elm creek
Watershed Management Commission

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Meeting of Technical Advisory Committee
AGENDA

March 8, 2017

I. Approve Agenda.*

II. Approve Minutes of January 11, 2017 TAC meeting.*

III. Old Business.

A. Model Manure Management Ordinance.*
1. Facilitate transition from agricultural to rural residential land use.
2. What BMPs should be used when animals are present?
3. How are load reduction credits quantified?
4. How will reductions from land conversion be measured?

B. Commission rules pertaining to filtration infiltration and abstraction during stormwater management review. *Staff has requested from the member cities their stormwater ponding, infiltration, filtration, and runoff volume abstraction rules and standards. Responses have been received from the cities of Corcoran, Maple Grove, Medina, Plymouth and Rogers. They have been forwarded to the Commission's technical staff for review and compilation.*
1. City/HOA Operation and maintenance requirements.
   a. Who is responsible for this work in each city
   b. Does it depend on the type of pond
   c. Filtration/Infiltration/Biofiltration standards for each city?
2. Infiltration (if infiltration of the soils is <0.2 " per hour go to credit sequencing?)
   a. Credit Sequencing……How can we determine the hierarchy and be objective?
      1) Buffer, preservation areas, compost amendment (all equal as preference in credit for abstraction) then consider;
      2) Water reuse/irrigation (volume and nutrient credits??)
         a) Volume credit for irrigation? Acceptable model?
         b) Nutrient credit for irrigation?
      3) Biofiltration (volume and nutrient credits??)
         a) Iron enhanced filter credit toward volume abstraction? 0.65" per 1" filtered? 1" per 1" filtered??
         b) Credits for volume abstraction for biofiltration with sand/compost bio-retention soil mix? 0.33" per 1" filtered? 0.5" per 1"???
         c) Nutrient credits for filtering/bio-filtering?
      4) Detachment credit
3. How far does water have to travel over vegetation for an impervious area to be considered detached?
   a. We have been using 75' of grass for sheet flows
   b. And 300' for channel flows.
4. Pre and Post development TSS/TP loads and runoff volume.
   a. Staff is not comfortable with P8
   b. MIDS/NURP for post development ok?

c. ECWMC pre-existing conditions ok?
d. NURP concentrations? Are the following concentrations still acceptable?
1) 450 ppb for residential
2) 600 ppb for commercial/industrial

C. Cost share Policy.
1. *Please refer to the January 11 TAC minutes. Clarification is needed regarding determination of matching funds.*
2. *Per Steve Christopher, BWSR, a Minor Plan amendment will be needed to change this policy in Appendix G of the Third Generation Plan.*

D. Prioritizing special projects other than SWAs.*
Staff circulated a list of criteria via email to TAC members and Commissioners, asking them to prioritize the items. As of March 1 2017, five communities and three technical folks have responded.

IV. New Business.

A. Call for additions/revision to Commission's current CIP. *
As of March 1, 2017, two additions, and one revision to the CIP have been received.

B. Call for 2017 CIPs for consideration for ad valorem funding.

V. Other Business.

a. Next TAC meeting _____.

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Technical Advisory Committee
and Regular Meeting Minutes
January 11, 2017

I. A meeting of the **Technical Advisory Committee (TAC)** for the Elm Creek Watershed Management Commission was convened at 10:05 a.m., Wednesday, January 11, 2017, in the Mayor's Conference Room, Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN.

In attendance were: Todd Tuominen, Champlin; Susan Nelson and Meaghan Watson, Wenck Associates, Corcoran; Rick Lestina and Mark Lahtinen, Maple Grove; Kaci Fisher, Hakanson-Anderson, Medina; Ben Scharenbroich, Plymouth; Andrew Simmons, Rogers; Ali Durgunoğlu, James Kujawa and Kirsten Barta, Hennepin County Dept. of Environment and Energy (HCEE); Rich Brasch, Three Rivers Park District (TRPD); Jeff Weiss, Barr Engineering; Diane Spector, Wenck Associates; and Judie Anderson and Amy Juntunen, JASS.

Not represented: Dayton.

Also present: Doug Baines, Dayton; Elizabeth Weir, Medina; and Fred Moore, Plymouth.

A. Motion by Lestina, second by Scharenbroich to approve the **meeting agenda.*** *Motion carried unanimously.*

B. Motion by Lestina, second by Scharenbroich to approve the **minutes of the October 12, 2016 TAC meeting.*** *Motion carried unanimously.*

C. **Model Manure Management Ordinance.** The Commission's Third Generation Watershed Management Plan states as one of its Water Quality goals:

> *Member cities shall adopt a manure management ordinance using the Commission's model ordinance for guidance, or adopt other standards and practices that will accomplish the objective of reducing phosphorus loading from new livestock operations*.

Currently the Commission does not have a model manure management ordinance. During a previous TAC meeting the members identified the following elements that should be considered when writing such an ordinance:

1. Facilitate transition from agricultural to rural residential land use.
2. What BMPs should be used when animals are present?
3. How are load reduction credits quantified?

Action: Brasch, Kujawa and Barta will work to bring a draft ordinance to the March 8 TAC meeting. Medina's Ordinance will be reviewed for sample language.

D. **Buffer inspection/enforcement requirements.**

The Joint Powers Agreement (JPA) does not give the Commission permission to perform inspections, unless requested by the member cities, and grants the Commission no enforcement authority, excepting when serving as the LGU for the Wetland Conservation Act (WCA). These duties could be assumed by the Commission through a Memorandum of Understanding with each individual city. The Commission's attorney has prepared a draft MoU* apprising the cities that this service is available.

*in meeting packet

Action: Since, under the 2016 State Buffer Law, watershed organizations are not required to enforce its provisions, this item will be set aside for possible future discussion.

[Tuominen arrived 10:30 a.m.]

E. Hy-Vee project in Maple Grove.

At the Commission's November meeting, the developer's engineer requested an interpretation of the Commission's 25-foot average/10-foot minimum requirement for a buffer when a retaining wall is used to minimize wetland impacts. He queried whether the Commission would still require a 10-foot minimum below the retaining wall, thus impacting more wetlands, or would it accept an area to be mitigated elsewhere on the parcel? Spector provided the following:

> This scenario occurs infrequently so it would be rare to call it out in rules and standards. The purpose of a buffer is twofold: 1) prevent encroachment into the wetland and 2) filter runoff. A retaining wall effectively limits encroachment. If there will be minimal sheet flow over the retaining wall into the wetland (and there should be none to minimal for structural reasons) then we'd (Shingle Creek and West Mississippi WMOs) consider limited to no buffer on the top of the wall. If there will be incidental flow down a slope, we'd suggest a minimum 10' native buffer to encourage abstraction. Most importantly, we'd consider it a formal variance from the buffer requirement with findings documenting the unique circumstances.

Action: Following discussion, it was a consensus to request copies of the member cities' wetland buffer rules before continuing this discussion. Staff will request this information from the cities.

F. Measuring phosphorus reductions from land conversion.

This discussion will occur, in part, during consideration of the Model Manure Management Ordinance.

G. Rules pertaining to filtration, infiltration and abstraction.

At the October TAC meeting Staff was directed to draft a comprehensive listing of sequencing guidelines for use during stormwater management review of projects. Staff was directed to Ramsey-Washington Watershed District's Rule C,* which includes more formal sequencing requirements than are outlined in the Elm Creek Commission's rules. It was noted during the discussion that the member cities have differing ponding requirements.

Action: Staff will contact the cities, requesting their pond requirements. Since many cities are in the midst of updating their Local Plans, this process may take a few months. At the same time, Technical Staff will develop a sequencing process for review by the members. Timeframe: 2-3 months.

H. Cost Share Policy.

At the July Commission meeting the Commissioners discussed the Rush Creek Headwaters Subwatershed Assessment (SWA) grant application. Wenck's July 19, 2016* memo was included in the meeting packet for reference. Much of the discussion centered on cooperative funding of the grant. The formula used to request funding for the Rush Creek Headwaters Subwatershed Assessment =

Estimated Project Cost	62,850
Commission Match	12,070
Corcoran Match	500
Grant Request	50,280
Total	62,850

*in meeting packet

It was noted that since the Commission does not have a policy for cost-sharing SWAs or other special projects, this should be a topic for discussion by the TAC. As a starting point, Staff contacted nine other watershed organizations to determine how they fund "special projects." In many cases, projects such as SWAs are funded using the ad valorem process. In all cases, where projects are not funded through the ad valorem process, they are funded out of the general fund with no city match.

Appendix G of the Commission's Third Generation Plan includes the following language (emphasis added):

> Both by itself and also in partnership with member cities the Commission will undertake special studies to target BMP implementation and to perform feasibility analyses to develop grant applications. These special studies will be solicited and identified each year through the budget/CIP review process. Some examples of these are:
>
> TMDL Implementation. The Elm Creek Watershed TMDL implementation actions include a number of strategies that would require additional, more detailed study to identify specific BMPs and their costs and benefits. The Commission will share 50% of the cost of feasibility studies and subwatershed assessments.

Note: In the Pioneer-Sarah Creek watershed two SWAs have been done by the County. The Rush Creek Headwaters SWA grant application was completed by Wenck Associates. The capacity of the County to do this work depends on Staff time and availability and would be performed under separate contract.

At the October TAC meeting the following action was approved: Subwatershed assessments shall be 1) identified in areas outside of the MUSA, 2) be supported by the City in which the SWA is located, 3) be undertaken at the discretion of the Commission, 4) should have a $15,000 maximum cap (grant or Commission funding), and 5) the cost should be shared by the City at a 20% match. [This action will require a minor plan amendment per S. Christopher.] The formula under this scenario would look like this:

Estimated Project Cost	62,850	
A. Commission Match	12,569	D minus C minus B
B. City Match	3,143	D minus C x .20
C. Grant Request	47,138	75% project cost
D. Total	62,850	

NOTE: Staff ran this motion and formula by Diane Spector for verification and she responded:

Under point 4 above – are they proposing to cap the Commission match at $15,000 or the grant request at $15,000 or both? Most grants have a minimum request of $25,000. Also, $15,000 won't get you much of a SWA.

As for the formula, it's actually a bit more complicated. The BWSR requires that the *grant* (*not* the project cost) be matched 25% so there's some math involved. If X = the grant amount, then .25*X = the match amount. (X + .25X) or 1.25X = the project cost. If you know the project cost, then (project cost/1.25)=grant and (project cost-grant)=match. So:

$62,850/1.25 = $50,280 grant

$62,850-$50,280=$12,570 match

Under the proposed policy, that would be split ($12,750*20%=$2,550 Corcoran) and ($12,570-2,550=$10,020 Commission)

So, if the maximum Commission participation is $15,000, which would require a 20% match or $3,000, then the total available match would be $18,000. The maximum grant request would be $72,000 (because $18,000 =.25X so multiply by 4) for a total maximum project cost of $90,000

Other grant sources like 319 define the match as percent of total *project* cost, so I would recommend being more neutral and using language that would establish the Commission contribution cap, require the Commission contribution to be matched, and be silent on how the grant amount is figured, because it will be different depending on the grant source.

*in meeting packet

I. Prioritizing Special Projects

At the October TAC meeting members reviewed criteria identified by the nine WMOs and WDs that were contacted (G, above) for prioritizing **special projects** other than subwatershed assessments. Five additional criteria were added to the list by the members.

Action: Staff will circulate the list via email, asking members to prioritize the 19 items. Staff will also draft minor plan amendment language if necessary. [No amendment required, per S. Christopher.]

J. Capital Improvement Program (CIPs).

The members received Table 4.5* of the Third Generation Plan. It is an updated version of the CIP program as amended on May 11, 2016.

Action: Staff will contact the cities requesting their updates and additions to the CIP. The TAC members will consider projects scheduled for 2017 at their March meeting. Form Exhibit A* was also included in the packet and should be used by the cities to submit their updates/additions.

K. Adjournment.

The meeting of the Technical Advisory Committee of the Elm Creek Watershed Management Commission was adjourned at 11:31 a.m. The next meeting of the TAC will be convened on March 8, 2017.

II. A regular meeting of the Elm Creek Watershed Management Commission was called to order at 11:41 a.m., Wednesday, January 11, 2017, in the Mayor's Conference Room, Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN by Chairman Doug Baines.

Present were: Bill Walraven, Champlin; Doug Baines, Dayton; Joe Trainor, Maple Grove; Elizabeth Weir, Medina; Fred Moore, Plymouth; Kevin Jullie, Rogers; Ali Durgunoğlu, James Kujawa and Kirsten Barta, Hennepin County Dept. of Environment and Energy (HCEE); Rich Brasch, Three Rivers Park District (TRPD); Jeff Weiss, Barr Engineering; and Judie Anderson and Amy Juntunen, JASS.

Not represented: Corcoran.

Also present: Todd Tuominen, Champlin; Mark Lahtinen, Maple Grove; Lisa Vertelney and Ben Scharenbroich, Plymouth; Andrew Simmons, Rogers; and Dan Parks, Westwood Professional Services, for project 2016-047.

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

B. Motion by Walraven, second by Weir to approve the **minutes*** of the December 14, 2016 regular meeting. *Motion carried unanimously.*

C. Motion by Moore, second by Walraven to approve the **January Treasurer's Report and Claims*** totaling $13,336.82. *Motion carried unanimously.*

D. Open Forum.

No one wished to speak to items not on the agenda.

E. Action Items.

1. Project Review 2016-005W Ravinia Wetland Bank, Corcoran. In February, a Wetland Banking Concept Plan was submitted for Phase II of the Ravinia Development. The plan has since

*in meeting packet

been withdrawn in favor of an onsite wetland replacement plan. Wetland impacts from the final phases of this development will be 1.17 acres. The applicant is proposing to restore, enhance and create 3.3 acres of wetland credits and 1.24 acres of upland buffer credits on site. The original wetland delineation was approved by the LGU on September 9, 2013. The project was noticed per MN WCA requirements on August 27. Comments were accepted until September 30, 2016. A TEP was held on the replacement plan on October 3. The TEP and applicant agreed to revise the plan so wetland restoration and creation were limited on one basin for a better wetland. A revised wetland permit application was received on November 28, 2016 and Staff issued the Notice of Application on December 1, 2016, with the comment period closing on December 30, 2016. In their findings dated January 10, 2017, Staff recommended approval pending five conditions. Motion by Moore, second by Weir to approve Staff's recommendations. *Motion carried unanimously.* Staff will work with the Commission's attorney to assure fulfillment of the condition pertaining to the letter of credit.

2. Project Review 2016-047 HyVee Maple Grove #1. 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 (just south of future Highway 610) for the purpose of constructing a grocery store, fuel station, convenience store and parking facilities. The applicant's engineer was present at the November meeting to have preliminary discussions regarding the use of retaining walls to minimize wetland impacts on the site. Discussion included enhancing the low quality wetlands, particularly the wetland in the southwest corner of the site, to mitigate total disturbances. The engineer was requesting interpretation from the Commission on their 25' average and 10' minimum standard for a buffer when a retaining wall is used to minimize wetland impacts. The Commission felt there had to be some type of mitigating compensation for such a scenario, but could not provide specifics on this site plan since it had not been submitted for review to the Commission and the LGU had not yet approved a wetland replacement or buffer plan.

A complete plan was submitted on December 1, 2016. Staff findings dated January 10, 2017, recommends approval of this project subject to a) receipt, approval, and recordation of an Operations and Maintenance Plan for the pond and the iron-enhanced filtration system, b) revisions for items relating to buffer requirements and erosion and sediment control as enumerated in the findings, and c) receipt of a signed and dated final plan set. Motion by Moore, second by Walraven to approve Staff's recommendations with the further requirement that the Commission receive and comment on a WCA impact notice. *Motion carried unanimously.*

F. Watershed Management Plan. The members received Table 4.5* of the Third Generation Plan. It is an updated version of the **Capital Improvement Program (CIP)** as amended on May 11, 2016. Staff will contact the cities requesting their updates and additions to the CIP. Form *Exhibit A** was also included in the meeting packet for use by the cities in submitting their updates/additions. The Technical Advisory Committee (TAC) will consider projects scheduled for 2017 at their March meeting.

G. Elm Creek Watershedwide TMDL. The MPCA has completed its informal review of both the TMDL and the WRAPS. The TMDL is still being reviewed by the EPA. The informal Stakeholder review will begin next week and extend for a period of 30 days. Both documents will be uploaded to the MPCA and Commission websites.

H. New Business.

I. Communications.

J. Education.

1. Planting for Clean Water Project. The *Planting for Clean Water and Pollinators* "Big Project" is underway. To help promote the Planting for Clean Water message, the West Metro Water Alliance (WMWA) is organizing opportunities for native plant sales at various city events around the watersheds. At the

*in meeting packet

January 10, 2017 WMWA meeting, the group narrowed the list of potential events/sites to the following, although more could be added.

Plymouth Home Expo	Champlin Father Hennepin Days
Brooklyn Park Farmers Market	New Hope City Days (or the Farmers market)
St Louis Park Parktacular	Camden (Minneapolis) Farmers Market
Golden Valley Days	Medina City Festival
Maple Grove Farmers Market	a Metro Blooms Workshop

More information is available on the campaign website http://www.bluethumb.org/pledge

2. **Educators.** More than 2,850 students were served in 2016, including about 200 students in the MWMO under a subagreement. The three educators are now scheduling spring visits and evaluating interest in a 6th grade follow up lesson. Complete metrics will be included in WMWA's *2016 Annual Report.*

3. The **next WMWA meeting** is scheduled for 8:30 a.m., Tuesday, February 14, 2017, at Plymouth City Hall. Commissioners are encouraged to attend.

K. **Grant Opportunities.**

1. The Board of Water and Soil Resources (BWSR) has approved Clean Water Grant funding for the **Internal Phosphorus Loading Control in Fish Lake project** in the amount of $200,000. The Commission will serve as the fiscal agent, Three Rivers Park District will undertake the bidding process.

2. BSWR has also approved Accelerated Implementation Grant funding for the **Rush Creek Headwaters Subwatershed Assessment project** in the amount of $50,280. Motion by Trainor, second by Weir to contract with Wenck Associates for this project. *Motion carried unanimously.*

3. Deadline for applications for **Hennepin County AIS Prevention Grants** is January 20, 2017. TRPD indicated they will be submitting a number of applications.

L. **Other Business.**

1. **Commissioner/Alternate appointments are due.**

2. Hearing no further nominations, motion by Moore, second by Jullie to **nominate the current officers for 2017.** *Motion carried unanimously.* Election of officers will take place at the March 8, 2017 meeting.

3. The **biennial solicitation of interest proposals** for administrative, legal, technical and wetland consultants will be published in the January 17 edition of the *State Register.* Responses are due February 1, 2017.

M. 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. 2015-006 Veit Building and Parking Lot Addition, Rogers.
5. 2015-013 Wayzata High School, Plymouth.
6. 2015-020 Strehler Estates, Corcoran.
7. 2015-030 Kiddiegarten Child Care Center, Maple Grove.
8. 2016-002 The Markets at Rush Creek, Maple Grove.
9. 2016-004 Park Place Storage Site Plans, Corcoran.
10. 2016-005W Ravinia Wetland Bank, Corcoran.

*in meeting packet

11. 2016-014 Balsam Apartments, Dayton.
12. 2016-018 Cambridge Park, Maple Grove.
13. 2016-019 Just for Kix, Medina.
14. 2016-021 Diamond View Estates, Dayton.
15. 2016-022 AutoZone, Maple Grove.
16. 2016-026 Faithbrook Church, Dayton.*
17. 2016-038 AutoMotorPlex, Medina.
18. 2016-039 Fields at Meadow Ridge, Plymouth.
19. 2016-040 Kinghorn 4th Addition, Rogers.
20. 2016-041 Bartus Subdivision, Plymouth,
21. 2016-045W Brothers Mini Storage Wetland Replacement Plan, Corcoran.
22. 2016-047 Hy-Vee Maple Grove #1, Maple Grove.
23. 2016-049 Medina Senior Living, Medina.
24. 2016-050 Southeast Rogers AUAR.
25. 2016-051 Grove Circle Medical Office Building, Maple Grove.
26. 2016-052 The Woods at Rush Creek, Maple Grove.

N. Adjournment. There being no further business, motion by Walraven, second by Weir to adjourn. *Motion carried unanimously.* The meeting was adjourned at 12:51 p.m.

Respectfully submitted,

Recording Secretary
JAA:tim
Z:\Elm Creek\Meetings\Meetings 2017\01 Reg and TAC Meeting Minutes.docx

*in meeting packet

Pioneer-Sarah Creek Watershed Management Commission
Livestock Management Policy

1. The primary goal of this policy is to reduce phosphorus runoff from livestock-associated facilities.

2. This policy applies to new facilities or the expansion of existing facilities based on the City's Conditional Use Permit (CUP) provisions for livestock.

3. Feedlots and manure storage areas are prohibited within the shoreland of any lake, perennial stream, intermittent stream, or protected wetland without a CUP.

a. In the case of feedlots and manure storage areas for which a CUP is required, the CUP shall only be issued if a Nutrient and Management Plan (NMP) specific to that operation, and which has been prepared and implemented within the timeframe specified by the City, is in place.

b. The NMP must meet the standards of the University of Minnesota Extension Service or the United States Department of Agriculture Natural Resources and Conservation Services (NRCS).

4. Definitions.

a. Animal Density. Allowable animal density shall be based on the net area of the parcel that can be grazed in its entirety. This area excludes wetlands, woodland, farmsteads, feedlots, parking lots, and other areas where grazing cannot or should not occur.

b. Animal Feedlot. A lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising or holding of animals and specifically designed as a confinement area in which manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. Open lots used for the feeding and rearing of poultry (poultry ranges) shall be considered to be animal feedlots. Manure storage areas off the site of the feedlot are considered as feedlots.

c. Animal Unit. The definition of "animal unit" shall be determined by the City. The City may also refer to Minnesota Rules part 7020.0300.

d. Conditional use. Land use or development as defined by ordinance that would not be appropriate generally but may be allowed with appropriate restrictions as provided by official controls upon a finding that certain conditions as detailed in the zoning ordinance exist, the use or development conforms to the comprehensive land use plan of the community, and the use is compatible with the existing neighborhood.

e. Manure storage facility. Any site or area specifically designed and/or constructed for the purpose of storage or holding of animal waste and manure. This includes any storage facility previously designed and installed meeting the NRCS Technical Guidelines current at the time of installation, any commercial-prefabricated storage facility, concrete slabs, earthen dugouts, dikes or any other area intended for the storage of animal manure, no matter how small that accumulation may be or how long the manure may be stored.

f. Pasture - Areas where grass or other growing plants are used for grazing and where the concentration of animals is such that a vegetative cover is maintained during the growing season except in the immediate vicinity of temporary supplemental feeding or watering devices. Those areas of supplemental feeding or watering devices within a pasture do not constitute a feedlot.

g. Shoreland. Land located within 1,000 feet from the ordinary high water level of a lake, pond, or flowage; 300 feet from a river or stream; or the landward extent of a floodplain designated by ordinance on a river or stream, whichever is greater.

ECWMC Member Community Wetland Buffer Comparison

Member City / Wetland Ranking	Champlin		Corcoran		Dayton		Maple Grove		Medina		Plymouth		Rogers		Elm Creek WMC	
	Min.	Ave.	Min.	Ave.	Min.	Ave.	Min.	Ave.	Min.	Ave.	Min.	Ave.	Min.	Ave.	Min.	Ave.
Preserve/ Exceptional	67	75	-	-	40	50	-	-	30	50	50	75	-	-	-	-
High/ Manage 1	34	40	20	25	30	40	25	40	20	30	40	50	25	40	10	25
Medium/ Manage 2	24	30	10	15	20	30	10	-	20	25	10	30	10	-	10	25
Low/ Manage 3	16	20	5	10	20	20	10	-	15	20	10	25	10	-	10	25

Does not meet ECWMC rule

Z:\Elm Creek\Buffers\Member community buffer comparison table.docx

At the October Elm Creek TAC meeting members reviewed criteria identified by nine neighboring WMOs and WDs for prioritizing **special projects** other than subwatershed assessments. Five additional criteria were added to the list by the members at the January TAC meeting. The criteria are shown in the table below.Staff was directed to circulate the list of criteria via email, asking members to prioritize the items. Staff has also been in contact with Steve Christopher at BWSR who indicated no plan amendment would be required to incorporate the results of this task. Please complete and return the list to the administrative office by **Friday. February 17**. The TAC members will review the responses at their March 8 meeting. As of March 1, 2017:

Comments	Criterion	**A** Very important ④	**B** Important ③	**C** Of Medium Importance ②	**D** Not Important ①	**E** Should not be considered ⓪	**F** Ranking (highest no. in red being most important)
See Note A	Load reductions	R,T,P,ME,K ⑤	D,W,MG ③				R1,W7,T2,MG4,K2 **(29)**
	Grant opportunity/eligibility	D,T,ME ③	R,W,MG,P,K ⑤				R4,W6,T4,MG3,K7 **(27)**
	TMDL related	D, W,P, ,K ④	T,MG, ME ③	R ①			R8,W3,T6,MG5,K3 **(27)**
See Note A	Total project cost	T,MG ②	R,W,ME ③	D,P,K ③			R2,W8,T3,MG1,K9 **(23)**
P: these two are duplicative	Protects natural resource	T,P,K ③	D,W, ME ③		MG ①	R ①	R17,W5,T1,MG14,K4 **(22)**
	Protects high quality resource	W,P ②	T,ME,K ③	R,MG ②	D ①		R16,W1,T5,MG8,K6 **(22)**
	In city's CIP		T,W,MG,P,ME⑤	D, R,K ③			R10,W10,T10,MG6, **(21)**
	Multiple benefits	W ①	R,ME,K ③	D,T,MG,P ④			R3,W4,T17,MG7,K5 **(21)**
	Goes beyond city management activities	MG ①	R,T,W,P,K ⑤		ME ①	D ①	R7,W11,T8,MG2,K7 **(20)**
	Location in watershed	D ①	R, W,K ③	T,MG,P ③	ME ①		R6,T16,MG9, **(20)**
	Included in Comm. operating budget	D ①	T,W ②	R,MG,ME,K ④	P ①		R11,W9,T9,MG11, **(19)**
	Result of regulatory mandate.	W ①	D,T,P ③	ME ①	MG, R ②	K ①	R14,W2,T7,MG15, **(17)**
See Note A	Total impacted area		R,T,ME ③	D,P,K ③	W,MG ②		R5,W15,T11,MG12,K10 **(17)**
See Note A	No. of impacted cities		ME ①	R,T,MG,P,K ⑤	D,W ②		R9,W14,T12,MG10, **(15)**
	City request (not on CIP)	K ①		T,W,P,ME ④	R,MG ②	D ①	R15,W13,T15,MG17,K1 **(14)**
	Timing of project		ME ①	R,T,W,P,K ⑤	MG ①	D ①	R12,W12,T13,MG13, **(14)**
	On Comm-derived schedule		T ①	D,R,ME,K ④	W,MG ②	P ①	R13,W16,T14,MG16, **(13)**
	Note A: W: Cost per lbs. of load reduction is very important						

A=ALI DURGNOGLU; CH=CHAMPLIN; CO=CORCORAN; D=DAYTON; K= KUJAWA; MG=MAPLE GROVE; ME=MEDINA; P=PLYMOUTH; R=ROGERS; T=TRPD; W=WEISS

Table 4.5. Elm Creek Third Generation Plan Capital Improvement Program

Description	Location	Priority	Est Proj Cost	Partners	Funding Source(s)	Estimated Commission Cost					
						2015	2016	2017	2018	2019	2020-2024
Special Studies											
TMDL implementation special study	Watershed	H	225,000	Cities, HCEED	Operating budget	0	25,000	25,000	25,000	25,000	125,000
Stream segment prioritization	Watershed	H	20,000	Cities, HCEED, TRPD	Operating budget	10,000	0	0	0	10,000	0
High Priority Stream Restoration Projects				Cities, TRPD	Cities, TRPD, county levy, grants						
Elm Cr Reach E	Plymouth	H	1,086,000	Commission, Plymouth	County Levy	250,000	Levied in 2015				
CIP-2016-RO-01 Fox Cr, Creekview	Rogers	H	321,250			0	80,312	0	0	0	0
Mississippi Point Park Riverbank Repair	Champlin	M	300,000			0	75,000	0	0	0	0
Elm Creek Dam	Champlin	H	7,001,220			0	187,500	0	0	0	0
Tree Thinning and Bank Stabilization Project	Watershed	H	50,000			0		50,000	50,000	50,000	250,000
Fox Cr, Hyacinth	Rogers	M	360,000			0	0	90,000	0	0	0
Fox Cr, South Pointe, Rogers	Rogers	M	90,000			0	0	22,500	0	0	0
Other High Priority Stream Project	Watershed	H	500,000			0	0	0	125,000	125,000	250,000
CIP-2016-MG-02 Rush Creek Main	Maple Grove		1,650,000				75,000	75,000	75,000	25,000	
CIP-2016-MG-03 Rush Creek South	Maple Grove		675,000						168,750		
CIP-2017-PL-01 EC Stream Restoration Reach D	Plymouth		850,000	City, County, Comm	City, County, Comm				212,500		
High Priority Wetland Improvements				Cities	Cities, Commission						
DNR #27-0437	Maple Grove	L	75,000			0	0	0	0	0	18,750
Stone's Throw Wetland	Corcoran	M	450,000			0	0	~~112,500~~	112,500	0	0
Other High Priority Wetland Projects	Watershed	L	100,000			0	0	0	0	0	25,000
CIP-2016-MG-01 Ranchview Wetland Restoration	Maple Grove		2,000,000					250,000			
Lake TMDL Implementation Projects				Cities, lake assns.	Cities, Comm, grants, owners						
Mill Pond Fishery and Habitat Restoration	Champlin	H	5,000,000			0	0	250,000	0	0	0
Other Priority Lake Internal Load Projects	Watershed	M	100,000			0	0	0	0	0	25,000
CIP-2016-MG-04 Fish Lake Alum Treatment-Phase 1	Maple Grove	H	300,000	City, TPRD, Comm, lake assn	City, TRPD, grants, Comm, county levy, lake assn		75,000				
Stonebridge	Maple Grove	M	200,000			0		50,000	0	0	0
Rain Garden at Independence Avenue	Champlin	L	300,000			0		75,000	0	0	0
CIP-2016-CH-01 Mill Pond Rain Gardens	Champlin	M	400,000			0	0		100,000	0	0
Other Priority Urban BMP Projects	Watershed	L	200,000			0	0	0	0	0	50,000
Other											
Livestock Exclus, Buffer & Stabilized Access	Watershed	M	50,000	Cities, owners, U Extension, NRCS	Cities, owners, Comm, NRCS	0	0	0	50,000	0	50,000
Agricultural BMPs Cost Share	Watershed	H	50,000	Cities, owners, U Extension, NRCS	Cities, owners, Comm, NRCS	0		50,000	50,000	50,000	100,000
~~CIP-2016-RO-04~~ CIP-2017-RO-1 Ag BMPs	Rogers		300,000	City, Comm	City, Comm, BWSR				75,000		
CIP-2016-RO-03 Downtown Pond Exp & Reuse	Rogers		406,000						101,500		
Hydrologic & Hydraulic Modeling	Watershed	L	25,000	HCEE	Commission	0	0	0	25,000	0	0
Fourth Generation Plan	Watershed	L	70,000		Commission	0	0	0	0	0	$70,000
TOTAL STUDIES			245,000		**COMM SHARE TOTAL STUDIES**	**10,000**	**25,000**	**25,000**	**25,000**	**35,000**	**125,000**
TOTAL CIPS			~~21,759,470~~		**COMM SHARE TOTAL CIPS**	**$ 250,000**	**$ 492,812**	**~~$ 1,025,000~~**	**~~$ 576,500~~**	**$ 250,000**	**$ 838,750**
			22,909,470					**$ 912,500**	**$ 1,145,250**		

Table A – Updates to CIP March 8, 2017							
Description	**New Revised Existing**	**Est Project Cost**	**2016**	**2017**	**2018**	**2019**	**2020-2024**
Fox Creek at Creekview Restoration Project, Rogers	R	~~150,000~~ 321,250	~~$37,500~~ $80,312				
Mississippi Pointe Park Riverbank Repair, Champlin	E	300,000	$75,000				
Elm Creek Dam Miss River Shoreline Restoration, Champlin	E	7,001,220	$187,500				
Fish Lake Alum Treatment Phase 1, Maple Grove	N	300,000	$75,000				
Rush Creek Main Stem Restoration, Maple Grove	N	1,650,000	$75,000	$75,000	$75,000	$25,000	
Fox Creek at Hyacinth, Rogers	E	360,000		90,000			
Fox Creek at South Pointe, Rogers	E	90,000		22,500			
Other High Priority Stream Project – PLACEHOLDER	E	500,000			125,000	125,000	250,000
Tree Thinning and Bank Stabilization Project	E	50,000	*anually*	50,000	50,000	50,000	250,000
Rush Creek South Stem Restoration, Maple Grove	E	675,000			168,750		
Elm Creek Restoration, Reach D, Plymouth	N	850,000			212,500		
DNR Wetland 27-0437	E	75,000					18,750
Other Priority Wetland Projects	E	100,000					25,000
Stone's Throw Wetland, Corcoran	R	450,000			112,500		
Ranchview Wetland Restoration, Maple Grove	E	2,000,000		250,000			
Mill Pond Fishery & Habitat Restoration, Champlin	E	5,000,000		250,000			
Stonebridge Storm Sewer Retrofit, Maple Grove	E	200,000		50,000			
Rain Garden at Independence Avenue, Champlin	E	300,000		75,000			
Mill Pond Raingardens, Champlin	E	400,000			100,000		
Other Priority Lake Internal Load Projects PLACEHOLDER	E	100,000					25,000
Other Priority Urban BMPs PLACEHOLDER	E	200,000					50,000
Livestock Exclusion, Buffers & Stabilized Access **NOTE A**	E	50,000	*anually*		50,000		50,000
Agricultural BMPs Cost Share **NOTE A**	E	50,000	*anually*	50,000	50,000	50,000	100,000
Agricultural BMPs, Rogers	N	300,000			75,000		
Downtown Pond Expansion & Reuse, Rogers	N	406,000			101,500		
Hydrologic and Hydraulic Modeling PLACEHOLDER	E	25,000			25,000		
Fourth Generation Plan **NOTE B**	E	70,000					70,000
TOTAL		$ 21,823,470	$ 492,812	$912,500	$ 1,145,250	$ 250,000	$ 838,750

Projects certified for the 2016 ad valorem tax levy

NOTE A: Combine items, reconsider cost.

NOTE B: Remove, include in Operating Budget.

From: Susan L. Nelson [mailto:snelson@wenck.com]
Sent: Friday, February 03, 2017 4:12 PM
To: judie@jass.biz
Cc: Kent C. Torve; Diane F. Spector
Subject: Stone's Throw Wetland

Hi Judie,

If it's not too late, would you please delay the Stone's Throw wetland restoration in the Elm Creek CIP for another year?

Thank you, and have a good weekend!

Susan

Susan Nelson
Botanist

WENCK ASSOCIATES Responsive partner. Exceptional outcomes.

snelson@wenck.com | C **612.850.5638**
1800 Pioneer Creek Center | Maple Plain, MN 55359

EXHIBIT A

Elm Creek Watershed Management Commission

Capital Improvement Project Submittal

(This submittal will be rated on its completeness and adherence to the goals of the Commission.
A second page may be used to provide complete responses.)

City	**Plymouth**
Contact Name	**Ben Scharenbroich**
Telephone	**763-509-5527**
Email	**bscharenbroich@plymouthmn.gov**
Address	**3400 Plymouth Blvd, Plymouth MN 55447**
Project Name	**Elm Creek Stream Restoration – Reach D**

	1. Is project in Member's CIP? (**X**) yes ( ) no ***Will be added to Plymouth's next CIP Cycle (Early 2017)**	Proposed CIP Year = **2018**
	2. Has a feasibility study or an engineering report (circle one) been done for this project? (**X**) yes( ) no	

		Amount
	Total Estimated Project Cost	**$850,000**
	Estimated Commission Share (up to 25%, not to exceed $250,000)	**$212,500**
	Other Funding Sources (name them) **City CIP Funds, Hennepin County Grant**	$
		$

3. What is the scope of the project?

This project would restore approximately 3,850 linear feet of Elm Creek on the former Elm Creek Golf Course Property. Reach D would restore the remaining section of Elm Creek between Peony Lane and Highway 55 and would be blend into the Elm Creek Reach E Restoration Project (2015-2016) which received funding from Hennepin County and the Elm Creek Watershed Management Commission.

This project would have similar components to the Reach E project and will most likely incorporate root wads, rock veins and native vegetative buffers. Reach D was identified in the Elm Creek Channel Study (2007) as a creek section in need of restoration by increasing the channel area through the golf course property. The restored creek will have a slightly wider meander pattern resulting in a stream corridor width 60-70 feet.

4. What is the purpose of the project? What water resource(s) will be impacted by the project?

The purpose of this project is to restore this degraded section of Elm Creek by widening the channel, installing root wads, rock veins and native vegetative buffers to help improve water quality in Elm Creek and downstream in Rice Lake.

5. What is the anticipated improvement that would result from the project? (Include size of area treated and projected nutrient reduction.)

Modeled pollutant removal information would be provided to the Elm Creek Watershed Management Commission as part of the design process for this project. Reach E, which is directly downstream of this project, was recently restored and was projected to remove 94 lbs/year TP and 471,200 lbs/year TSS. The City of Plymouth is monitoring upstream and downstream of Reach E and results will be available in early summer 2017.

6. How does the project contribute to achieving the goals and programs of the Commission?

Elm Creek is part of the Rice Lake watershed and the goal of the project is to reduce phosphorus and total suspended soils levels in Elm Creek as part of the reductions needed to satisfy TMDL requirements. A secondary goal of the project is to incorporate stream restoration and water quality components that will improve dissolved oxygen and the index of biotic integrity in the creek.

0/10 7. Does the project result from a regulatory mandate? (**X**) yes ( ) no How?

TMDL for Elm Creek and Rice Lake

0/10/20	8. Does the project address one or more TMDL requirements? (**X**) yes ( ) no Which? **Rice Lake – Nutrient/Eutrophication** **Elm Creek – Dissolved Oxygen**
0/10/20	9. Does the project have an educational component? (**X**) yes ( ) no Describe. **The City would provide education on the project to show how it is improving water quality. Additionally, the City could install educational signs on the Wayzata High School property explaining the project, if allowed by the school district.**
0/10	10. Do all the LGUs responsible for sharing in the cost of the project agree to go forward with this project? (**X**) yes ( ) no Identify the LGUs. **City of Plymouth**
10/20	11. Is the project in all the LGUs' CIPs? (**X**) yes ( ) no **Will be added to the City of Plymouth's CIP in 2017.**

1-34	(*For TAC use)* 12. Does project improve water quality? (0-10) 13. Prevent or correct erosion? (0-10) 14. Prevent flooding? (0-5)	15. Promote groundwater recharge? (0-3) 16. Protect and enhance fish and wildlife habitat? (0-3) 17. Improve or create water recreation facilities? (0-3)
TOTAL (poss 114)		Adopted April 11, 2012

Z:\ELM CREEK\MANAGEMENT PLAN\EXHIBIT A_APRIL 2012F.DOC

City of Plymouth

Elm Creek Stream Restoration
Reach D
3850 linear feet

N
W
E
S

0 75 150 300
Feet

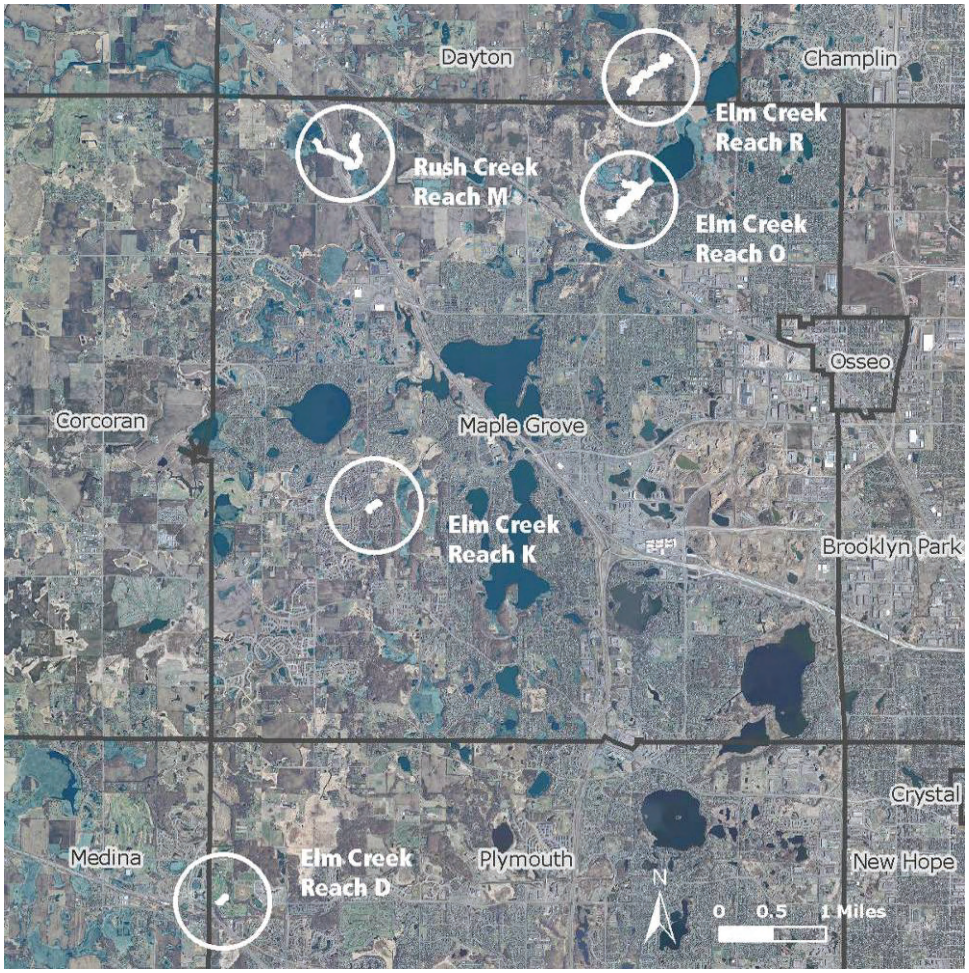
Section 5 – Channel Stabilization Concept Plans

SELECTED LOCATIONS AND SCOPE

As land uses change within Elm Creek Watershed, communities are faced with a growing number of expensive stream stability projects and adverse impacts to natural resources. This section provides a view of the level of physical reconstruction needed to repair streams in five reference locations. Channel stabilization concept plans have been developed for the five locations shown in Figure 5.1. These locations were selected by the Commission based on survey data and bankfull flow estimates. In all cases the 1-year storm runoff peak exceeds the bankfull capacity of the channel, and the channel is visibly impacted by watershed changes.

The recommendations that follow are based on surveyed cross-sections, GIS data, field observations and modeled flows. Stable channel configurations have been identified to demonstrate the level of constructed improvement necessary to address watershed impacts.

FIGURE 5.1 SELECTED CHANNEL STABILIZATION SITES



ELM CREEK, REACH D

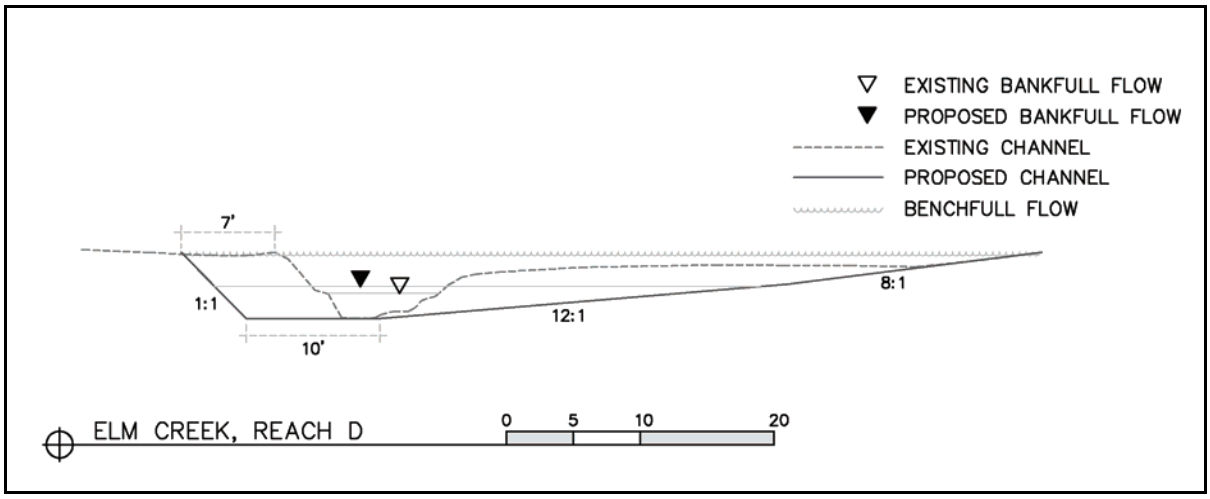
Reach D flows through a golf course in the City of Plymouth. Survey photos are provided in Figure 5.2. The stream overbank is uniformly mowed turf grass and the channel banks show signs of side cutting in response to increased runoff. Bankfull indicators were identified at an elevation below the eroded banks, and appear to be associated with the previously stable cross-section and meander pattern. The estimated capacity of the bankfull channel is 23 cfs. The watershed model reports a 1-year storm runoff peak of 147 cfs. This stream is within the FEMA mapped floodplain - Zone A.

This stream has a relatively flat profile slope and is confined vertically within the watershed. The observed side cutting should be expected to continue in response to increased volume and frequency of runoff. The resulting sediment load will impact the hydraulics and aquatic quality of the downstream system.

The stream channel in this reach can be stabilized by increasing the channel area and lowering the hydraulic shear stress. The modified cross-section shown in Figure 5.3 has been designed to convey 140 cfs, with shear stress matching 23 cfs flow in the existing channel.

FIGURE 5.2 REACH D PHOTOS

FIGURE 5.3 REACH D STABLE CROSS-SECTION



The proposed cross-section extends the cut banks outward and lowers the inside bends to make full use of the available stream corridor. This approach assumes a limited potential to cut into golf course fairways. Mowing limits would follow the stream corridor edge rather than the stream bank. Hydraulic calculations for the recommended section are summarized in Table 5.1.

TABLE 5.1 REACH D HYDRAULICS

Elm D	Slope ft/ft	Area sqft	Perim ft	Rh ft	Shear psf	n	Q cfs	V fps
existing bankfull	0.0032	10.4	9.8	1.1	0.212	0.040	21	2.2
existing benchfull	0.0032	87.9	60.6	1.5	0.290	0.080	119	1.3
proposed bankfull	0.0024	60.2	41.9	1.4	0.215	0.040	140	2.3
proposed benchfull	0.0024	193.5	66.7	2.9	0.434	0.070	410	2.1

Plan application of the proposed cross-section is shown in figure 5.4. The extended cut banks result in a slightly wider meander pattern, increased flow length and decreased slope. The meander pattern shown should be adjusted during final design to account for specific topography and tree preservation.

The proposed channel work creates a well defined stream corridor with a width of 60 to 70 feet. This corridor should be planted with native vegetation to provide bank stabilization and to buffer the stream from adjacent turf management practices. The open landscape would support native prairie grasses and forbs, installed in a temporary erosion blanket to prevent scour. Additional structural support would not be required.

An underground utility pipe crosses the channel above grade at the surveyed cross-section location. This utility should be relocated or lowered to prevent channel obstruction. If this is not possible, the support system should be reconstructed to minimize channel blockage and prevent collapse of the pipe. Existing overhead utility poles are also located along the channel corridor. The depth of cut should be managed at each pole or additional support provided to avoid relocation of this utility.

FIGURE 5.4 REACH D CONCEPT PLAN

Elm Creek — Reach D (Golf Course)

November 18th, 2005 Brian Johnson, Dan Murphy
partly sunny, breezy, ~40F, Elm Creek Golf Course, Spots with 1/2" - 1" of ice, sandy bottom, heavily eroded banks, bankfull not easily discerned. Unstable bank conditions. Used point sand bars as indicator for bankful. Benchmark at NE corner of Bridge

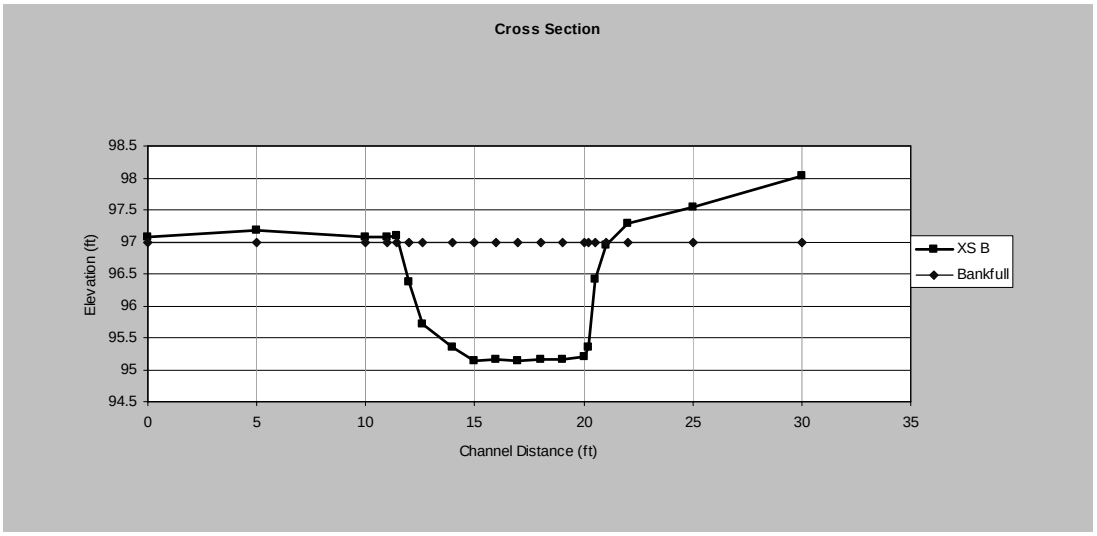
BM Elev. 100 unstable

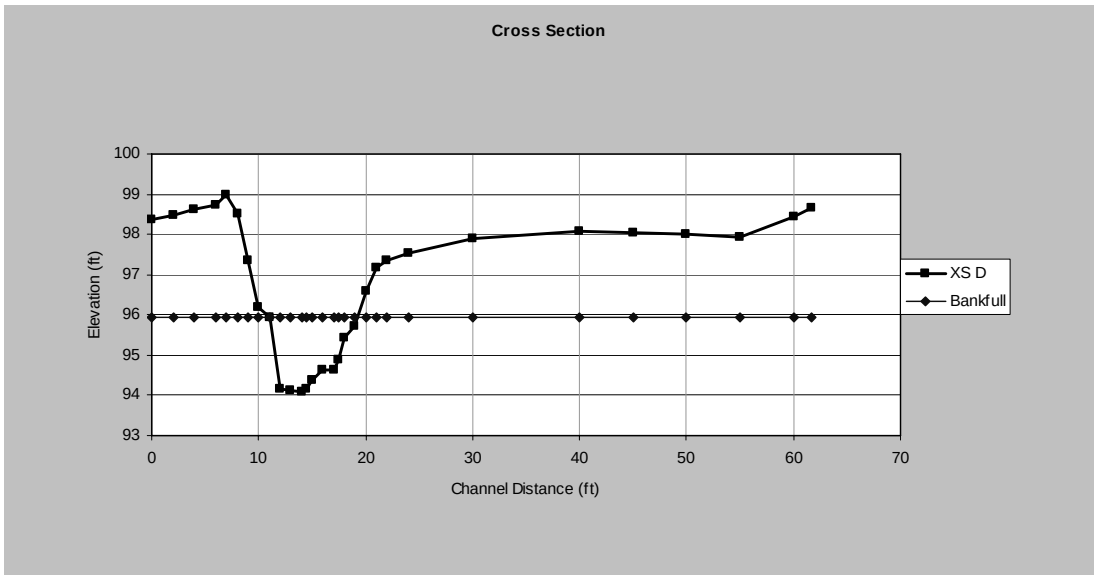
Stream Profile

Notes	Cross Section	Distance	Station	Turning Points BS	HI	FS	bed FS	water depth	bankfull FS	other FS	bed ELEV	water ELEV	bankfull ELEV	other ELEV
BS - BM Bridge				3.52	103.52									
D1	0	0	0	0	103.52	0	8.98	0.72	7.21	9.29	94.54	95.26	96.31	7.21
XS D	XS D	46	46	0	103.52	0	9.35	1	7.57	0	94.17	95.17	95.95	NA
D2	0	39	85	0	103.52	0	8.95	0.42	7.84	0	94.57	94.99	95.68	NA
D3	0	77	162	0	103.52	0	9.85	1.11	7.96	0	93.67	94.78	95.56	NA
D4	0	97	259	0	103.52	0	9.79	1.11	8.11	0	93.73	94.84	95.41	NA

Cross Sections

Cross Section ID	XS D	Distance	BS	HI	FS	Elev	Bankfull	integral A	segment P
Instrument Ht	103.52	0	0	103.52	5.16	98.36	95.95		
Longitudinal Station	46	2	0	103.52	5.05	98.47	95.95	0.00	0.00
Bankfull Stage	95.95	4	0	103.52	4.91	98.61	95.95	0.00	0.00
Channel Slope	0.0032	6	0	103.52	4.79	98.73	95.95	0.00	0.00
Manning's "n"	0.04	7	0	103.52	4.54	98.98	95.95	0.00	0.00
Bankfull flow area	10.29	8	0	103.52	5.02	98.5	95.95	0.00	0.00
Bankfull wetted perimeter	10.51	9	0	103.52	6.17	97.35	95.95	0.00	0.00
Hydraulic Radius	0.98	10	0	103.52	7.33	96.19	95.95	0.00	0.00
Bankfull Flow (cfs)	**21**	11	0	103.52	7.58	95.94	95.95	-0.12	1.03
Bankfull Velocity (fps)	2.1	12	0	103.52	9.36	94.16	95.95	0.90	2.04
		13	0	103.52	9.39	94.13	95.95	1.80	1.00
		14	0	103.52	9.42	94.1	95.95	1.83	1.00
		14.5	0	103.52	9.35	94.17	95.95	0.91	0.50
		15	0	103.52	9.13	94.39	95.95	0.83	0.55
		16	0	103.52	8.88	94.64	95.95	1.43	1.03
		17	0	103.52	8.9	94.62	95.95	1.32	1.00
		17.5	0	103.52	8.64	94.88	95.95	0.60	0.56
		18	0	103.52	8.08	95.44	95.95	0.39	0.75
		19	0	103.52	7.8	95.72	95.95	0.37	1.04
		20	0	103.52	6.94	96.58	95.95	0.00	0.00
		21	0	103.52	6.36	97.16	95.95	0.00	0.00
		22	0	103.52	6.15	97.37	95.95	0.00	0.00
		24	0	103.52	5.97	97.55	95.95	0.00	0.00
		30	0	103.52	5.63	97.89	95.95	0.00	0.00
		40	0	103.52	5.45	98.07	95.95	0.00	0.00
		45	0	103.52	5.48	98.04	95.95	0.00	0.00
		50	0	103.52	5.5	98.02	95.95	0.00	0.00
		55	0	103.52	5.6	97.92	95.95	0.00	0.00
		60	0	103.52	5.08	98.44	95.95	0.00	0.00
		61.7	0	103.52	4.87	98.65	95.95	0.00	0.00


Cross Section
Elevation (ft)
98.5
98
97.5
97
96.5
96
95.5
95
94.5
0
5
10
15
20
25
30
35
Channel Distance (ft)
XS B
Bankfull


Cross Section
Elevation (ft)
100
99
98
97
96
95
94
93
0
10
20
30
40
50
60
70
Channel Distance (ft)
XS D
Bankfull

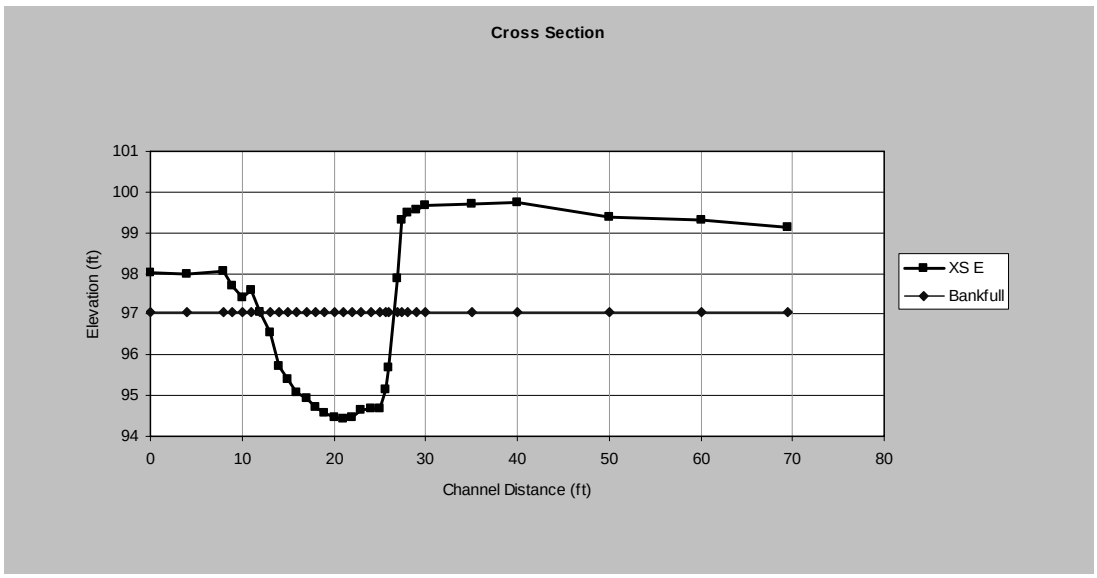

Cross Section
Elevation (ft)
101
100
99
98
97
96
95
94
0
10
20
30
40
50
60
70
80
Channel Distance (ft)
XS E
Bankfull

EXHIBIT A

Elm Creek Watershed Management Commission

Capital Improvement Project Submittal

(This submittal will be rated on its completeness and adherence to the goals of the Commission. A second page may be used to provide complete responses.)

City	Rogers
Contact Name	Andrew Simmons
Telephone	763-428-8580
Email	asimmons@rogersmn.gov
Address	22350 South Diamond Lake Road
Project Name	CIP-2016-RO-04 Ag BMPs

	1. Is project in Member's CIP? ( ) yes (x) no	Proposed CIP Year = 2018
	2. Has a feasibility study or an engineering report (circle one) been done for this project? ( ) yes (x) no	

		Amount
	Total Estimated Project Cost	$ 300,000
	Estimated Commission Share (up to 25%, not to exceed $250,000)	$ 75,000
	Other Funding Sources (City of Rogers, Hennepin County, BSWR)	$ 225,000
		$

	3. What is the scope of the project? Intensive agriculture near and around Cowley Lake is a significant contributing factor to the poor water quality and high nutrient loads in the lake. This project would involve the installation of iron enhanced filtration benches and increased vegetative buffer along the channel between Sylvan and Cowley Lakes.
	4. What is the purpose of the project? What water resource(s) will be impacted by the project? The purpose of the project is to reduce phosphorus loads entering Cowley Lake.
	5. What is the anticipated improvement that would result from the project? (Include size of area treated and projected nutrient reduction.) Roughly 30 acres of agricultural land drains towards this channel. This channel also drains Sylvan Lake during high water events. A similar project was completed in Minnehaha Creek Watershed and had a removal rate of 25 to 30 lbs/year of phosphorus.
	6. How does the project contribute to achieving the goals and programs of the Commission? This project helps address the nutrient TMDL on Cowley Lake.
0/10	7. Does the project result from a regulatory mandate? ( ) yes (x) no How?
0/10/20	8. Does the project address one or more TMDL requirements? (x) yes ( ) no Which? Cowley Lake Nutrient Loading
0/10/20	9. Does the project have an educational component? ( ) yes (x) no Describe.
0/10	10. Do all the LGUs responsible for sharing in the cost of the project agree to go forward with this project? (x) yes ( ) no Identify the LGUs. City of Rogers
10/20	11. Is the project in all the LGUs' CIPs? ( ) yes (x) no

1-34	(*For TAC use)* 12. Does project improve water quality? (0-10) 13. Prevent or correct erosion? (0-10) 14. Prevent flooding? (0-5)	15. Promote groundwater recharge? (0-3) 16. Protect and enhance fish and wildlife habitat? (0-3) 17. Improve or create water recreation facilities? (0-3)
TOTAL (poss 114)		

Adopted April 11, 2012