish Lake Alum Treatment Annual Progress Report 2017**

The Fish Lake Alum Treatment project proposed two aluminum sulfate applications on Fish Lake (DNR # 27-118-00). HAB Aquatic Solutions was awarded the contract for the Fish Lake alum treatment. The first alum treatment was performed from September 18th through September 21st of 2017. The on-site mobilization included two 7,000-gallon temporary chemical storage tanks to store liquid aluminum sulfate. Alum was delivered to the site in 5,000 gallon tanker trucks to transfer alum to temporary storage tanks. The storage tanks allowed for the continuous transfer of alum to the treatment barge (Figure 1) at a rate that exceeded the delivered supply from the tanker trucks. The treatment barge had computer that was pre-programed with bathymetry data that adjusted the target alum dosage rate of 80 grams/m<sup>2</sup> based on water depth and travel speed. There was 95,349 gallons of alum applied (22 tanker trucks) to 120 acres of Fish Lake at depths greater than 20 feet (Table 1; Figure 2). HAB Aquatic Solutions provided a map of the actual treatment area (Figure 3). The Fish Lake Area Residents Association (FLARA) scheduled a media event on September 20th with partner representatives from Elm Creek Watershed Commission, City of Maple Grove, Three Rivers Park District and HAB Aquatic Solutions. There were approximately 15 home owners that attended the media event. The CCX news station featured a story about the alum treatment while conducting interviews with local partners and home owners.

Three Rivers Park District and the University of Wisconsin-Stout conducted a study to determine the effectiveness of the alum application in controlling internal phosphorus load. Sediment traps were deployed above the sediment surface in two different locations of Fish Lake (Figure 2) prior to the alum application to determine the Al:P binding capacity ratio. The traps were collected 1 week after the alum application to allow for the complete settling of the alum floc. The samples are currently being analyzed for dry mass, total aluminum, aluminum-bound phosphorus, and the Al:P binding ratio. The sediment trap analysis will be compared with the changes in phosphorus vertical profile before and after the alum application. Preliminary results indicate that the alum application was effective at removing phosphorus as the alum floc settled throughout the water column (Figure 4). These results will be used to estimate the mass of phosphorus sequestered by the alum as it settled throughout the water column.

Three Rivers Park District will monitor the anticipated change in water quality in response to the fall alum treatment performed in 2017. Water samples will be collected bi-weekly at the surface from May through September in 2018. Surface water samples will be analyzed for total phosphorus, soluble reactive phosphorus, total nitrogen, and chlorophyll-a. The water clarity/transparency will also be measured with a secchi disk. The surface water quality constituents will be compared to the MPCA state water quality standards. Water samples will also be collected at the top of the hypolimnion and 1-m from the bottom to estimate the change in hypolimnetic phosphorus due to sediment release during anoxic conditions in 2018.

The hypolimnetic phosphorus analysis results will be compared to laboratory sediment phosphorus release rates. Three Rivers Park District will collect sediment cores in the fall of 2018, and the University of Wisconsin-Stout laboratory will analyze the sediment cores for diffusive phosphorus flux under anaerobic conditions. Sediment chemistry will also be analyzed to estimate the Al:P binding

ratio in the alum floc. These results will be used to estimate the alum dosage for the second alum treatment proposed in 2019.

Table 1: Fish Lake alum treatment application in 2017.

Date	Hours of Application	Alum Applied (gallons)	Area Applied (acres)	Alum Truck Deliveries
9/18/2017	12:35 - 20:25	19,800	50.2	6
9/19/2017	6:55 - 21:00	30,668	77.8	7
9/20/2017	7:40 - 21:35	29,385	74.3	7
9/21/2017	7:35 - 13:05	15,496	39.1	2
Total		95,349	241.4	22

Figure 1: HAB Aquatic Solutions treatment barge used for the Fish Lake alum application in 2017.





Figure 2: Fish Lake alum proposed treatment area and sediment trap location.

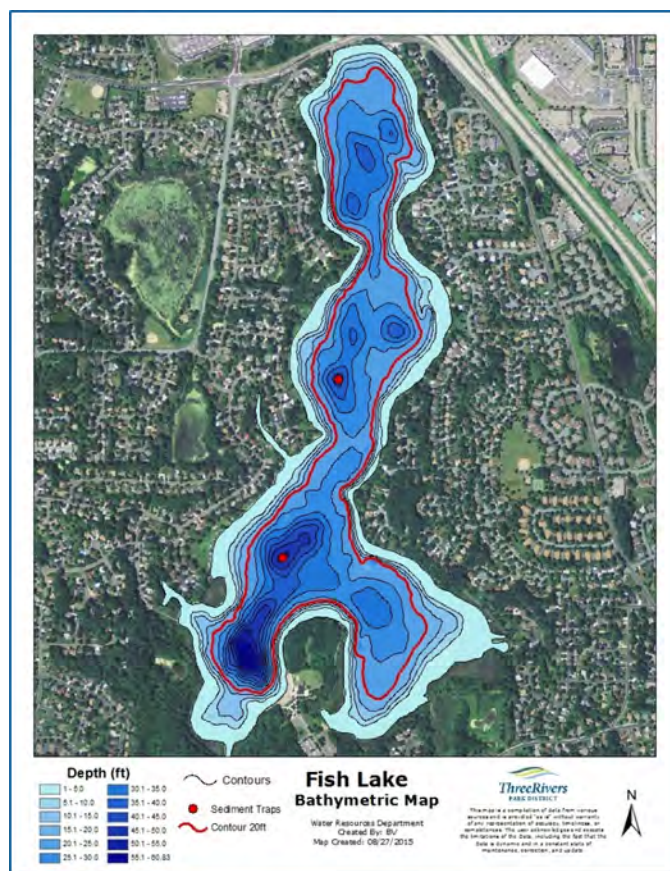


Figure 3: Fish Lake alum application coverage September 18-21, 2017.

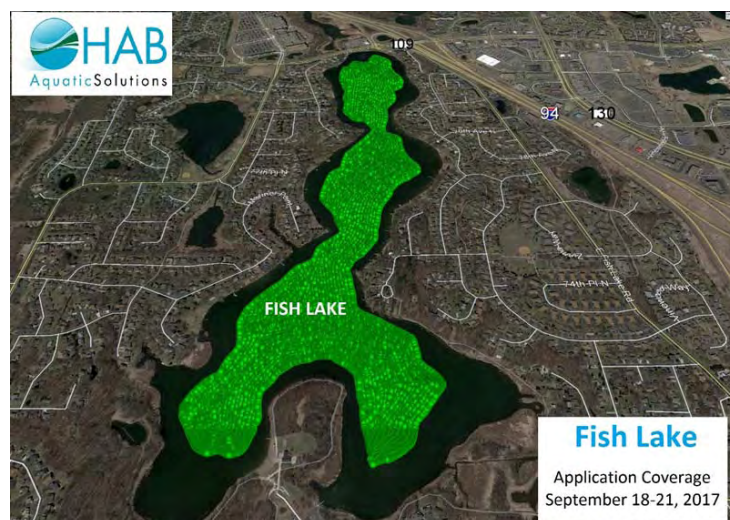
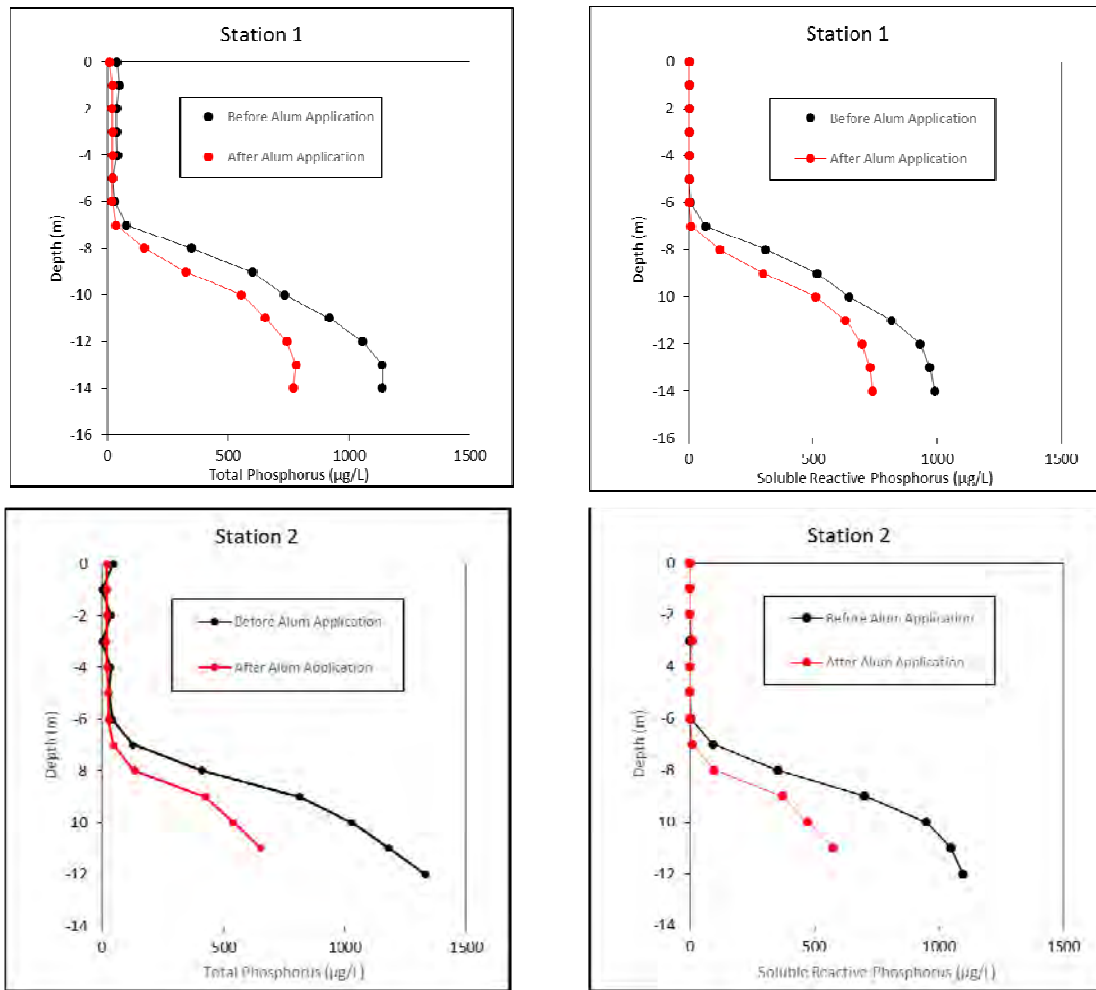


Figure 4: Changes in phosphorus concentrations due to the alum application in September 2017.



# Technical Memo

**To:** Elm Creek WMO Commissioners

**From:** Diane Spector, Wenck Associates, Inc.

**Date:** February 5, 2018

**Subject:** Rush Creek Headwaters SWA Status Report

This report details Rush Creek Headwaters Subwatershed Assessment project progress through January 2018.

**Budget status:**

Budget*	\$56,700.00
Through 12/31/17	\$31,471.30
1/1/18 – 1/31/18	\$7,583.40
Balance	\$17,645.30

\*For Wenck Associates services only, excluding JASS or Hennepin County services

**Activities January 2018**

- Review input from Open House
- Update BMP cost estimates
- Review SWAT model runoff and loading data from Three Rivers to estimate BMP load reductions
- Review modeled BMPs in one management unit, pare them down to priority BMPs, estimate cost and removals
- Prepare report outline

**Expected February-March 2018 Activities:**

- Meet with Core Team to review prioritization scheme and BMP costs and removals (met February 2)
- Meet with TAC in February to review prioritized BMPs (February 14)
- Apply prioritization scheme to the other five management units, estimate cost and removals
- Draft report
- Identify potential focus group participants

**Expected April 2018 Activities:**

- Meet with Core Team to review draft report and identified BMPs
- Meet with TAC in February to review draft report and identified BMPs
- Meet with focus group to review draft report and identified BMPs