

elm creek Watershed Management Commission

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
FAX: 763.553.9326
email: judie@jass.biz
www.elmcreekwatershed.org

TECHNICAL OFFICE
Hennepin County
Dept. of Environment & Energy
701 Fourth Ave S Suite 700
Minneapolis, MN 55415-1600
PH: 612.596.1171
FAX: 612.348.8532
email: Ali.Durgunoglu@co.hennepin.mn.us

April 5, 2017

Representatives
Elm Creek Watershed Management Commission
Hennepin County, MN

The meeting packet for this meeting 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, April 12, 2017, at 11:30 a.m.** in the Mayor's Conference Room at Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN.

The meeting will be preceded at 10:00 a.m. by a meeting of the Commission's Technical Advisory Committee (TAC). Materials for the TAC meeting are also available on the Commission's website.

Please email Kerstin at kerstin@jass.biz to confirm whether you or your Alternate will be attending the meeting. Thank you.

Regards,



Judie A. Anderson
Administrator
JAA:tim

Encls: Meeting Packet

cc: Alternates	HCEE	BWSR	MPCA
Joel Jamnik	TAC	Met Council	DNR
TRPD	Diane Spector	Clerks	Official Newspaper

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Meeting of Technical Advisory Committee AGENDA

April 12, 2017

- I. Approve Agenda.*
- II. Approve Minutes of March 8, 2017 TAC meeting.*
- III. Old Business.
 - A. Manure Management Policy* – Barta.
 - 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 are being reviewed by the Commission's Technical staff.*
 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.

IV. New Business.

- A. Call for 2017 CIPs for consideration for ad valorem funding.*

V. Other Business.

- a. Next TAC meeting _____.

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Email: Ali.Durgunoglu@co.hennepin.mn

Technical Advisory Committee and Regular Meeting Minutes March 8, 2017

I. A meeting of the **Technical Advisory Committee (TAC)** for the Elm Creek Watershed Management Commission was convened at 10:01 a.m., Wednesday, March 8, 2017, in the Mayor's Conference Room, Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN.

In attendance were: Susan Nelson, Wenck Associates, Corcoran; Rick Lestina, 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; and Judie Anderson and Amy Juntunen, JASS.

Not represented: Champlin and Dayton.

Also present: Sharon Meister, Corcoran; Doug Baines, Dayton; and Elizabeth Weir, Medina.

A. Motion by Kujawa, second by Nelson to approve the **revised meeting agenda**.* *Motion carried unanimously.*

B. Motion by Kujawa, second by Durgunoğlu to approve the **minutes of the January 11, 2017 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 that the 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. At a previous TAC meeting the members identified three elements that should be considered when writing such an ordinance. Barta spoke to these elements.

1. Facilitate transition from agricultural to rural residential land use.
 - a. Horses/chickens/other animals where there was no livestock before— follow animal expansion recommendations from Pioneer Sarah ordinance
 - b. New animal operations with grazing animals should have a proper grazing plan/appropriately designed feedlot
 - 1) Ensure there is no excessive grazing and erosion
 - 2) Proper siting and design of feedlot and barn structures will allow for water flow on site to be directed away from the additional nutrients from animal operation
 - c. Where there was livestock before, proper disposal procedures should be followed when sealing and cleaning waste pits
 - d. For cropped fields going into housing, temporary cover crop or other vegetation should be put in until lawn/pasture is established
 - e. Topsoil should be conserved on site as much as possible
 - f. Maintain buffers along waterways as needed
 - g. Wetland restoration where feasible

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2. What BMPs should be used when animals are present? Manure management should be practiced appropriately depending on the animal species – if enough animal units are present, MPCA feedlot rules must be followed.

- a. Composting – especially horse operations
- b. Livestock exclusion from streams, wetlands, and other sensitive areas
- c. For cattle, swine, and poultry proper manure holding facilities should be established
 - 1) Wastewater filter strips should be established below barn and feedlot facilities
 - 2) Scraping of feedlots should be practiced regularly

3. How are load reduction credits quantified? Impacts will be measured using University of Minnesota, BWSR, and MPCA nutrient load calculation tools, RUSLE, and other programs/tools as needed and appropriate

4. How will reductions from land conversion be measured? Depends on whether land conversion reduces nutrient production or increases it. See 3 for tools.

Included in the meeting packet for reference was a copy of the Pioneer-Sarah Creek Commission's Livestock Management Policy.*

How will proposed ordinance feed into TMDL? The way the TMDL is structured most areas are out of the MUSA and will be covered under load allocations. Areas within MUSA will not be able to have livestock. Hopefully, cities will be looking for overall water quality improvement. There is an evolving definition of regulated conveyance facility.

D. Rules pertaining to filtration, infiltration and abstraction during stormwater management review.

Staff has requested from the member cities their stormwater pond, infiltration, filtration, and runoff volume abstraction rules and standards. Responses have been received from the member cities and are being compiled and reviewed by the Commission's technical staff.

When the Minnehaha Creek Watershed District goes through sequencing and filtration is the only option, they require 2x filtration. This provides for elevated removal of TSS and TP. An iron-enhanced filtration system may receive a higher credit than regular filtration.

Technical staff are looking for a hierarchal list.

1. Water Reuse. Water reuse is another substitute for abstraction that is not currently in the Commission's rules. Requiring abstraction through water reuse prior to other proxy methods could be added to the rules, though it would not be a minor plan amendment. Concerns about city requirements for inspections were raised. The Commission could require operations & maintenance agreements with annual inspections for the irrigation systems to assure that water reuse will occur in residential developments. Weir will research how Medina ensures reuse is occurring.

2. Infiltration/Filtration/Credit Sequencing. Currently buffers, preservation areas and compost amendment are all equal in credit for abstraction. The bio-filtration credit should be removed unless associated with a pond. The filtration credit could be increased from 1:1 to incentivize developers to investigate other options. Iron-enhanced filtration credits should be added. Water reuse will be further researched for inclusion. A maximum credit per sequencing BMP may also be considered. The detachment credit will be further defined for length of travel over vegetated area for sheet and channel flows.

Staff will create a credit scenario for demonstration at the next TAC meeting, potentially a tiered system with 50% abstraction done by one suite of BMPs and the other 50% by less quantifiable options.

3. Pre and post development TSS/TP loans and runoff volume. Kujawa noted that P8 modeling is acceptable by MPCA, but technical staff prefers to use the MIDS or PondNet/NURP models for TSS/TP reduction modeling. Technical staff does not use P8 modeling and the many variables can be used to obtain non-reliable results. Staff will compare submitted P8 modeling to PondNet. Brian Vlach of TRPD can also train staff on P8 modeling.

E. Cost share policy. Postponed to next TAC meeting.

F. Prioritizing special projects other than SWAs.* Postponed to next TAC meeting.

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G. Calls for additions/revisions to Commission's current CIP.* Two additions and one revision to the CIP have been received. Corcoran requested the Stone's Throw wetland restoration be moved from 2017 to 2018. Plymouth requested the restoration of Elm Creek Reach D, and Rogers requested Ag BMPs around Cowley and Sylvan Lakes be added to the CIP for 2018 implementation. Nelson noted that she is unable to locate any details about the Stone's Throw project. Anderson will send her the Exhibit A description of the project.

Motion by Scharenbroich, second by Lestina to recommend to the Commission the following: 1) adjust the name of the Rogers project to Cowley/Sylvan Connection BMPs and add the project as a placeholder to the CIP for 2018, 2) add the Plymouth Reach D restoration project to the CIP for 2018, and 3) revise the date on the Stone's Throw project. *Motion carried unanimously.*

H. Next meeting/Adjournment. The next TAC meeting will be held prior to the next regular meeting, April 12, 2017 at 10:00 a.m. The TAC meeting was adjourned at 11:30 a.m.

II. A regular meeting of the Elm Creek Watershed Management Commission was called to order at 11:39 a.m., Wednesday, March 8, 2017, 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; 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.

Also present: Brad Martens, Corcoran; Lisa Vertelney and Ben Scharenbroich, Plymouth; and Andrew Simmons, Rogers.

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

B. Motion by Weir, second by Butcher to approve the **minutes*** of the February 8, 2017 regular meeting. *Motion carried unanimously.*

C. Motion by Moore, second by Weir to approve the March **Treasurer's Report and Claims*** totaling \$10,984.91. *Motion carried unanimously.*

Motion by Weir, second by Jullie to encumber the funds remaining in the 2016 Studies/Project ID/SWA account for that purpose. *Motion carried unanimously.* (Pre-audit, the funds remaining in that account total \$28,515.80.)

III. Open Forum.

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

IV. Action Items.

A. Project Review 2016-052 The Woods at Rush Creek, Maple Grove.* This project combines five parcels (40 acres total) into 73, single family residential lots. It is located on CR 101 south of the Rush Creek Golf Course and north of the Lord of Life Lutheran Church. The majority of the site drains into Cook Lake which is located immediately west of this development. The Commission's review is for compliance with the Commission's rules D (stormwater management), E (erosion control), G (wetland alteration) and I (buffer strips). In their findings dated February 15, 2017, Staff recommends approval of the project contingent upon; a) Biofiltration pond approval in lieu of abstraction or abstraction credit alternatives; b) The Biofiltration pond must have an operation and maintenance plan developed, approved by the Commission and City and recorded on the land title; and c) A buffer monument location plan must be provided and approved. Motion by Weir, second by Jullie to approve Staff's recommendations. *Motion carried unanimously.*

B. Project Review 2017-002 RDO Site Plan, Dayton.* This is a commercial development proposal on a 25.6± acre plot located between I94 and Holly Lane. The project will develop the south 16 acres, to create about 7.6 acres of impervious cover. Staff recommends the approval of the project with the following revisions: a) A note on the plans that the soil amendment mix shall be a mix of 25% compost and 75% sand; b) The type of storm sewer line

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running along the center line of the swale shall be specified as either solid or perforated; and c) A final, dated plan signed by a professional engineer licensed in the State of Minnesota must be submitted to the Commission and the City. Motion by Moore, second by Trainor to approve Staff's recommendations. *Motion carried unanimously.*

C. Project Review 2017-008 TH169 Reconstruction, Champlin.* The stormwater review will be done by the West Mississippi WMO because over three-fourths of the work will be done in that watershed. This Commission's review is for floodplain impacts and mitigation. No WCA jurisdictional wetlands will be impacted by this project. In their findings dated March 2, 2017, Staff recommended approval conditioned upon receiving signed final plans when they become available. Motion by Weir, second by Butcher to approve Staff's recommendation. *Motion carried unanimously.*

D. 2017 Work Plan.* The members reviewed Staff's March 1, 2017 memo that summarizes the projected work plan for 2017. Brasch proposed two additional monitoring programs for 2017.

1. Monitor the Mill Pond now that it is back up to full pool. This would be the "additional water body" referred to in #3. \$3,200 to do the four sentinel lakes, another \$800 to do the Mill Pond, \$6,300 to do the three stream sites (flow only), and \$1,000 for the synoptic survey of Diamond Creek. The synoptic survey was on the program last year but could not be completed due to flow conditions. The Commission was not charged for the survey.

2. Perform a longitudinal survey of upper Rush Creek over 4-5 different flow conditions and at 4-5 different locations to support the Upper Rush Creek subwatershed assessment. Estimated cost for this effort would be \$5,000.

Motion by Weir, second by Trainor to accept the 2017 Work Plan including the two additional monitoring programs described above, encumber \$1,000 from the 2016 Stream Monitoring budget for the synoptic survey, and earmark \$5,000 from the Water Monitoring and Contingency budgets for the longitudinal survey. *Motion carried unanimously.*

Staff will continue to work to complete some missing details, after which it will be incorporated into the *2016 Annual Activity Report*.

A final draft of the 2016 Work Plan* was also included in the meeting packet.

E. Two lakes are included in the 2017 budget for **CAMP monitoring**. The Citizen Assisted Monitoring Program is sponsored by Metropolitan Council. In 2016 Cowley and Jubert lakes were monitored. Kujawa will seek volunteers for this year's program, likely Jubert plus one more.

V. 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 contacted the cities requesting their updates and additions to the CIP. Two additions and one revision were received. They were reviewed by the Technical Advisory Committee (TAC) at its meeting earlier today.

A. 2017 CIP-PL-01 Elm Creek Stream Restoration Reach D was submitted by the City of Plymouth. Proposed for construction in 2018, the Commission's share of the \$850,000 project is \$212,500. The TAC recommended approval of this project for inclusion on the CIP.

B. 2017 CIP-RO-1 Ag BMPs was submitted by the City of Rogers. Proposed for construction in 2018, the Commission's share of this \$300,000 project is \$75,000. To be more definitive, this project will be renamed the Cowley-Sylvan Connections BMPs. The TAC recommended approval of this project for inclusion on the CIP.

C. The City of Corcoran has requested that the **Stone's Throw Wetland Project** be moved from 2017 to 2018. The Commission's share of this \$450,000 project is \$112,500. The TAC recommended approval of this revision to the CIP.

Motion by Weir, second by Butcher to approve these updates to the Commission's CIP.

VI. Elm Creek Watershedwide TMDL. Approval of the TMDL by the Environmental Protection Agency is expected in mid-March.

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VII. Grant Opportunities and Updates.

A. 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's share will be \$75,000. The City and Lake Association portions will be determined in April. Chairman Baines signed the contract agreement last month. Staff is awaiting the fully executed agreement. Staff has drafted a cooperative agreement between the parties that is currently being reviewed.

B. BSWR has also approved Accelerated Implementation Grant funding for the **Rush Creek Headwaters Subwatershed Assessment project** in the amount of \$50,280. The local match will total \$12,570. Chairman Baines signed the contract agreement in February. Staff is awaiting the fully executed agreement.

VIII. Education.

A. The **Plymouth Home Expo** is April 7-8, 2017. Volunteers are being sought to "man" the Commission's booth.

B. The next **WMWA meetings** are scheduled for 8:30 a.m., Tuesday, March 14, and Tuesday, April 11, 2017, at Plymouth City Hall. Commissioners are encouraged to attend.

IX. New Business.

Election of officers. The current officers have been nominated for re-election. They are Baines, Chair; Weir, Vice Chair; Bill Walraven, Champlin, Secretary; and Moore, Treasurer. Hearing no further nominations, motion by Butcher, second by Jullie to elect these individuals to serve in 2017. *Motion carried unanimously.*

X. Communications.

"**Stream Buffers 101,**" January 13, 2017, *Stormwater Weekly.* * Printed from Forester Network.

XI. Other Business.

A. The following **projects** are discussed in the March 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.
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. 2016-052 The Woods at Rush Creek, Maple Grove.*

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25. 2017-001 Sundance Road Pond Excavation, Corcoran.
26. 2017-002 RDO Site Plan, Dayton.*
27. 2017-003 Brayburn Trail EAW, Dayton.*
28. 2017-004W Cartway Trail, Champlin.
29. 2017-005 Creekside Hills, Plymouth.
30. 2017-006 Summers Edge II, Plymouth.
31. 2017-007 Downtown Corcoran Ditch Maint/Cimarron Circle Drainage Maintenance, Champlin.
32. 2017-008 TH169 Reconstruction, Champlin.*

B. Adjournment. There being no further business, motion by Weir, second by Jullie to adjourn. *Motion carried unanimously.* The meeting was adjourned at 12:49 p.m.

Respectfully submitted,



Judie A. Anderson
Recording Secretary
JAA:tim

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Reasons for ordinance suggestions

Creating well designed sites, ordinances, and layouts will allow cities to avoid issues later with land use conflicts, having to grandfather facilities in, water quality issues, etc. Also long term avoids costs and headaches for landowners of having renovate facilities/do restorations etc

Manure Management:

- Manure is high in nutrients P & N as well as bacteria and other substance we want to keep out of the water
- Decomposing manure in water leads to anoxic conditions which can lead to fish kills/loss of other organisms
- Excess nutrients leads to eutrophication of waters, which can include toxic algae blooms
- Well designed filter strips around barns/livestock areas greatly assist with nutrient management
- Composting horse manure can help with management on smaller parcels where spreading isn't possible or wanted
- Scraping of feedlots prevents water running across them from picking up and transporting animal waste

Maintaining livestock away from water:

- Helps with manure management
- Keeps natural systems intact – allows for less human intervention required to maintain water quality
 - buffers and other filters remove sediments, nutrients, and other pollutants
 - areas surrounding streams, lakes, and wetlands are fragile and sensitive to animal trampling

Manure pit regulation:

- Similar reasons to proper closure of septic systems once converted to sewer. Poses an environmental and human health hazard

Soil conservation:

- Sediment is the largest water pollutant
- uncovered/protected soil during site development is a huge source of erosion and soil loss

Proper siting and wetland restoration

- Correctly functioning wetlands are a big asset in flood management and restoring natural water movement in an area
- siting barns and other livestock facilities in wet areas can lead to long term health problems for the animals as well as water quality issues
- MDA has information about long term site planning for agricultural facilities
- cuts down on neighbor disputes

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Suggestions for city ordinances within Elm Creek Watershed for areas transitioning from rural to developing

1. Transition from agriculture to residential
 - A. Horses/chickens/other animals where there was no livestock before— follow animal expansion recommendations from Pioneer Sarah ordinance
 - B. New animal operations with grazing animals should have a proper grazing plan/appropriately designed feedlot
 - a. ensure there is no excessive grazing and erosion
 - b. proper siting and design of feedlot and barn structures will allow for water flow on site to be directed away from the additional nutrients from animal operation
 - C. Where there was livestock before, proper disposal procedures should be followed when sealing and cleaning out waste pits
 - D. For cropped fields going into housing, temporary cover crop or other vegetation should be put in until lawn/pasture is established
 - E. Topsoil should be conserved on site as much as possible
 - F. Maintain buffer along waterways as needed
 - G. Wetland restoration where feasible
2. Manure management should be practiced appropriately depending on the animal species – if enough animal units are present, MPCA feedlot rules must be followed.
 - A. Composting – especially horse operations
 - B. Livestock exclusion from streams, wetlands, and other sensitive areas
 - C. For cattle, swine, and poultry proper manure holding facilities should be established following NRCS guidelines and MPCA regulations
 - a. Wastewater filter strips should be established below barn and feedlot facilities
 - b. Scraping of feedlots should be practiced regularly
3. Impacts will be measured using University of Minnesota, BWSR, and MPCA nutrient load calculation tools, RUSLE, and other programs/tools as needed and appropriate. The TMDL structure is such that there really will be no impact on it at all, these suggestions are purely for water quality improvement purposes.

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Resources for cities:

Manure pit closing regulations (Minnesota Rule 7020.2025):

<https://www.revisor.leg.state.mn.us/rules/?id=7020.2025>

And Minnesota Rule 7020.2225 Land Application of Manure:

<https://www.revisor.leg.state.mn.us/rules/?id=7020.2225>

Animal unit suggested guidelines:

<http://www.mda.state.mn.us/animals/feedlots/feedlot-dmt/animalunitcalcwksht.aspx>

UMN manure management resources:

<http://www.extension.umn.edu/agriculture/manure-management-and-air-quality/feedlots-and-manure-storage/>

NRCS Manure Pit standards – Practice # 313

<https://efotg.sc.egov.usda.gov/references/public/MN/313mnDec2016.pdf>

NRCS Manure Pit Closure Standard – Practice # 360

<https://efotg.sc.egov.usda.gov/references/public/MN/360mnCPS2017.pdf>

NRCS Field Office Technical Guide for Hennepin County:

<https://efotg.sc.egov.usda.gov/treemenuFS.aspx>

MDA siting and planning resources: <http://www.mda.state.mn.us/animals/feedlots.aspx>

**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.

5. Exhibits.

The following documents are attached and may be reviewed for content.

- a. Exhibit A.** 80.10 Manure Management Policy, City of Medina
- b. Exhibit B.** Manure Management-Related Ordinances, City of Medina.
- c. Exhibit C.** Ordinance 2016-02 Amending City Code Section 152.071(G) as it pertains to livestock and domestic farm animals, City of Greenfield.

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	<u>50,280</u>
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	<u>47,138</u>	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:

$$\begin{aligned} \$62,850/1.25 &= \$50,280 \text{ grant} \\ \$62,850 - \$50,280 &= \$12,570 \text{ match} \end{aligned}$$

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

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. **As of March 6, 2017:**

Comments	Criterion	A Very important ④	B Important ③	C Of Medium Importance ②	D Not Important ①	E Should not be considered ①	F Ranking (highest no. in red being most important)
See Note A	Load reductions	CH, R,T,P,ME,K ⑥	D,W,MG ③				R1,W7,T2,MG4,K2 (33)
	Grant opportunity/eligibility	D,T,ME ③	CH, R,W,MG,P,K ⑥				R4,W6,T4,MG3,K7 (30)
	TMDL related	D, W,P, ,K ④	CH, T,MG, ME ④	R ①			R8,W3,T6,MG5,K3 (30)
See Note A	Total project cost	T,MG ②	CH, R,W,ME ④	D,P,K ③			R2,W8,T3,MG1,K9 (26)
P: these two are duplicative	Protects natural resource	CH, T,P,K ④	D,W, ME ③		MG ①	R ①	R17,W5,T1,MG14,K4 (26)
	Protects high quality resource	CH, W,P ③	T,ME,K ③	R,MG ②	D ①		R16,W1,T5,MG8,K6 (26)
	In city's CIP		CH,T,W,MG,P,ME ⑥	D, R,K ③			R10,W10,T10,MG6, (24)
	Multiple benefits	W ①	CH, R,ME,K ④	D,T,MG,P ④			R3,W4,T17,MG7,K5 (24)
	Goes beyond city management activities	MG ①	CH, R,T,W,P,K ⑥		ME ①	D ①	R7,W11,T8,MG2,K7 (23)
	Included in Comm. operating budget	CH, D ②	T,W ②	R,MG,ME,K ④	P ①		R11,W9,T9,MG11, (23)
	Location in watershed	D ①	R, W,K ③	CH, T,MG,P ④	ME ①		R6,T16,MG9, (22)
	Result of regulatory mandate.	W ①	CH, D,T,P ④	ME ①	MG, R ②	K ①	R14,W2,T7,MG15, (20)
See Note A	Total impacted area		CH, R,T,ME ④	D,P,K ③	W,MG ②		R5,W15,T11,MG12,K10 (20)
See Note A	No. of impacted cities		CH, ME ②	R,T,MG,P,K ⑤	D,W ②		R9,W14,T12,MG10, (18)
	Timing of project	CH ①	ME ①	R,T,W,P,K ⑤	MG ①	D ①	R12,W12,T13,MG13, (18)
	City request (not on CIP)	K ①	CH ①	T,W,P,ME ④	R,MG ②	D ①	R15,W13,T15,MG17,K1 (17)
	On Comm-derived schedule	CH ①	T ①	D,R,ME,K ④	W,MG ②	P ①	R13,W16,T14,MG16, (17)
	Note A: W: Cost per lbs. of load reduction is very important						

A=ALI DURGNOLU; 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											
Elm Cr Reach E	Plymouth	H	1,086,000	Commission, Plymouth	County Levy - levied in 2015	250,000					
CIP-2016-RO-01 Fox Cr, Creekview	Rogers	H	321,250	Commission, Rogers	County Levy - levied in 2016	0	80,312	0	0	0	0
Mississippi Point Park Riverbank Repair	Champlin	M	300,000		County Levy - levied in 2016	0	75,000	0	0	0	0
Elm Creek Dam	Champlin	H	7,001,220		County Levy - levied in 2016	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		County Levy - levied in 2016		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											
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											
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	County Levy - levied in 2016		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 Exclous, 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-Cowley-Sylvan Connections 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		

Projects levied in prior years

Projects added/ revised in 2017