elm creek
Watershed Management Commission

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

April 5, 2023

Representatives
and
Technical Advisory Committee Members
Elm Creek Watershed Management Commission
Hennepin County, Minnesota

The meeting packet for this meeting may be found on the Commission's website:
http://www.elmcreekwatershed.org/minutes--meeting-packets.html

Dear Representatives and Members:

A regular meeting of the Elm Creek Watershed Management Commission will be held on **Wednesday, April 12, 2023, at 11:30 a.m.** in the Aspen Room at Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN.

The Technical Advisory Committee (TAC) will NOT MEET prior to the regular meeting.

Please email me at judie@jass.biz to confirm whether you or your Alternate will be attending the regular meeting.

Thank you.

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

cc:	Alternates	Erik Megow	Diane Spector	James Kujawa	Rebecca Carlson
	TAC Members	Karen Galles	Kris Guentzel	Kevin Ellis	Brian Vlach
	City Clerks	DNR	BWSR	Met Council	MPCA
	Official Newspaper				

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AGENDA

Regular Meeting | April 12, 2023

Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN.

The meeting packet may be found on the Commission's website: http://elmcreekwatershed.org/minutes--meeting-packets.html

1. Call Regular Meeting to Order.
   a. Approve Agenda.*
2. Consent Agenda.
   a. Minutes last Meeting.*
   b. Treasurer's Report and Claims.*
3 Open Forum.
4. Action Items.
   a. Project Reviews.*
   b. 2022 Annual Activity Report.*
   c. 2023 Services Agreement – Hennepin County.*
   d. 10-year TMDL Progress Review.*
   e. WBIF Scopes of Work.*
   f. CSAH12/Dayton River Road Ravine Stabilization - Cooperative Agreement.*
      1) Revised Exhibit A.*
   g. Preliminary CIP.*
5. Old Business.
6. New Business.
   a. Selection of CAMP lake.
7. Communications.
   a. Staff Report.*
   b. Hennepin County Staff Report.*
   c. Twin Cities Watershed Assessment and Trends Update - MPCA.*
   d. Letter of Support Champlin Brown Property Acquisition.*
   e. Letter to Support Reauthorization of ENRTF Lottery Dedication.*
   f. TRPD State of the Parks* - *will be distributed at the meeting.*
   g. 2022 Metropolitan Council Lake Water Quality Summary.*
8. Education.
   a. WMWA – next meeting May 9, 2023, at 8:30 a.m., via Zoom.
9. Grant Opportunities and Updates.
10. Project Reviews.

*in meeting packet
**available at meeting or on website

Item No.	E	A	I|RPFI RP|DD	AR	Project No.	Project Name
					W=wetland project	
ca.				AR	2014-015	Rogers Drive Extension, Rogers.
cb.				AR	2015-030	Kiddiegarten Child Care Center, Maple Grove.
cc.				AR	2016-005W	Ravinia Wetland Bank Plan, Corcoran.
cd.				AR	2017-014	Laurel Creek, Rogers.
a.					2017-050W	Ernie Mayers Wetland/floodplain violation, Corcoran.
ce.				AR	2018-046	Graco, Rogers.
cf.				AR	2020-009	Stetler Barn, Medina.
cg.				AR	2020-017	Meadow View Townhomes, Medina.
ch.				AR	2020-032	Enclave Rogers - Commerce Boulevard, Rogers.
ci.				AR	2020-033	Weston Woods, Medina.
cj.				AR	2021-020	Crew Carwash, Maple Grove.
b.					2021-025	Hackamore Road Reconstruction, Medina/Corcoran.
c.					2021-029	Tri-Care Grocery / Retail, Maple Grove
d.					2021-034	BAPS Hindu Temple, Medina.
ck.				AR	2021-035	Mister Car Wash - Rogers
cl.				AR	2021-036	D & D Service, Corcoran.
e.					2021-044	Balsam II Apartments, Dayton.
f.					2021-050	Evanswood, Maple Grove.
g.					2021-052	Norbella Senior Living, Rogers.
h.					2022-002	Summerwell, Maple Grove.
i.					2022-003	Fox Briar Ridge East, Maple Grove.
j.					2022-006	Hamel Townhomes, Medina.
k.					2022-008	Bechtold Farm, Corcoran.
l.					2022-009	Dunkirk Lane Development, Plymouth.
m.					2022-011	Arrowhead Drive Turn Lane Expansion, Medina.
n.					2022-012	Graco Building 2, Dayton
o.					2022-013	Dayton 94 Industrial Site, Dayton.
p.					2022-016	Rogers Activity Center, Rogers.
q.					2022-017	City Center Drive, Corcoran.
r.					2022-018	Big Woods, Rogers.
s.					2022-019	Grass Lake Preserve, Dayton.
t.					2022-020	Skye Meadows Extension, Rogers.
u.					2022-022	Cook Lake Highlands, Corcoran.
v.					2022-026	Archway Building, Rogers
w.					2022-028	Elsie Stephens Park, Dayton.
x.					2022-029	Hayden Hills Park, Dayton.
y.					2022-030	Garages Too, Corcoran.
z.					2022-031	Corcoran II Substation.
aa.					2022-033	Pet Suites, Maple Grove.
ab.					2022-035	Rush Hollow, Maple Grove.
ac.					2022-038	Tavera North Side, Corcoran.
ad.					2022-040	Kariniemi Meadows, Corcoran.
ae.					2022-042	Walcott Glen, Corcoran.
af.					2022-043	Meander Park and Boardwalk, Medina.
ag.					2022-044	Trail Haven Road Bridge Replacement, Corcoran.
ah.					2022-045	Corcoran Water Treatment Plant, Corcoran.
ai.					2022-046	CSAH12 Culvert and Guardrail Replacement, Dayton.

*in meeting packet
**available at meeting or on website

aj.					2022-047	Suite Living of Maple Grove.
ak.					2022-048	Hassan Elementary 2023 Pavement Renovation, Rogers.
al.					2022-049	Connexus Energy Subdivision, Dayton.
am.	**A**	**E**			2023-01	Chankahda Trail Reconstruction Phase 2, Plymouth.
an.					2023-02	Lynde Greenhouse Fire Damage Repair, Maple Grove.
ao.					2023-03	Cemstone Supply Facility, Dayton.
ap.					2023-04	Medina Industrial Site, Medina.
aq.					2023-05	MTL Troy Lane Addition, Dayton.
ar.					2023-06	Sota Shine, Maple Grove.
as.					2023-07	Lakeview Knoll's Pickleball Courts, Maple Grove.
at.					2023-08	Rush Creek Boulevard Interchange, Maple Grove.

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

11. Other Business.
    a. *These items will be considered at the May TAC and Regular meetings.*
        1) Reserve/Fund Balance Policy.*
        2) Project Review Costs.*
        3) Draft 2024 Operating Budget.*
12. Adjournment.

*in meeting packet
**available at meeting or on website

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MINUTES
Regular Meeting
March 8, 2023

I. A meeting of the Elm Creek Watershed Management Commission was called to order at 11:30 a.m., Wednesday, March 8, 2023, in the Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN, by Chair Doug Baines.

Present were: Bill Walraven, Champlin; Tom Anderson, Corcoran; Doug Baines, Dayton; Dan Riggs, Maple Grove; Terry Sharp, Medina; Catherine Cesnik, Plymouth; and David Katzner, Rogers.

Also present: Heather Nelson, Champlin; Kevin Mattson, Corcoran; Derek Asche, Maple Grove; Ben Scharenbroich, Plymouth; Andrew Simmons, Rogers; Diane Spector and Erik Megow, Stantec; James Kujawa, Surface Water Solutions; Kris Guentzel and Kevin Ellis, Hennepin County Environment and Energy (HCEE); Brian Vlach, Three Rivers Park District; Judie Anderson, JASS; Mike Nielson, Sambatek, for Project 2022-012; and Todd McLouth, Loucks, Inc. for Project 2023-02

A. Motion by Walraven, second by T. Anderson to approve the **agenda.*** *Motion carried unanimously.*

B. Motion by Walraven, second by Sharp to approve the Consent Agenda:

1. **Minutes*** of the February 8, 2023, regular meeting.

2. **March Treasurer's Report** and **Claims*** totaling $56,354.82.

Motion carried unanimously.

II. Open Forum.

[Cesnik arrived 11:40 a.m.]

III. Action Items.

A. **Project Review 2022-012 Graco Building 2, Dayton.*** Graco purchased this property that was the Liberty Industrial Center, approved by the Commission under project 2015-011. Graco is proposing to replat this site and construct a 515,400 SF distribution center. Additionally, mass grading on the remaining portion of Outlot H, and Outlots A and B will occur to accommodate two future buildings, regional ponding, and the construction of French Lake Road West. In total, 74 acres will be graded. The Commission's review covers Rules D and E on the 74 acre site. The site plan proposes to encroach into an existing conservation and preservation easement approved by the Commission for project 2015-011. At the July 2022 meeting the Commission reviewed this project and approved site plans for the area west of French Lake Road, contingent upon Staff recommendations found in their findings dated July 6, 2022: (1) final wetland buffer monumentation meeting Commission requirements, (2) an operations and maintenance agreement approved by the City that implements conditions that bind current and future owners of the project shall be recorded on this property and (3) the escrow balance reconciliation. A decision on the areas east of French Lake Road was tabled.

Revised plans for the West French Lake Road project area were submitted on November 23, 2022, January 6, 2023, and February 17, 2023. The applicant extended the decision deadline (per 15.99) to March 20, 2023. Updated plans for West French Lake Road were reviewed for erosion and sediment controls, buffers, and the conservation easement. Staff's findings and recommendation for approval dated February 24, 2023 are provided in the March meeting packet. The recommendations include the outstanding conditions from the original approval: (1) An operation and maintenance agreement approved by the city that implement conditions that bind current and future owners of the project shall be recorded on this property; (2) the City of Dayton must approve Conservation Easement abandonment and reestablishment; (3) final conservation easement documentation and title recordings must be provided to the Commission; and (4) the Commission escrow balance must be reconciled to the satisfaction of the Commission Administrator. Motion by Walraven, second by Riggs to approve Staff's recommendations. *Motion carried unanimously.*

B. Project Review 2023-02 Lynde Greenhouse Fire Damage Repair, Maple Grove.* The project proposes to rebuild a greenhouse building lost to a fire in 2022. The project is located south of 93rd Avenue North, along Pineview Lane. The property is approximately 10.3 acres and this project will disturb approximately 1.6 acres, triggering Commission Rules D and E. Staff reviewed the initial application materials and sent the applicant comments for their stormwater management. As they address the stormwater management issues, Staff, along with the City of Maple Grove, have given the applicants approval to commence grading and erosion control activities at their own risk. In their review and findings dated March 1, 2023, Staff recommends approval with two conditions: (1) an operation and maintenance agreement approved by the City; and (2) the Commission escrow balance must be reconciled to the satisfaction of the Commission Administrator. Motion by Katzner, second by Sharp to approve Staff's recommendations. *Motion carried unanimously.*

C. Hennepin County 2023 Services Agreement.* During the February 8 Commission meeting, Hennepin County staff requested feedback from the Commissioners and Staff regarding County priorities for technical services in 2023. To provide this feedback Commissioners requested two things:

1. A better understanding of the County's long-term goals in the Commission's jurisdictional areas; and

2. More detail regarding the County's priority work, including a breakdown of tasks completed by subwatershed or city.

The County's March 2, 2023, memo addresses those requests.

Since the dissolution of the Hennepin Conservation District (HCD) in 2014, Hennepin County's Environment and Energy Department has been serving the role of soil and water conservation district in the county. This role, among others, includes working with private residents to address erosion and nutrient runoff on their property(ies) to protect downstream waterbodies. This aligns well with the Commission's mission and allows the County to work parallel to city staff, assisting residents to implement conservation on private lands/properties.

Goals. Hennepin County is in the process of updating its Natural Resources Strategic Plan, which is also expected to serve as the soil and water conservation district comprehensive plan. This plan will describe each of the County's goals in protecting and restoring natural and water resources in Hennepin County and will outline the strategies and actions the County intends to complete over the next 10 years to reach those goals, as staffing and resources allow.

Although plan content is not yet available publicly in draft form, its anticipated the plan will include goals and strategies to strengthen the relationship with the Commission, cities, and private residents in the Commission's jurisdiction, including continuing staff resources and technical assistance for implementing conservation activities on private lands in western Hennepin County, expanding partnerships at the federal, state, and local levels to achieve improved natural resources outcomes, and tailoring programming to better consider both disparity reduction and climate action mitigation and adaptation.

2022 Projects. County staff, primarily Kevin Ellis, worked across the Elm Creek watershed in 2022. As per the Watershed Services Agreement, work was primarily focused on conservation practice implementation in the headwaters of Rush Creek subwatershed. This led to implementation of five grassed waterways, one water and sediment control basin, two livestock exclusion fences, two livestock watering facilities and upgrades to a single barn drainage system. These practices are estimated to reduce 47.2 tons total suspended solids (TSS) and 110.9-pounds total phosphorus (TP) from reaching Rush Creek annually. Installed BMPs from this work are identified on a map attached to Staff's memo.

Hennepin County staff track time based on project codes. A code is established for a project or significant work with a specific partner. In the Elm Creek watershed, the following codes were used.

1. **General Elm Creek Commission work** (82 hours from Kevin, 113 hours from other staff): Preparation of staff reports, agreements, and other deliverables, as well as attendance of TAC and general meetings.

2. **Rush Creek project** (417 hours from Kevin, 304 hours from other staff): Work related to the Rush Creek Clean Water Fund grant including development of outreach materials, landowner correspondence, site visits, best management practice (BMP) design, implementation assistance, inspections, and contracting.

3. **Conservation outreach and implementation** (141 hours from Kevin, 108 hours from other staff): Activities in the Elm Creek watershed related to the development of BMP projects utilizing state cost share funding, but not within Rush Creek subwatershed. This includes outreach, landowner correspondence, site visits, BMP design, implementation assistance, inspections, and contracting. Also shown above is the amount of time billed to each code. Although these are not split by city, work was generally focused in the cities of Rogers and Corcoran in the Rush Creek headwaters subwatershed.

Work with Cities. Hennepin County Staff began working directly with the city of Corcoran to develop livestock ordinances that will better reflect the proper management required to ensure that water resources are protected. Staff hope that this work will continue and that they are able to work more closely with cities across the watershed and county to propose land management activities that protect soil and water resources, and to provide services directly to residents. As a result of the Rush Creek Clean Water Fund grant, staff have been able to work closely with residents on issues related to water quality. During the implementation period, staff were able to reach 241 landowners with targeted outreach related to the type of land use they are engaged in. This outreach has led to 12 site visits where staff were able to provide technical assistance and, in some cases, propose projects that could have an impact on water quality while meeting landowner needs. In addition to currently implemented projects, two water and sediment control basins, one manure bunker, one wetland restoration, and one barn drainage upgrade are currently in the design phase.

2024 Budget. County staff, primarily Ellis, have been increasing the County's commitment to working with western Hennepin County landowners to address erosion issues and implement conservation.

This has fostered an increased level of partnership between county, city, and Commission staff that has resulted in greater conservation results and improved customer service for our residents. In the Elm Creek watershed alone, County Environment and Energy staff spent at least 1,165 hours of staff time in 2022. A breakdown of that time is shown above. The County sees this investment as benefiting both organization's missions. To help meet budget needs, the County is requesting an increased investment from the Commission for future year's efforts to help meet our shared priorities.

The County is proposing increasing the 2024 conservation promotion not-to-exceed amount to $22,000, a 10% increase from the 2023 amount ($20,000; as shown in Exhibit A Task 2 of the 2023 Watershed Services Agreement). This includes time towards public engagement, answering landowner's general land and water resource management questions, and BMP project development, design, and construction. The County projects department costs for this work will be over $50,000.00.

In addition, in 2023 neither RiverWatch nor the Wetland Health Evaluation Program (WHEP) will invoice the Commission for services rendered. RiverWatch brought back some services in 2022 as COVID protocols allowed, but any services performed within the Elm Creek watershed will not be billed to the Commission. The County plans to revisit partner cost share in the RiverWatch program in 2024. Unfortunately, Hennepin County Environment and Energy discontinued the WHEP program in 2022.

County Staff will return to the April meeting with the revised 2023 agreement. At the February meeting, the County was requested to include in the agreement a map of the subwatershed assessments and where they are work-wise.

IV. Old Business.

V. New Business.

A. Election of Officers. Hearing no further nominations, motion by Sharp, second by T. Anderson to elect the following officers for 2023: Baines, Chair; Cesnik, Vice Chair; Walraven, Secretary; Ken Guenthner, Corcoran, Treasurer. *Motion carried unanimously.*

B. Annual Appointments. Motion by Walraven, second by Riggs to appoint the following for 2023: Official Newspaper, *Osseo-Maple Grove Press*; Official Depositories, US Bank and the 4M fund; Deputy Treasurer, Judie Anderson; and Auditor, Johnson & Co., Ltd. *Motion carried unanimously.*

C. Included in the meeting packet was information regarding the reauthorization of the **Minnesota Lottery dedication to the Environment and Natural Resources Trust Fund.*** The ENRTF is requesting the Commission's support in asking the State Legislature to put this funding source back on the ballot as a constitutional amendment in 2024 which, in part, would reauthorize the use of net lottery funds for the ENRTF until the year 2050. Since its first appropriation in 1991, the ENRTF has provided over $900 million in stable long-term funding for innovative projects in natural resource management. Motion by Walraven, second by Sharp to authorize Staff to draft a letter of support for the chair's signature. *Motion carried unanimously.*

VI. Water Quality.

A. Watershed TMDL 10-Year Review.* The Commission and Technical Advisory Committee (TAC) are interested in reviewing progress toward achieving the goals of the Elm Creek Watershed TMDL (Total Maximum Daily Load) study. Staff's March 1, 2023 memo provides a summary of the TMDL findings and introduces a framework for potential approaches to such a review. The goals of this meeting are to: 1) familiarize TAC and Commissioners with the TMDL and the recommended actions; 2) consider options for

inclusion in the proposed review of progress; and 3) obtain input and 2023 guidance from the TAC and Commissioners on how to proceed with a more defined proposal at the April meeting.

A TMDL is a diagnostic study undertaken when waters do not meet one or more water quality standards. The federal Clean Water Act requires the states to establish such standards and to assess their waters to determine which comply. Those that do not meet standards are added to the Environmental Protection Agency's (EPA) List of Impaired Waters, known as the 303(d) List after the relevant section of the law, and a TMDL must be prepared to evaluate the sources of pollutants and causes of the impairment, estimate the amount of pollutant reduction necessary (called *load reduction)*, and identify potential actions that could be taken to improve conditions in the waters.

The Elm Creek Watershed-wide TMDL process was completed in phases over several years, starting with additional monitoring and data gathering in 2009-2010, analysis and development of the TMDL in 2012-2014, and completion of the TMDL document and accompanying Watershed Restoration and Protection Strategies (WRAPS) document in 2015. The final reports were approved by the Minnesota Pollution Control Agency (MPCA) and EPA in 2016.

The Elm Creek TMDL study addresses multiple impairments, including:

1. Fish, Rice, Diamond, Goose, Cowley, Sylvan, and Henry Lakes, which are all impaired by excess *nutrients (total phosphorus, or TP).*

2. S Fork Rush Creek, Rush Creek main stem, Diamond Creek, and Elm Creek, which are impaired by high levels of *E. coli bacteria*.

3. Rush Creek main stem, Diamond Creek, and Elm Creek, impaired by *low dissolved oxygen (DO)* concentrations necessary to support aquatic life.

4. The upper and lower reaches of S Fork Rush Creek, Rush Creek main stem, Diamond Creek, and Elm Creek, where the fish and macroinvertebrate communities are impaired for *biotic integrity*.

In addition, during the development of the TMDL for the fish and macroinvertebrate impairments, the following factors were identified as probable stressors to the biotic community, and TMDLs:

5. Upper and lower reaches of S Fork Rush Creek, Rush Creek main stem, Diamond Creek, and Elm Creek, excessive nutrients *(total phosphorus, or TP).*

6. Elm Creek and Diamond Creek, excessive *total suspended sediment (TSS).*

Since completion of the Watershed TMDL, additional impairments have been designated or are pending in the watershed:

7. Elm Creek and the lower reach of S Fork Rush Creek are impaired for excess *chloride*. TMDLs for the streams were completed as part of the Twin Cities Metro Chloride TMDL.

8. Fish Lake and Weaver Lake are impaired for *mercury* in fish tissue. TMDLs were completed as part of the statewide mercury TMDL.

9. The MPCA is processing two new impairments: *TSS* in Elm Creek and *fish biotic integrity* (*F-IBI)* in Fish Lake.

10. The nutrient impairment for Fish Lake is proposed for "delisting" as the lake now meets state standards.

The MPCA does not have a formal process or guidance for undertaking reviews of progress

toward meeting TMDLs. Entities such as cities and counties that are MS4s are required to annually report certain TMDL implementation activities that they take in the watershed, but that is not a comprehensive assessment, and does not include actions taken within the waterbodies such as stream restorations, lake alum treatments, or rough fish management. When they have undertaken other TMDL reviews of progress, Staff have considered the following analytical steps:

1. Update watershed runoff and pollutant loading and lake response modeling to reflect most current land use information and monitoring data.

2. Collect new monitoring and other data to fill data gaps.

3. Collect data on BMPs undertaken since the TMDL baseline year(s) to estimate progress toward meeting the identified pollutant load reductions and non-numeric requirements.

4. Evaluate monitoring data to determine water quality trends and progress toward meeting the standards.

5. Review implementation strategies and recommend any course corrections for the coming period.

Updating the various models used to quantify pollutant loading can range from simple to very detailed. Generally, this step is considered only when there has been significant land use change or where new data is available; for example, updating a lake response model to use measured sediment phosphorus release rates rather than literature values. While there has been development in the watershed, Staff don't think it is significant enough to warrant the expense and effort to update the watershed pollutant loading models. Following review of the lake water quality and BMP data, there may be some lakes where lake response modeling might be helpful, such as Laura Lake, which was not included in the original TMDL.

1. Lakes. The Commission has been annually monitoring four sentinel lakes – Fish, Weaver, Diamond, and Rice – and occasionally monitoring other lakes on a rotating basis. While the sentinel lakes have a good set of data available, it would be helpful to obtain more data on Henry, Jubert, Dubay, Laura, and French, where there is very little data. The cost of monitoring those lakes for two consecutive years would be about $8,000 per year. The 2023 budget includes $12,617 for lake monitoring, including the sentinel lakes and two additional lakes, which in 2023 will likely be Sylvan and either Henry or Cowley. If two of the "additional" lakes were completed as part of the annual lake monitoring budget, then the additional cost would be about $4,500 per year.

2. Streams. In addition to the partnership with the USGS to monitor flow and water quality on Elm Creek in the regional park, the Commission currently routinely monitors flow and water quality at three sites in the watershed: Elm Creek at its crossing of the Medicine Lake Regional Trail in Maple Grove; Rush Creek at Territorial Road; and Diamond Creek. Some data is available at other sites in the watershed. It may be helpful to collect additional data to help with the trend analysis. The Commission currently budgets $10,020 annually for stream monitoring; adding another site would be an estimated $3,500 annually.

The estimated cost to add two additional lakes and one additional stream site in 2024-2025 would be about $8,000 per year, or $16,000 total.

3. Biological. The Commission has completed a minimal amount of biological (fish and macroinvertebrates) monitoring in the streams. There is some data at a few sites completed by the MPCA, and the 2023 budget includes funding to undertake sampling at a few sites. It is Staff's recommendation that the Commission focus this review on quantifying chemical parameters and in the review develop a plan for more systematically undertaking biological monitoring for evaluation during the next progress review.

4. BMP Data. This task is compiling information about the BMPs undertaken in the watershed and estimating the pollutant load reductions achieved by each. Cities have been collecting and reporting watershed load reductions, including any structural BMPs or nonstructurals such as enhanced street sweeping. In addition, load reduction data is estimated for development and redevelopment activity that requires a Commission project review. This data could be collected, assembled, and geolocated to document and summarize load reductions by receiving water. For example, the TMDL established TP load reductions for the entire length of Elm Creek; the individual cities through which Elm Creek flows are reporting data just for what occurs in their city.

There are also other types of actions taken that the cities are not required to report on in the NPDES permit annual reports. These may include lake internal load reductions from an alum treatment, or habitat improvements achieved through stream restoration. These should also be documented as progress toward achieving the goals established in the TMDL.

Depending on how much data is available and how it is organized, and the number of BMPs for which removals would need to be calculated, this could be a simple GIS exercise, or it may be more extensive. Staff estimate the level of effort to be in the $5,000-8,000 range.

5. Evaluating Monitoring Data. Three Rivers Park District has been collecting and maintaining data for many years, and the annual report includes figures and tables showing water quality by year. It may be interesting to run some trend analysis statistics where there is a good data set to determine if there are any statistically significant trends. This might be a $2,000-3,000 effort.

6. Review Implementation Strategies and Report. This task would include compiling the information developed in the previous tasks to provide an overall summary of actions taken and progress made to date. The WRAPS report, which is the "implementation plan" of the TMDL, identified a universe of potential actions the various stakeholders could take to make progress toward the TMDL. This task would identify what has been successful and what not so successful and develop a prioritized action plan for the next several years. This then could be rolled into the Commission's Fourth Generation Watershed Management Plan that will be underway at about the same time. Due to that timing, this progress review would become an appendix to the Watershed Plan. It is likely that this would be an $8,000-10,000 effort.

7. Summary. It is likely that this TMDL 10-year Progress Review would be a $35,000-40,000 effort, depending on how much additional monitoring is desired. Discussion and input from the TAC and Commission will be helpful in further defining the scope of work.

The TAC and the Commission will discuss this review process with an anticipation, if they decide to proceed, of budgeting for the 10-year review as part of the upcoming 2024 budgeting process.

B. Preliminary Scope – South Fork Rush Creek SWA.*

Staff have been working to define the proposed scope of work for the three studies proposed for potential funding from the Watershed-Based Implementation Funding grant. The Commission allocated $92,774 for "Priority Assessments," identifying the (1) South Fork Rush Creek Subwatershed assessment requested by the City of Corcoran, (2) the North Fork Rush Creek Remeander Feasibility Assessment for the reach adjacent to Stieg Woods in Rogers, and (3) a remeander feasibility study for the Diamond Lake outlet channel to Diamond Creek in Dayton.

Staff propose to proceed in a similar manner to the Rush Creek Headwaters SWA. The general items of work include:

1. Data Collection and Review. This task includes identifying collecting, and compiling available data and information including but not limited to:

a. Land cover and land use
b. Sites of ecological diversity or significance
c. Soils and topography
d. NWI Wetlands, probable wetlands, and drained wetlands
e. Individual Sewage Treatment System locations
f. Registered feedlots and allowable animal units
g. Nonregistered animal operations and estimated animal units

2. Summarize Existing Conditions. Like the Headwaters SWA, this data will be used to create a series of maps that will depict:

a. Location and extent of intact natural cover (forest/wetland)
b. Hydrologic soil group, soil erodibility, and estimated soil loss rate
c. Mean slope
d. Location and extent of potentially tiled drained agricultural land
e. Location and relative impact of failing septic systems, where applicable
f. Location of feedlots and other animal operations

3. BMP Identification. Using the Agricultural Conservation Planning Framework (ACPF) toolbox, Stantec will identify up to ten potential projects that could yield the greatest benefit toward reducing sediment and phosphorus input to the South Fork Rush Creek. As in the Diamond Lake SWA, Staff will work with Hennepin County conservationists and City staff to "ground truth" those locations, ruling out those that may seem on paper to be feasible, but which may be difficult to actually implement.

4. BMP Prioritization. Using the ground-truthed ACPF outputs, Staff will estimate the cost of each BMP using unit prices and rank them by magnitude and cost-effectiveness of the estimated load reductions.

5. Technical Summary. The Rush Creek Headwaters SWA broke down the subwatershed into six smaller Management Units. Staff would expect to do something similar for the South Fork Rush Creek SWA. The final report will present individual prioritized lists of BMPs by Management Unit. In addition, they will compile all the geospatial data, including the prioritized BMP locations, into an interactive online map for ease of use.

6. Meetings. Staff would expect to have at least three "small group" meetings with the affected cities: Corcoran, Medina, and Maple Grove, and potentially one Open House with the public.

At this time the estimated cost to undertake this project is $60,400. An open question that may add to that cost is whether a recent windshield or aerial survey of small animal operations has been completed or whether that would need to be added to this cost. The grant requires a 10% match, or about $5,600. Under the Commission's SWA policy, the Commission would contribute 75% of that, about $4,200, from its budget, and the local participants the other 25%. When they finalize the cost, Staff will present the breakdown by funding partner and confirm that the participants have agreed to their shares.

C. Preliminary Scope – North Fork Rush Creek Remeander.*

This scope of work is less advanced than the SWA. Based on a scope Stantec recently completed for a feasibility study and conceptual design of a natural channel restoration of similar length in

Brooklyn Park, Staff estimate the cost to be about $28,000 for data collection, review and field work, and alternatives development, with an additional $11,000 for 30% design.

1. **Data Collection and Review.** This task would start with assembling previous studies, planning documents, and publicly available soils, hydrology, wetland, vegetation, and historical aerial imagery of the creek area, available utility information, and modelling, water quality, and flow data. Staff would also review existing hydraulic model data, features, and results. In this task they would visit the site to note potential constraints, current channel conditions, eroded banks, hydrogeologic factors like springs and seeps, vegetation quality, storm sewer outfalls and infrastructure, and opportunities for habitat improvement. Staff will also perform a site topological survey and a tree survey.

2. **Alternatives Assessment and Basis of Design.** Staff will work with the city of Rogers, Hennepin County, and Three Rivers Park District to refine design alternatives that meet Commission goals for water quality and ecological improvements, and which will work with the Stieg Woods Master Plan, upcoming extension of CR 117 and the future extension of the Rush Creek Regional Trail. These alternative designs will address bank stabilization, erosion and sediment control practices, water control practices, infrastructure impacts, visual quality and 'fit' within the surrounding area. The conceptual design alternative work will be presented in a Basis of Design memo describing and summarizing the desktop and field data collection and analysis, design alternative elements and impacts to the surrounding areas, project cost estimates, pollutant reduction estimates, and a comparison table of each alternative focusing on cost and pollutant reduction/water quality improvement potential.

3. **30% Preliminary Design of Selected Alternative.** Should the stakeholders be able to select and commit to a design alternative, Staff will prepare preliminary plans and opinion of probable cost and the final basis of design memorandum.

Staff plan to bring the final scopes back in April for formal consideration. Based on their initial scoping work, the $92,774 may not be sufficient to undertake all three identified assessments.

VII. Communications.

A. Staff Report.* Staff reports provide updates on the development projects currently under review by Staff. The projects listed in the table beginning on page 11 of these minutes are discussed in the March 1, 2023, report.

B. Hennepin County Staff Report.*

The draft Hennepin County Zero Waste Plan (PDF) is available for the public to review and provide comments. The plan outlines how the County will accomplish its goals of creating a system where all materials are designed to become resources for others to use and preventing 90% or more of all discarded materials from being landfilled or incinerated. Comments can be provided in the following ways:

1. **Take the survey.** The survey walks through the plan's goal, aims, and key actions, gathers feedback on level of support for these items, and provides opportunities to offer specific comments.

2. **Attend an online community meeting,** Thursday, March 9 at 6:30 p.m. County staff and the consultant who helped develop the plan will briefly present the plan's goal, aims, and key proposed actions. Participants will have the opportunity to provide feedback on their level of support for the aims and actions as well as ask questions of the presenters and make verbal or written comments. Register to attend. The presentation will also be recorded and posted online at BeHeardHennepin.org.

3. Share ideas and get questions answered online. Join the conversation and provide input at your convenience on BeHeardHennepin.org. You can post ideas or ask questions that will be answered by the Zero Waste Plan team.

The County welcomes your thoughts on the plan. Comments submitted by March 20 will be considered by the Zero Waste Plan team as the plan is finalized. In addition, a summary of the survey and verbatim comments will be shared with commissioners and back to the public when the final plan is shared with commissioners.

VIII. Education and Public Outreach.

A. The **Conservation Education and Implementation Partnership Program** will be coordinated by a new limited-duration education and outreach coordinator shared with Hennepin County and the Richfield-Bloomington WMO. Watershed-Based Implementation Funding (WBIF) to help fund the program has been approved by the Board of Water and Soil Resources (BWSR). The Hennepin County Board has approved the new position and the County is in the process of finalizing the job description and working though the hiring process. The position will be posted by mid-March and the coordinator is proposed to be in place by Earth Day.

B. A copy of a **letter of support*** from the Commission and other watershed organizations to members of the Minnesota House and Senate is included in the packet. It requests their support in passing the **Smart Salting Bill** during the 2023 legislative session. The Commission is a signatory to this letter.

C. Chloride Management Plan.* Two of the streams in the watershed – Elm Creek and the lower reach of the South Fork Rush Creek – are impaired for excess chloride and have established TMDLs. Cities in the watershed are also under a requirement of their NPDES permits to implement chloride-reduction efforts and provide education and outreach to stakeholders about chloride pollution. The Commission has expressed concern over chloride use at new developments and is interested in using that review as an opportunity to promote Chloride Management Plans with watershed approval. However, as dicussed previously, there is often a disconnect between project applicants, project owners, and building maintenance staff and this may not be the most effective way to get people to use less salt. The Commission has included in its 2023 Workplan an activity to develop a chloride management plan for the watershed that includes an education and outreach component.

As discussed previously, the Hennepin County Chloride Initiative (HCCI) has been working on a campaign called *Low Salt No Salt Minnesota* for local government unit (LGU) staff to communicate chloride issues and management strategies to the community. The campaign targets property managers, communities of faith, and homeowners associations. The *Low Salt No Salt* campaign is now live and resources are available on the website at https://rpbcwd.org/low-salt-no-salt.

The websites hosts a toolbox for LGUs to use to start conversations about chloride use with the community, including videos, presentations, conversation starter ideas, pledge forms, and more. The website also has model winter maintenance contracts for properties and links to other resources such as Smart Salting Training and water quality data.

The purpose of Staff's March 2, 2023, memo is to initiate a discussion among the Commissioners and city staff on what a chloride management plan for the watershed should look like. Below is a draft matrix to start the discussion of how the Commission could start to approach a chloride management plan, including what messages should be conveyed to various stakeholders, who is responsible for

relaying those messages, and what existing resources can be used. Ahead of this meeting, Commissioners were asked to review the draft matrix and come ready to discuss. The matrix was filled out interactively at the meeting. Using a comprehensive set of potential messages and actions, in April the Commissioners will refine the matrix actions that are measurable and achievable in the next few years.

Stakeholder	Message	Responsible Communicator	Resources for Communicator/Stakeholder
General public		Watershed Education and Outreach Coordinator, City staff	
Property Owners (single-family homes, HOAs, etc.)		City staff	Low Salt No Salt website Train the Trainer workshops
Property Managers		City staff	Low Salt No Salt website Train the Trainer workshops
City Maintenance Staff		City staff	Smart Salting Training
Developers/Redevelopers	Optimize site design for low salt use	Project review staff (Stantec); Commissions	??

D. The **West Metro Water Alliance (WMWA**) will meet via Zoom at 8:30 a.m., March 14, 2023.

IX. Grant Opportunities and Project Updates.

X. Other Business.

XI. Adjournment. There being no further business, the meeting was adjourned.

Respectfully submitted,

Judie A.Anderson
Recording Secretary
JAA:tim

Z:\Elm Creek\Meetings\Meetings 2023\February 8 2023 Regular meeting minutes.docx

Project No.	Project Name
W=wetland	
2014-015	Rogers Drive Extension, Rogers.
2015-030	Kiddiegarten Child Care Center, Maple Grove.
2016-005W	Ravinia Wetland Bank Plan, Corcoran.
2017-014	Laurel Creek, Rogers.
2017-050W	Ernie Mayers Wetland/floodplain violation, Corcoran.
2018-046	Graco, Rogers.
2019-021	Brenly Meadows, Rogers.
2019-026	Interstate Power Systems, Rogers.
2020-009	Stetler Barn, Medina.
2020-017	Meadow View Townhomes, Medina.
2020-032	Enclave Rogers - Commerce Boulevard, Rogers.
2020-033	Weston Woods, Medina.
2020-036	Balsam Pointe, Dayton.
2021-007	Birchwood 2nd Addition, Rogers

2021-016	Territorial Lofts, Rogers.
2021-020	Crew Carwash, Maple Grove.
2021-021	Territorial Triangle, Dayton.
2021-023	Maple Grove Medial Office Building (MOB).
2021-024	Riverwalk, Dayton
2021-025	Hackamore Road Reconstruction, Medina/Corcoran.
2021-027	Xcel Energy Elm Creek Substation, Maple Grove
2021-029	Tri-Care Grocery / Retail, Maple Grove
2021-031	Cook Lake Edgewater, Maple Grove
2021-034	BAPS Hindu Temple, Medina.
2021-035	Mister Car Wash - Rogers
2021-036	D & D Service, Corcoran.
2021-037	Marsh Pointe, Medina.
2021-039	1-94 Logistics Center, Rogers.
2021-040	Napa Auto, Corcoran.
2021-041	Carlson Ridge, Plymouth.
2021-043	Northwood Community Church Maple Grove.
2021-044	Balsam II Apartments, Dayton.
2021-047	CR 10 Box Culvert Replacement, Corcoran
2021-050	Evanswood, Maple Grove.
2021-051	Fields of Nanterre Drainage Improvements, Plymouth.
2021-052	Norbella Senior Living, Rogers.
2021-053	Towns at Fox Creek, Rogers.
2021-055	Morningside Estates 6th Addition, Champlin.
2022-002	Summerwell, Maple Grove.
2022-003	Fox Briar Ridge East, Maple Grove.
2022-006	Hamel Townhomes, Medina.
2022-008	Bechtold Farm, Corcoran.
2022-009	Dunkirk Lane Development, Plymouth.
2022-011	Arrowhead Drive turn Lane expansion,
2022-012	Graco Building 2, Dayton.
2022-013	Dayton 94 Industrial Site, Dayton.
2022-014	Aster Mill, Rogers.
2022-015	County Road 47 Phase I Reconstruction, Plymouth.
2022-016	Rogers Activity Center, Rogers.
2022-017	City Center Drive, Corcoran.
2022-018	Big Woods, Rogers.
2022-019	Grass Lake Preserve, Dayton.
2022-020	Skye Meadows Extension, Rogers.
2022-022	Cook Lake Highlands, Corcoran.
2022-023	Asguard, Rogers.
2022-024	Bridge No. 27J70, Maple Grove.
2022-025	Harvest View, Rogers.
2022-026	Archway Building, Rogers
2022-027	Edison at Maple Grove Apartments.
2022-028	Elsie Stephens Park, Dayton.
2022-029	Hayden Hills Park, Dayton.

2022-030	Garages Too, Corcoran.
2022-031	Corcoran II Substation.
2022-033	Pet Suites, Maple Grove.
2022-034	CSAH 101 Improvements, Maple Grove.
2022-035	Rush Hollow, Maple Grove.
2022-036	West French Lake Road Improvements, Maple Grove.
2022-037	CSAH13 CR203 Culvert Replacement, Dayton.
2022-038	Tavera North Side, Corcoran.
2022-039	Garland Commons, Maple Grove.
2022-040	Karinieimi Meadows, Corcoran.
2022-041	Elm Creek Swim Pond Culvert, Maple Grove.
2022-042	Walcott Glen, Corcoran.
2022-043	Meander Park and Boardwalk, Medina.
2022-044	Trail Haven Road Bridge Replacement, Corcoran.
2022-045	Corcoran Water Treatment Plant.
2022-046	CSAH12 Culvert and Guardrail Replacement, Dayton.
2022-047	Suite Living of Maple Grove.
2022-048	Hassan Elementary Pavement Renovation, Rogers.
2022-049	Connexus Energy South Dayton Substation.
2023-001	Chankahda Trail Reconstruction Phase 2, Plymouth.
2023-002	Lynde Greenhouse Fire Damage Repair, Maple Grove.

Elm Creek Watershed Management Commission Treasurer's Report

		2023 Budget	Mar 2023	April 2023	2023 Budget YTD
EXPENSES					
Administrative		100,000	10,881.12	11,914.65	34,995.15
Grant Writing		0			0.00
Website		2,000	231.37	99.92	552.79
Legal		2,000	170.50	124.00	294.50
Audit		6,500			0.00
Insurance		4,000			3,784.00
Miscellaneous/Contingency		0			0.00
Technical Support - HCEE		20,000			0.00
HUC-8 Floodplain Mapping		0			0.00
Technical - Project Review		184,000	7,571.50	5,201.00	15,710.00
Technical - Other		70,000	6,079.00	9,147.00	18,474.25
Project Review - Admin Support		16,000	1,266.22	961.98	3,859.26
Stream Monitoring USGS		24,000	15,075.00		15,075.00
Stream Monitoring TRPD		10,020			0.00
Biological Monitoring		4,500			0.00
DO Longitudinal Survey		2,400			0.00
Partnership Biomonitoring Project (Comm shar		2,000			0.00
Rain Gauge		440	28.49	28.49	86.47
Lakes Monitoring - CAMP		840			0.00
TRPD Monitoring - Sentinel Lakes/Addn'l Lake		10,412			0.00
Aquatic Vegetation Surveys		1,365			0.00
Wetland Monitoring (WHEP)		0			0.00
Education		2,000	301.62		801.62
WMWA General Activities		5,000		3,000.00	3,000.00
WMWA Implementation/Watershed Prep		4,500		2,000.00	2,000.00
Rain Garden Wkshops/Intensive BMPs/Special Proj		2,000		4,000.00	4,000.00
Macroinvertebrate Monitoring-River Watch		0			0.00
Studies / Project ID / SWA		0	14,750.00		14,750.00
CIPs General		3,000		289.73	289.73
Rush Creek SWA Implementation		106,050			0.00
Plan Amendment		2,000			0.00
Contribution to 4th Gen Plan		12,500			0.00
Transfer to (from) Capital Projects (see CIP Tr		*291,638*			0.00
Transfer to (from) Cash Sureties (see below)			-	-	0.00
Transfer to (from) Grants (see below)		*125,000*	-	-	19,971.75
To Fund Balance					0.00
TOTAL - Month			**53,354.07**	**36,766.77**	**134,643.77**
TOTAL Paid in 2023, incl late 2022 Expenses		**1,014,165.00**	**128,554.01**	**165,320.78**	**2023 Paid**

Elm Creek Watershed Management Commission Treasurer's Report

		2023 Budget	Mar 2023	April 2023	2023 Budget YTD
INCOME					
Project Review Fee		184,000	3,300.00		17,050.00
Project Review Fee 2022 Additional Due			5,617.00		
Nonrefundable Admin		16,000	300.00		1,550.00
Nonrefundable Technical		17,000	450.00		2,325.00
Water Monitoring - TRPD Co-op Agmt		6,500			0.00
Member Dues		250,000			250,000.00
Interest/Dividends Earned		750	6,879.23		17,390.30
Transfer to (from) Capital Projects (see CIP Tr		291,638			0.00
Transfer to (from) Grants (see below)		125,000	-	-	133,887.00
Rush Creek SWA Implementation		79,537			
Transfer from Assigned Fund Balance		26,513			
Misc Income / Contingency		0			
From Unrestricted Cash Reserves		*17,227*			
Total - Month			**16,546.23**	**0.00**	**422,202.30**
TOTAL Rec'd 2023, incl late 2022 Income		**1,014,165.00**	**442,230.45**	**442,230.45**	**2023 Received**
CASH SUMMARY		**Balance Fwd**			
Checking		0.00			
4M Fund		1,399,787.64	1,713,464.08	1,676,697.31	
Cash on Hand			**1,713,464.08**	**1,676,697.31**	
Claims Presented		General Ledger Account No	**March**	**April**	**TOTAL**
Campbell Knutson - Legal		521000		124.00	**124.00**
Connexus - Rain Gauge		551100		28.49	**28.49**
Shingle Creek WMO - WMWA					**9,000.00**
2023 WMWA General Expense		590001		3,000.00	
2023 WMWA Watershed PREP		590001		2,000.00	
2023 WMWA Special Projects		590001		4,000.00	
Surface Water Solutions					**1,272.50**
Technical - Project Review		578050		510.00	
Technical - Other		578050		762.50	
Stantec					**13,075.50**
Technical - Project Review		578050		4,691.00	
Technical - Other		578050		8,384.50	
JASS					**13,266.28**
Administration		511000		8,704.18	
TAC Support		511000		904.03	
Annual Reporting/Work Plan		511000		2,076.57	
Website		581000		99.92	
Project Review Admin Support		578100		373.98	
Project Reviews - Project Specific Admin		578100		588.00	
Education		590000			
CIPs General		563001		289.73	
Cost Share Admin		511000		178.37	
Elm Creek TMDL		580800		51.50	
TOTAL CLAIMS					**36,766.77**

CAMPBELL KNUTSON
Professional Association
Attorneys at Law
Federal Tax I.D. #41-1562130
Grand Oak Office Center I
860 Blue Gentian Road, Suite 290
Eagan, Minnesota 55121
(651) 452-5000

Elm Creek Watershed Management Commission
c/o Judie A. Anderson, Exec. Secty.
3235 Fernbrook Lane
Plymouth MN 55447

February 28, 2023
Account # 1448G

SUMMARY STATEMENT

PREVIOUS BALANCE	FEES	EXPENSES	CREDITS	PAYMENTS	BALANCE
1448-0000 RE: GENERAL MATTERS					
	SERVICES RENDERED TO DATE:				
201.50	124.00	0.00	0.00	-31.00	$294.50
				-170.50	$124.00

Amounts due over 30 days will be subject to a finance charge of .5% per month (or an annual rate of 6%). Minimum charge - 50 cents.

CAMPBELL KNUTSON
Professional Association
Attorneys at Law
Federal Tax I.D. #41-1562130
Grand Oak Office Center I
860 Blue Gentian Road, Suite 290
Eagan, Minnesota 55121
(651) 452-5000

February 28, 2023
Account # 1448-0000G
244

Elm Creek Watershed Management Commission
c/o Judie A. Anderson, Exec. Secty.
3235 Fernbrook Lane
Plymouth MN 55447

RE: GENERAL MATTERS
SERVICES RENDERED TO DATE:

			HOURS	
02/22/2023	JJJ	Emails Judie re: Three Rivers project share agreement; review and advise; follow-up review of corrected.	0.80	124.00
		AMOUNT DUE	0.80	124.00
		TOTAL CURRENT WORK		124.00
		PREVIOUS BALANCE		$201.50
02/14/2023		Payment - thank you		-31.00
		TOTAL AMOUNT DUE		$294.50

paid 3|8|23 -170.50

Total Due $124.00

Amounts due over 30 days will be subject to a finance charge of .5% per month (or an annual rate of 6%). Minimum charge - 50 cents.

CONNEXUS® ENERGY
Your Community Energy Partner

Account Number:
481113-238425
ELM CREEK WATERSHED MGMT ORG

Monthly Statement

Service Address
ELM CREEK RD
DAYTON MN

Total Amount Due	Due Date
$28.49	April 13, 2023

Billing Summary

Billing Date: Mar 17, 2023

Previous Balance	$28.49
Payments - Thank You!	$28.49
Balance Forward	**$0.00**
New Charges	**$28.49**
Total Amount Due	**$28.49**

Payment must be received on or before April 13, 2023

Message Center

Annual Meeting
Watch for your election ballots in the mail in early April. Your mailed packet has details on how to vote online and by mail. All members who vote will be entered into prize drawings. Election results will be announced at the Annual Meeting on April 20.

Energy Comparison

Previous Months' Usage Current Month's Usage

How to contact us

Member Services / Moving - 763-323-2650
Outages and Emergencies - 763-323-2660
Hearing/Speech Impaired Call - 711 or 800-627-3529
Email: info@connexusenergy.com
www.connexusenergy.com
Gopher State One Call - 811
14601 Ramsey Boulevard, Ramsey, MN 55303

▼ *Please detach at perforation and return this portion with a check or money order made payable to Connexus Energy* ▼

TRA3-D-006844/005916 VG29C5 S1-ET-M1-C00002

CONNEXUS® ENERGY
Your Community Energy Partner

Account Number:	**481113-238425**
Total Amount Due	**$28.49**
Payment Due By	April 13, 2023

006844 1 AB 0.504 002847/006844/005916 023 02 VG29C5
ELM CREEK WATERSHED MGMT ORG
3235 FERNBROOK LN N
PLYMOUTH MN 55447-5325

Connexus Energy
PO Box 1808
Minneapolis, MN 55480-1808

00002849 00048111302384225 000000 00000 00000000000 0000007

3235 Fernbrook Lane N
Plymouth MN 55447

Bassett Creek Watershed Management Commission
Elm Creek Watershed Management Commission
Shingle Creek Watershed Management Commission
West Mississippi Watershed Management Commission

03/17/23

2023 WMWA General Expense, Watershed PREP and Special Projects

Date	Description	Rate	Hours/ No.	Amount	Budget Total	Partner Share
	General Expense				12,000.00	3,000.00
	Watershed PREP				8,000.00	2,000.00
	Special Projects				16,000.00	4,000.00
	Total due this invoice					**9,000.00**
	Please make your check payable to:					
	Shingle Creek Watershed Management Commission					
	and mail to the address above.					
	Thank you.					

INVOICE

Comments

Surface Water Solutions LLC
6533 Neddersen Circle
Brooklyn Park, MN 55445-3206
952-456-4091
surfacewatersolutions@outlook.com

Stantec Project #

Invoice Date: April 1, 2023
Invoice Number: 2023-03

Type	Date	Hours	Job	Task	Memo	Amount
ECWMC	3/1/2023	1.00	Technical Services	Meetings	ECWMC meeting updates/follow-up	125.00
ECWMC	3/6/2023	0.40	Project Reviews	2022-042	Walcott Glen conference call	50.00
ECWMC	3/8/2023	2.50	Technical Services	Meetings	TAC and ECWMC meetings and preperation	312.50
ECWMC	3/8/2023	0.60	Technical Services	Pre-Project Review	archive search for Oswald/Corcoran request	75.00
ECWMC	3/16.23	0.33	Project Reviews	2022-030	project submittal/review condtiions/email	41.25
ECWMC	3/17/2023	2.00	Project Reviews	2022-042	revision review/findings updates email	250.00
ECWMC	3/20/2023	2.00	Technical Services	general	annual report updates Apendix C & F	250.00
ECWMC	3/21/2023	0.75	Project Reviews	2022-042	P8 review/updates/phone call and final email approve	93.75
ECWMC	3/27/2023	0.60	Project Reviews	2023-001	confrence call/emails	75.00
ECWMC						0.00
ECWMC						0.00
Total						1,272.50

Paid		Column1
Prereviews/Inquiries	101.2023.001	$75.00
Meetings	101.2023.002	$437.50
General Technical	101.2023.003	$250.00
Project Reviews	200	$510.00
Total		$1,272.50
	2022-030	$41.25
	2022-042	$393.75
	2023-001	$75.00
		$510.00

Stantec

INVOICE

Invoice Number	2063447
Invoice Date	March 31, 2023
Purchase Order	--
Customer Number	167501
Project Number	227705635

Bill To

Elm Creek Watershed Management Commission
Accounts Payable
3235 Fernbrook Lane
Plymouth MN 55447
United States

Please Remit To

Stantec Consulting Services Inc. (SCSI)
13980 Collections Center Drive
Chicago IL 60693
United States

Project	**Elm Creek WMO Services**			
	Project Manager	Megow, Erik Robert	Contract Upset	254,000.00
	Current Invoice Total (USD)	13,075.50	Amount Billed to Date	30,999.25
			For Period Ending	**March 24, 2023**

Accounting to email att: Judie Anderson at judie@jass.biz; Beverly@jass.biz

Top Task **101** **General Services**

Low Task **101.2023.001** **Prereviews and Inquiries**

Professional Services

Category/Employee		Current Hours	Rate	Current Amount
	Megow, Erik Robert	6.50	172.00	1,118.00
	Subtotal Professional Services	6.50		1,118.00

Low Task Subtotal **Prereviews and Inquiries** 1,118.00

Low Task **101.2023.002** **Meetings**

Professional Services

Category/Employee		Current Hours	Rate	Current Amount
	Megow, Erik Robert	5.00	172.00	860.00
	Matthiesen, Edward Armin (Ed)	0.25	220.00	55.00
	Subtotal Professional Services	5.25		915.00

Low Task Subtotal **Meetings** 915.00

Low Task **101.2023.003** **Other Services**

Professional Services

Category/Employee		Current Hours	Rate	Current Amount
	Truong, Kaitlen Nguyen (Kaitlin)	6.00	142.00	852.00
	Megow, Erik Robert	11.00	172.00	1,892.00
	Spector, Diane F	18.50	195.00	3,607.50
	Subtotal Professional Services	35.50		6,351.50

Invoice Number	2063447
Invoice Date	March 31, 2023
Purchase Order	--
Customer Number	167501
Project Number	227705635

Low Task Subtotal	**Other Services**	6,351.50
Top Task Subtotal	General Services	8,384.50

Top Task **200** **2023 Project Reviews**

Low Task **200.2023.001** **Chankahda Trail Reconstruction Phase 2**

Professional Services

Category/Employee	**Current Hours**	**Rate**	**Current Amount**
Krautmann, Kurt Thompson	6.75	127.00	857.25
Megow, Erik Robert	8.50	172.00	1,462.00
Thompson, Kathleen Anne (Katy)	0.50	195.00	97.50
Subtotal Professional Services	15.75		2,416.75

Low Task Subtotal	**Chankahda Trail Reconstruction Phase 2**	2,416.75

Low Task **200.2023.002** **Lynde Greenhouse Fire Damage**

Professional Services

Category/Employee	**Current Hours**	**Rate**	**Current Amount**
Krautmann, Kurt Thompson	2.75	127.00	349.25
Megow, Erik Robert	3.00	172.00	516.00
Subtotal Professional Services	5.75		865.25

Low Task Subtotal	**Lynde Greenhouse Fire Damage**	865.25

Low Task **200.2023.004** **Medina Industrial - Medina**

Professional Services

Category/Employee	**Current Hours**	**Rate**	**Current Amount**
Krautmann, Kurt Thompson	5.00	127.00	635.00
Megow, Erik Robert	4.50	172.00	774.00
Subtotal Professional Services	9.50		1,409.00

Low Task Subtotal	**Medina Industrial - Medina**	1,409.00
Top Task Subtotal	2023 Project Reviews	4,691.00
	Total Fees & Disbursements	13,075.50
	INVOICE TOTAL (USD)	**13,075.50**

Due upon receipt or in accordance with terms of the contract

3235 Fernbrook Lane
Plymouth MN 55447

Elm Creek Watershed Management Commission
3235 Fernbrook Lane
Plymouth, MN 55447

April 5 2023

				Total by Project Area
Administrative		70.00	0.00	
Administrative	52.750	75.00	3,956.25	
Admin - offsite	1.620	80.00	129.60	
Handbook		75.00	0.00	
Office Support	20.00	200.00	4,000.00	
Storage Unit - .47	1.00	183.77	183.77	
Data Processing/File Mgmt		70.00	0.00	
Drop Box Subscription		120.00	0.00	
Archiving		70.00	0.00	
Reimbursables	434.56	1.00	434.56	8,704.180
Administrative - TAC support		70.00	0.00	
Administrative - TAC Support	9.43	75.00	707.25	
Admin - TAC support	2.12	80.00	169.60	
TAC support - reimbursables	27.18	1.00	27.18	904.030
Website		70.00	0.00	
Website	0.93	75.00	69.75	
Web Domain, hosting		1.00	0.00	
Website - Zoom	30.17	1.00	30.17	99.920
Annual Report		70.00	0.00	
Annual Report	26.55	75.00	1,991.25	
Annual Reporting / Work Plans		75.00	0.00	
Annual Reporting/Work Plans - reimbursables	85.32	1.00	85.32	2,076.570
Project Reviews - Secre		70.00	0.00	
Project Reviews - Admin	4.35	75.00	326.25	
Project Reviews - Admin Project Specific	7.84	75.00	588.00	588.00
Project Reviews - Admin offiste		80.00	0.00	
Project Reviews - Admin - File Mgmt		75.00	0.00	
Project Reviews - reimbursables	47.73	1.00	47.73	373.980
CIPs -General		70.00	0.00	
CIPs - Administrative	3.83	75.00	287.25	
CIPs- Offsite Admin		80.00	0.00	
CIPs - reimbursables	2.48	1.00	2.48	289.730
Cost Share - admin		70.00	0.00	
Cost Share - admin	2.33	75.00	174.75	
Cost Share - reimbursables	3.62	1.00	3.62	178.370
TMDL Review	0.67	75.00	50.25	
TMDL Rev iew reimbursables	1.25	1.00	1.25	51.500
				13,266.280

elm creek
Watershed Management Commission

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

Chankahda Trail Reconstruction Phase 2

Plymouth Project #2023-01

Project Overview:

Location: Phase 2 of County Road 47 has been renamed Chankahda Trail. This phase extends from approximately 300 feet east of Peony Lane N/Maple Grove Parkway to roughly 100 feet east of Vicksburg Lane N.

Purpose: Improvements include the reconstruction of Chankahda Trail into a two-lane urban roadway, new trails along the north and south side of the road, utility updates, and stormwater management BMPs.

WMC Rules Triggered:

X	Rule D	Stormwater Management
X	Rule E	Erosion and Sediment Control
X	Rule F	Floodplain Alterations
	Rule G	Wetland Alteration
X	Rule H	Bridge and Culvert Crossings
	Rule I	Buffer Strips
	Rule K	Variance

Applicant:	City of Plymouth	*Attention:*	Ben Scharenbroich
Address:	3400 Plymouth Boulevard Plymouth MN, 55447	*Phone:*	(763)509-5527
		Email:	bscharenbroich@plymouthmn.gov
Agent:	Kimley-Horn and Associates	*Attention:*	Stephanie Thulien
Address:	767 N Eustis St Suite 100 St. Paul MN, 55114	*Phone:*	(612)-431-2644
		Email:	stephanie.thulien@kimley-horn.com

Exhibits:	**Description**	**Date Received**
Application	☒ Complete ECWMC Application	January 20, 2023
	☒ ECWMC Request for Review and Approval	January 20, 2023
	☒ City authorization: Plymouth, MN	January 12, 2023
	☒ Review fee: $6,075	January 20, 2023
	☒ Project Documents (site plans, reports, models, etc.)	January 20, 2023

Submittals

1. Stormwater Management Plan, dated January 11, 2023, prepared by Kimley-Horn and Associates, Revised March 6, 2023.
    a. Stormwater Narrative
    b. Existing and Proposed Drainage Maps

   c. Existing and Proposed HydroCAD Models
   d. Proposed MIDS Models
   e. Geotechnical Evaluation Report, dated June 25 2021, prepared by Braun Intertec Corporation
2. Construction Drawings, dated January 6, 2023, prepared by Kimley-Horn and Associates, Revised February 14, 2023

Findings

General

1. A complete application was received January 23, 2023. The initial 60-day decision period per MN Statute 15.99 expired March 24, 2023 and was extended an additional 60-days on March 23, 2023 to May 23, 2023.
2. The project area for Phase 2 includes the existing roadway and shoulders. Stormwater runoff currently sheet flows off the roadway. There is no existing storm sewer in this phase, except for a small portion at the intersection of Chankahda Trail and Vicksburg Lane N. The site currently drains in two general directions:
   a. To Elm Creek to the south
   b. To an existing wetland to the north
3. The proposed site for Phase 2 corridor will be reconstructed as an urban corridor with trails being added on the north and south side of the roadway. Storm sewer and infiltration basins will also be added, and the existing Elm Creek culvert will be replaced with a box culvert.
4. The total new and reconstructed impervious area will be 7.94-acres resulting in a net increase in impervious area of 2.65-acres.
5. Two proposed filtration basins and one rate control swale will be constructed to meet the water quality and abstraction requirements.
6. Braun Intertec recommended infiltration rates for stormwater BMPs to be listed as 0.06 in/hr. Because of this, infiltration BMPs are not feasible for this stormwater management design.
7. The project will cross Elm Creek and result in floodplain fill with compensatory storage.

Rule D – Stormwater Management

General

1. The total new and reconstructed impervious area will be 7.94-acres resulting in a net increase in impervious area of 2.65-acres.
2. Braun Intertec recommended infiltration rates for stormwater BMPs to be listed as 0.06 in/hr. Because of this, infiltration BMPs are not feasible for this stormwater management design.
3. Two proposed filtration basins and one rate control swale will be constructed to meet the water quality and abstraction requirements.
4. The ultimate discharge locations of the site are Elm Creek and an existing wetland area to the north.

Rate Controls

1. Rate control **meets** Commission requirements.
2. The proposed basins were sized to draw down within 48 hours.

3. The applicant provided HydroCAD model output for the 2-year, 10-year, and 100-year events total outflow from each drainage from the site. The rates are summarized in Table 1.

Table 1 Rate of Discharge Leaving Site

Direction	Condition	2-year (cfs)	10-year (cfs)	100-year (cfs)
South *To Elm Creek*	Pre-Project	17.76	31.39	65.57
	Proposed	13.14	22.74	43.98
	Change	**-4.62**	**-8.65**	**-21.59**
North *To Wetland*	Pre-Project	17.99	32.83	72.25
	Proposed	9.35	28.20	68.81
	Change	**-8.64**	**-4.63**	**-3.44**
TOTAL	Pre-Project	35.75	64.22	137.82
	Proposed	22.49	50.94	112.79
	Change	**-13.26**	**-13.28**	**-25.03**

Low Floor Elevations

1. Low floors **meet** Commission requirements.
2. The low floor elevations must be at least two feet above the 100-yr high water level (HWL) and at least one foot above the EOF for the stormwater pond.

Operation and Maintenance

The applicant will need to enter a stormwater maintenance agreement with the City of Plymouth. The city's template stormwater maintenance agreement satisfies the requirements of the Commission.

Abstraction Controls and Water Quality

1. Abstraction and Water Quality controls **meet** Commission requirements
2. Infiltration from 1.1 inches of runoff from impervious areas is not feasible.
3. The applicant proposes to use filtration to meet the Commission's requirement for abstraction.
4. Net, new impervious areas will be 2.65-acres from the site, requiring abstraction of 10,581 cubic feet.
5. The applicant provided existing and proposed MIDS modeling for the development showing conformance with the water quality requirements.

Table 2 Water Quality Summary

	Annual Runoff Vol. (ac-ft)	Abstraction Vol. (cubic feet)	TP (lbs/year)	TSS (lbs/year)
Pre-Project	18.62	N/A	15.20	2,760
Proposed (w/ BMP's)	22.77	10,581 (required) 32,670 (provided)	7.46	876
Change	**+4.15**	+22,089 (excess)	**-7.74**	**-1,884**

Rule E – Erosion and Sediment Control (plans)

1. Plans **meets** Commission requirements for erosion and sediment control.
2. The erosion and sediment control plans are consistent with current best management practices, including:
    a. Silt fence
    b. Catch basin inlet protection
    c. Permanent erosion control devices
    d. Stabilization of disturbed soil areas

Rule F – Floodplain Alteration

Alterations within the floodplain **do not meet** the Commission's requirements.

1. The 100-year high-water level of Elm Creek at the project location is 921.5 (NGVD 88).
2. The applicant is proposing net fill of 4,892 cubic yards within the 100-year floodplain of Elm Creek.
3. Approval of the provided compensatory storage is dependent on the Conditions of Approval being met for floodplain alteration.

Rule H – Bridge and Culvert Crossings

1. Bridge and culvert crossings **meet** the Commission's requirements.
2. Elm Creek box culvert maintains the 100-yr flow profile.
3. No rise certification provided.
4. The water quality is not adversely affected.

Recommendation

Conditional Approval

Conditions for Approval

1. Approval is contingent upon final application escrow fee balance. Additional payment or refund of the fees will be determined when all conditions for approval are met.
2. Approval is contingent upon an operation and maintenance plan that is approved by the City of Plymouth.
3. Approval is contingent upon the receival of an updated compensatory storage plan that is separated from groundwater and hydraulically connected to the floodplain.

On Behalf of Stantec Consulting Services, Inc.
Advisor to the Commission

Date 4/3/2022

Attachments

Figure 1	Project Location
Figure 2	Existing Drainage Map
Figure 3	Proposed Drainage Plan

Figure 1 Project Location

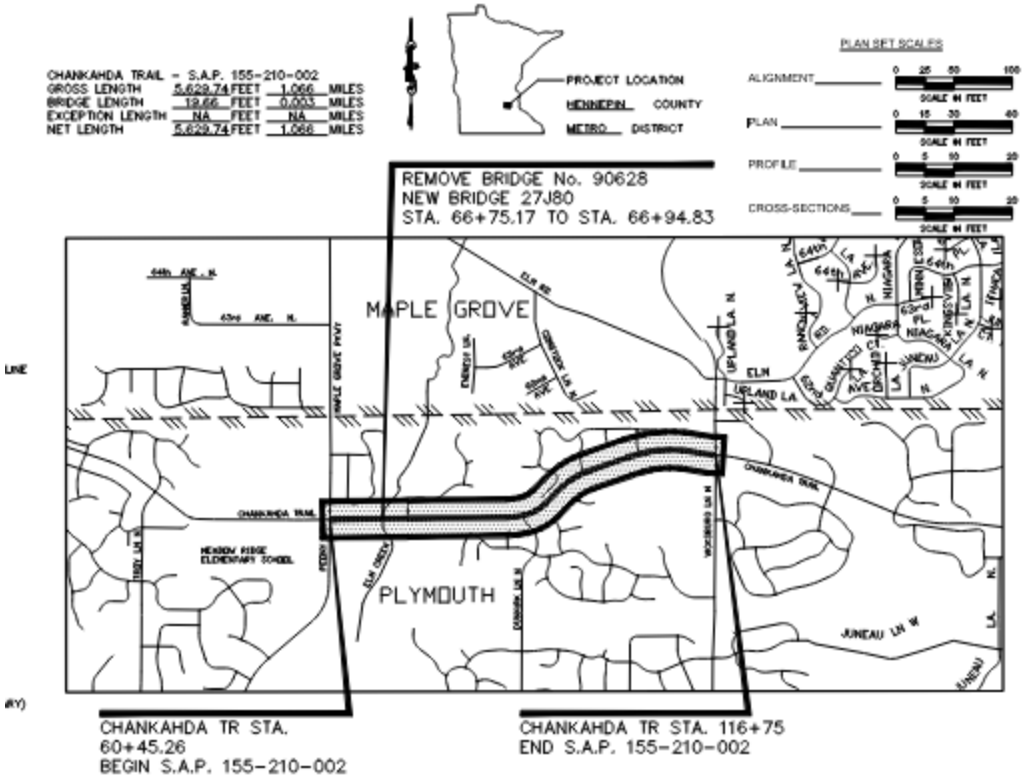


Figure 2 Existing Drainage Map

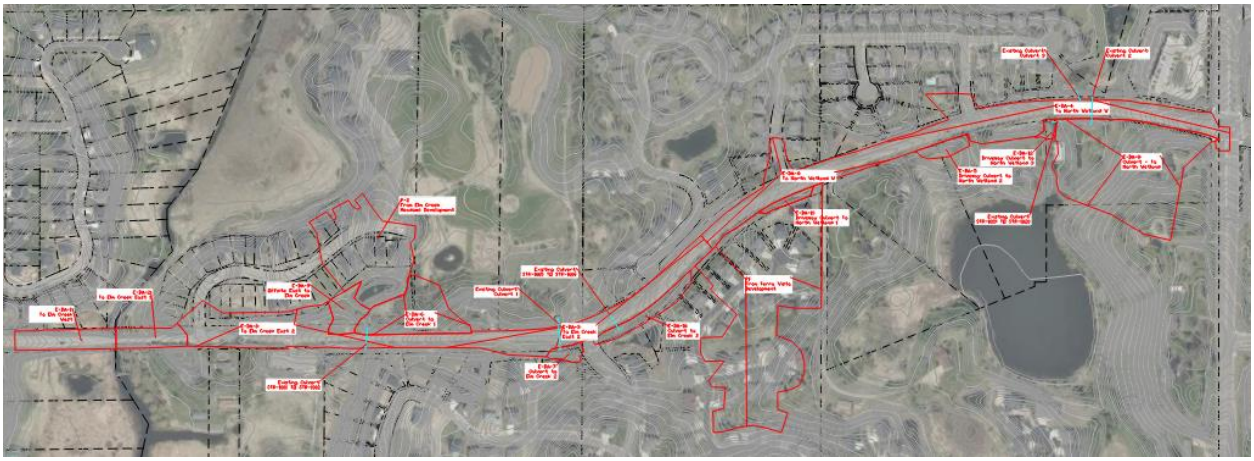
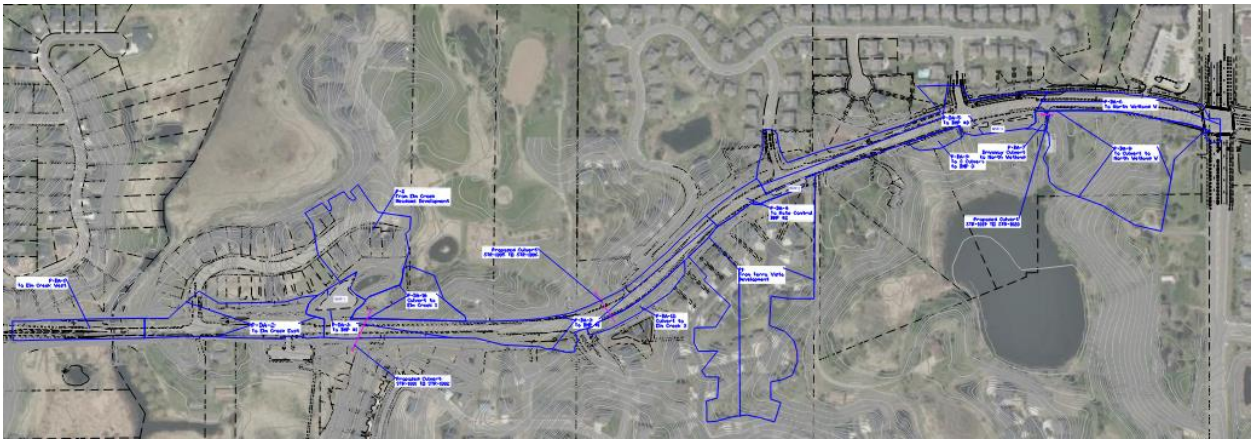


Figure 3 Proposed Drainage Plan



DRAFT

Elm Creek Watershed Management Commission

2022 Annual Activity Report

Elm Creek Watershed Management Commission

2022 Annual Activity Report

Table of Contents

Appendices

This report was prepared
for the Elm Creek Watershed Management Commission
by JASS, Inc.
For more information about this report, contact Judie@jass.biz

We gratefully acknowledge the assistance of:
Eric Megow, Stantec Consulting Services,
James Kujawa, Surface Water Solutions LLC,
Brian Vlach and Jonathan Hess, Three Rivers Park District

About the cover photograph:
Northwest Greenway, Plymouth
Photo courtesy of Ben Scharenbroich

The Northwest Greenway is a 350-acre wooded nature preserve with winding bike and pedestrian trails, stretching approximately two linear miles from Lake Camelot on the east side of Plymouth to the Northwest Greenway Pavilion and Challenge Course on the west. The Greenway connects to the Medicine Lake Regional Trail, which links French and Elm Creek regional parks.

Serving two main purposes, the Northwest Greenway preserves natural resources to provide a wildlife corridor in an area of Plymouth that is rich with high quality wetlands and trees. The Greenway also provides close to 7.5 miles of paved trails for walking and biking with scenic overlooks, an open-air pavilion for hosting gatherings and events, a Challenge Course and more.

This annual activity report, prepared by the Elm Creek Watershed Management Commission in accordance with the annual reporting requirements of Minnesota Rules Chapter 8410.0150 Subp. 2-3, summarizes the activities undertaken by the Commission during calendar year 2022.

≡ THE COMMISSION

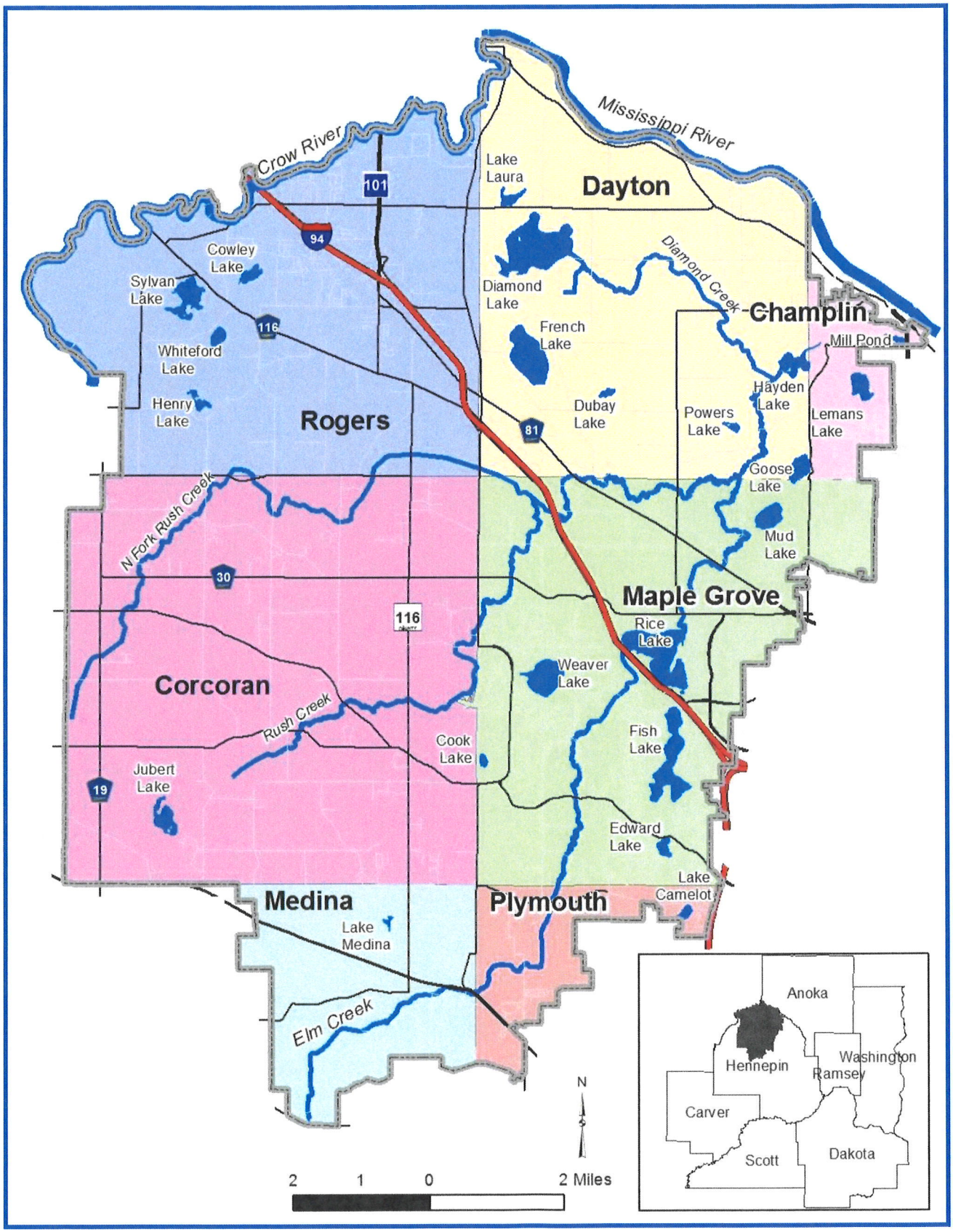
The Elm Creek Watershed Management Commission was established to protect and manage the natural resources of the Elm Creek watershed. A Board of Commissioners comprised of representatives appointed by the member communities was established as the governing body of the Commission. Its members are the cities of Champlin, Corcoran, Dayton, Maple Grove, Medina, Plymouth, and Rogers.

MEETINGS The Commission meets monthly on the second Wednesday at 11:30 a.m. Due to the COVID-19 pandemic, beginning in April 2020 and until April 2022, the Commission met virtually via zoom.us. All other meeting criteria remained the same. The May, June and July 2022 meetings took place in Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Gove, Minnesota. The August and subsequent meetings took place in the Plymouth Community Center, 14800 34th Avenue North, Plymouth, Minnesota. The meetings are open to the public and visitors are welcome. Meeting notices and agenda items are posted on the Commission's website. www.elmcreekwatershed.org.

COMMISSIONERS | TECHNICAL ADVISORY COMMITTEE | STAFF *Appendix A* includes the names of the Commissioners and their Alternates appointed to serve in 2022. Also listed there are the members of the Commission's Technical Advisory Committee (TAC) along with the individuals/firms serving as the Commission's administrative, legal, and technical support staff. The Commission has no employees.

≡ THE WATERSHED

The Elm Creek watershed covers approximately 130.61 square miles and lies wholly within the north central part of Hennepin County, Minnesota. The Crow and Mississippi Rivers demarcate the northern boundary. Although some areas in the north drain to the Crow and Mississippi Rivers, they are within the legal boundaries of the Elm Creek watershed. Table 1


Crow River
Mississippi River
Lake Laura
Dayton
101
94
Cowley Lake
Sylvan Lake
116
Whiteford Lake
Henry Lake
Rogers
Diamond Lake
Diamond Creek
Champlin
French Lake
Mill Pond
Dubay Lake
Powers Lake
Hayden Lake
Lemans Lake
81
Goose Lake
Mud Lake
N Fork Rush Creek
30
Maple Grove
116
Rice Lake
Weaver Lake
Corcoran
Rush Creek
Cook Lake
Fish Lake
Jubert Lake
19
Edward Lake
Lake Camelot
Medina
Plymouth
Lake Medina
Elm Creek
N
2 1 0 2 Miles
Anoka
Hennepin
Washington
Ramsey
Carver
Scott
Dakota

shows the area share of the member communities in the watershed. A map of the watershed may be viewed on the previous page.

Table 1 - Area of Members within the Elm Creek Watershed

Local Government Unit	Area (Square Miles)	%age of Watershed
Champlin	3.08	2.36%
Corcoran	36.06	27.61%
Dayton	25.17	19.27%
Maple Grove	26.32	20.15%
Medina	9.34	7.15%
Plymouth	4.44	3.40%
Rogers	26.20	20.06%
Total	130.61	100.0%

≡ The Watershed Plan

The Elm Creek Watershed Management Commission adopted its Third Generation Watershed Management Plan on October 14, 2015. The Third Generation Plan describes how the Commission will manage activities in the Elm Creek watershed in the ten-year period 2015-2024.

The Plan includes information required by Minnesota Administrative Rules Chapter 8410, Local Water Management: 1) an updated land and water resource inventory; 2) goals and policies; 3) an assessment of problems and identification of corrective actions; 4) an implementation program; and 5) a process for amending the Plan. The Plan also incorporates information and actions identified in the Elm Creek Watershed-wide Total Maximum Daily Load study (TMDL) and Watershed Restoration and Protection Strategy Study (WRAPS), completed between 2009 and 2016.

The Commission, along with the Citizen and Technical Advisory Committees (CAC and TAC), identified the following issues during development of the plan:

- **Water quality**—numerous lake and stream impairments, impact of land use changes, stream stability.
- **Agricultural impacts on water quality**—increase agricultural BMPs, develop effective mechanisms to encourage voluntary adoption, more effective outreach.
- **Funding**—maintaining a sustainable funding level; funding capital projects.
- **Other issues**—lack of information and knowledge of water quality issues and actions by multiple stakeholders; need to be realistic and prioritize actions; increase member city involvement; foster collaboration with other agencies.

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

- **Implement priority projects,** provide cost-share to member cities to undertake projects to help achieve WRAPS lake and stream goals.
- **Use results of WRAPS study to establish priority areas,** complete subwatershed assessments to identify specific BMPs that feasibly and cost-effectively reduce nutrient and sediment loading to impaired water resources.
- **Develop model manure management ordinance** to regulate placement of new, small non-food animal operations; require member cities to adopt that or other ordinances and practices to accomplish its objectives.
- **Partner with other organizations to complete pilot project** for targeted fertilizer application, increase and focus outreach to agricultural operators.
- **Continue participating in joint education and outreach activities** with the West Metro Water Alliance (WMWA) and other partners.

The Commission's goals and policies are detailed in *Appendix B.*

Local Plans

Member cities are required to adopt their own local water management plans during the life of the Commission's Watershed Management Plan. These plans must be consistent with the Commission's Plan and comply with MN Statutes, Section 103B.235, and MN Rules 8410 regarding local plan content.

≡ 2022 Work Plan in Review

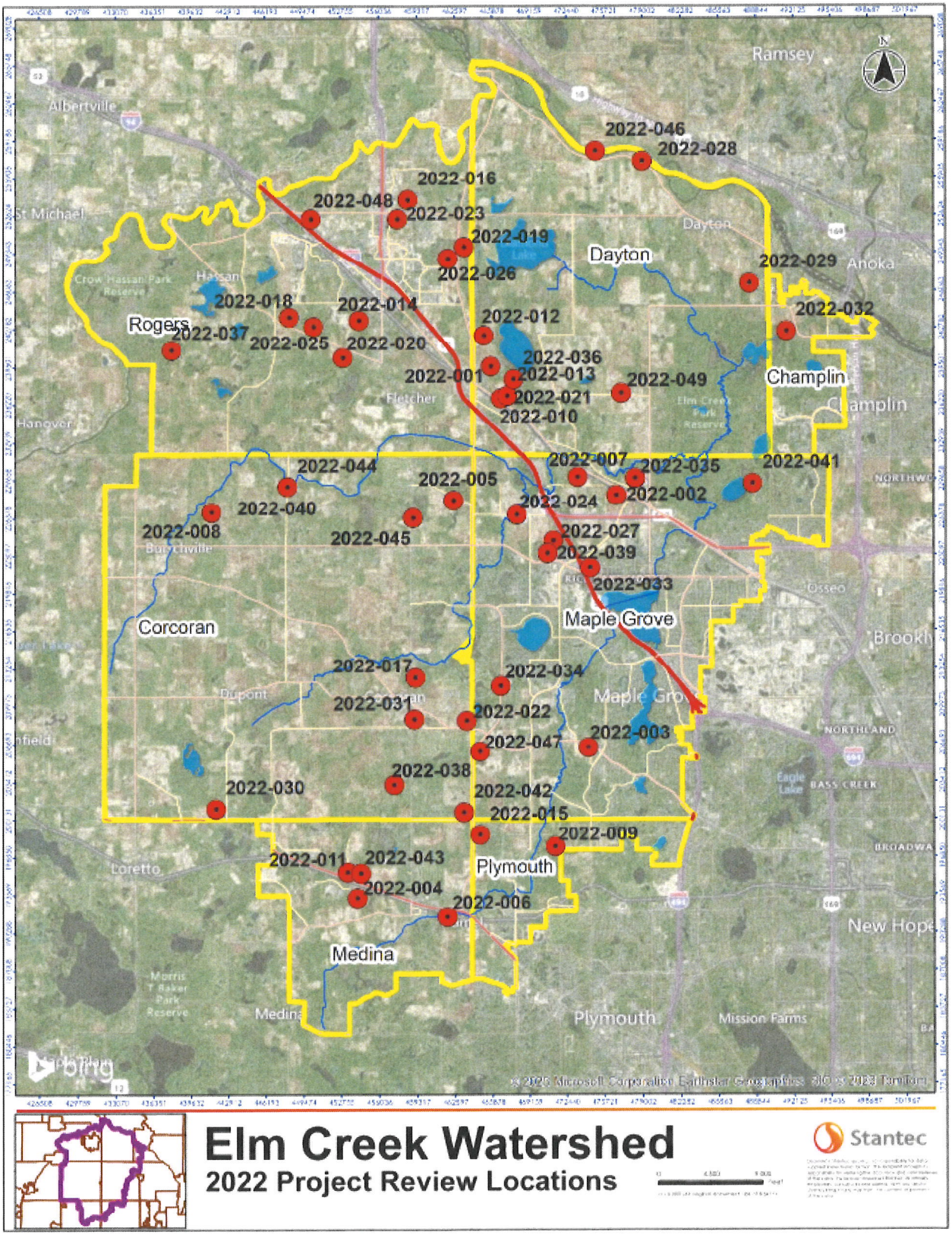
The Elm Creek Commission identified a number of activities to be undertaken in 2022. The activities are categorized as Technical, Monitoring, Education and Public Outreach, Projects and Capital Improvements, and Administrative, and are described below. The progress the Commission made toward completing these activities in 2022 is shown in ***italics.*** The 2022 Work Plan in Review was approved on February 8, 2023.

Technical

§ Continue to review local development/redevelopment plans for conformance with the standards outlined in the Commission's Third Generation Watershed Management Plan. *Evaluate the 2021 project review policy, application form, and fee schedule to determine how well they are meeting the Commission's goal of funding the costs of reviewing the projects. Revise the language for approval of O&M agreements. The Commission reviewed 49 projects in 2022. Now that the project review policy has been effect for two years, administrative and technical staff will meet early in 2023 to evaluate the policy and may recommend some adjustments.* Appendix C *lists these projects; a map showing their locations follows on page 6.*

§ Complete Special Flood Hazard Areas on the Federal Emergency Management Agency (FEMA) Floodplain maps located within the watershed into current modeling packages. The total budget for this project in Elm Creek was $92,772.45 and did not require a local match. At December 25, 2020, eight percent of the original budget remained, not including $14,800 of additional work authorized by the DNR in December 2020 and an additional $1,200 for the revision of 12 subwatersheds and update of the HEC-HMS model inputs for those subwatersheds. Work was completed by the end of the term of the contract, March 31, 2021.

As the member cities reviewed the model they noted significant differences between the flood elevations in their communities' hydrologic and hydraulic (XPSMWM) models and those included in the HUC-8 study. The Minnesota DNR had proposed to complete extensive surveys of all hydraulic structures (bridges, culverts, and weirs) within the effective (FEMA mapped) floodplain; however, they were unable to complete those surveys within limited budgets. Consequently, many hydraulic structures were modeled based on assumptions made from review of aerial imagery.


Ramsey
Albertville
St Michael
Dayton
Anoka
Champlin
Rogers
Hanover
Corcoran
Maple Grove
Plymouth
Medina
Loretto
New Hope
Osseo
Brooklyn Park
Mission Farms
2022-046
2022-028
2022-016
2022-048
2022-023
2022-019
2022-026
2022-029
2022-032
2022-018
2022-014
2022-012
2022-037
2022-025
2022-020
2022-036
2022-001
2022-013
2022-049
2022-021
2022-010
2022-044
2022-005
2022-007
2022-035
2022-041
2022-040
2022-024
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2022-008
2022-045
2022-027
2022-039
2022-033
2022-017
2022-034
2022-031
2022-022
2022-047
2022-003
2022-038
2022-030
2022-042
2022-015
2022-009
2022-011
2022-043
2022-004
2022-006
Elm Creek Watershed
2022 Project Review Locations
Stantec

On May 12, 2021, , the Commission authorized Stantec to undertake a Third Party Review of the study results. Stantec's findings were summarized and presented to the Commission' Technical Advisory Committee (TAC) in December 2021. The TAC directed Stantec to forward their summary and recommendations to the DNR.

Representatives from the DNR, Stantec, and the Commission's TAC met virtually to discuss Stantec's findings and recommendations. Based on the outcome of those discussions, proposals from Stantec and Barr Engineering were considered to rectify the work already completed in order to bring the project into satisfactory completion.

Stantec's proposal was chosen. Their updates to the model were sent to the DNR for review. The DNR responded via QA/QC review on November 8, 2022. Those comments were addressed and updates were sent to the DNR on January 5, 2023.

The next major step will be to hold the Flood Risk Review (FRR) meeting. The DNR is currently working with FEMA to determine the schedule and budget for remaining tasks for all of the Twin City HUC8 Models, including the Elm Creek model. The DNR will provide additional updates in early 2023, as they work through a grant amendment with FEMA.

MONITORING

- Continue to partner with the Three Rivers Park District (TRPD) to share in the costs of conducting lake and stream monitoring in the watershed. *In 2022 TRPD undertook stream monitoring and lake monitoring, including aquatic vegetation surveys on Diamond, Fish and Mud lakes. The DO longitudinal survey was not conducted in 2022 due to lack of water in the channel. Lake report cards are found in* Appendix D. *TRPD* stream monitoring results are found in Appendix E.

- In addition, under the five year-cooperative agreement, the Commission and the Park District provided financial support to assist the monitoring efforts of the United States Geological Survey (USGS) stream gauging station on Elm Creek within the Elm Creek Park Reserve. *Twelve monthly manual samples were collected to represent the variations in hydrologic conditions and physical and laboratory analyses of chemicals were also taken. A refrigerated automatic sample was used to collect eight composited samples of runoff events. They were discharge-weighted and collected during increasing or peak streamflow and analyzed for the same constituents as the manual samples. Analysis was completed for Total Phosphorus, Dissolved Phosphorus, Total Ammonia plus Organic Nitrogen, Dissolved*

Ammonia Nitrogen, Dissolved Nitrite plus Nitrate Nitrogen, Total Suspended Solids, Volatile Suspended Solids, Chemical Oxygen Demand, and Dissolved Chloride. Physical measurements included Water Temperature, Specific Conductance, and pH. Real time data from the monitoring station may be viewed on the Internet at http://waterdata.usgs.gov/mn/nwis/uv/?site_no=05287890&PARAmeter_cd=00065,00060.

§ Continue to operate the monitoring station in Champlin in cooperation with the United States Geological Survey (USGS). *The cooperative agreement was renewed for WY2022-23. The Commission's portion of the agreement is $44,900; the USGS' share is $39,800. A description of the USGS monitoring program, including 2022 results, are shown in* Appendix F.

§ Fund the monitoring of one lake through Metropolitan Council's Citizen Assisted Monitoring Program (CAMP). *No lakes were monitored by Commission volunteers during the 2022 CAMP program. When available, CAMP monitoring results are available on the Met Council's website, https://metrocouncil.org/Wastewater-Water/Services/Water-Quality-Management/Lake-Monitoring-Analysis/Citizen-Assisted-Monitoring-Program.aspx . Appendix G describes the CAMP program.*

§ Participate in the Minnesota Wetland Health Evaluation Program (WHEP) with four wetlands in 2022. *WHEP did not occur in 2022. Leadership in the Hennepin County Department of Environment and Energy have decided to discontinue WHEP, as it does not meet their department goals.*

EDUCATION AND PUBLIC OUTREACH

§ Continue as a member of the West Metro Water Alliance (WMWA). *). Due to the pandemic, Watershed PREP (**P**rotection, **R**estoration, **E**ducation, and **P**revention) classes were cancelled or conducted virtually. A video of the Watershed PREP class is available for home school or classroom viewing at http://www.westmetrowateralliance.org/.*

In 2022 WMWA and its member WMOs partnered with Hennepin County and the Richfield-Bloomington WMO to develop a shared education and outreach coordinator position funded by Watershed-Based Implementation Funding (WBIF) and the WMWA special projects budget. This two-year limited duration position will focus on engaging with various stakeholder groups in the five watersheds on clean water and chloride management issues. WMWA also drafted a long-term vision for the organization to help transition from a part-time to a full-time coordinator.

- Continue as a member of Blue Thumb and WaterShed Partners. *Administrative staff attended these meetings, offering expertise and otherwise participating to support our shared goals, and providing updates to the Commission at their monthly meetings.*

- Promote "Lawns to Legumes," a program for residents to seed their lawns with a bee lawn mix, targeting habitat for endangered species. A collaboration between Blue Thumb and the Minnesota Board of Water and Soil Resources (BWSR), provides cost-share funding and other resources to help Minnesota residents establish pollinator habitat in their yards. *The Commission continues to support and promote this program. Funding is provided by the Environment and Natural Resources Trust Fund (ENRTF) and is targeted in priority areas to benefit the Rusty patched bumblebee and other at-risk species.*

- Sponsor Resilient Yard Workshops as part of the Commission's Education and Public Outreach Program. The workshops are presented by Metro Blooms. *Since the beginning of the pandemic, all workshops have been held virtually. Virtual workshops were conducted in Plymouth on April 14, 2022, with 40 participants and on April 26 in Champlin with 15 registrants.*

  Since the pandemic precluded holding in-person workshops, a new Blue Thumb training program was implemented to teach participants skills in inspecting and caring for raingardens and other green infrastructure, all within a framework of eco-friendly landscaping practices. Individuals who take part in the three-session program receive a Sustainable Landcare Certificate. Participants in the program first receive Stormwater Basics, learning about watersheds and how water travels in our urban environment. They also learn how raingardens are built, how they work, and how to inspect them to ensure that they function properly. An important part of the program is identifying weeds, a major culprit of dysfunctional raingardens, and then choosing a way to manage them (without chemicals, if possible).

- Work with the Hennepin County Department of Environment and Energy (HCEE). Assist landowners in identifying BMPs for implementation throughout the watershed. Work with member cities to identify projects that will result in TMDL load reductions. HCEE *Staff provided monthly staff reports at the Commission's regular meetings. Included in those reports were project and program updates as well as announcements of grant programs and clinics offered by the County. In 2022 the County fully installed a manure bunker, two automatic waterers (to keep cattle out of North Fork of Rush Creek), two livestock*

exclusion fence projects, and gutters on several barns to reduce runoff traveling over areas cattle regularly cross. The County also substantially installed five grassed waterways in the Jubert Lake Subwatershed before construction was halted for the winter. Collectively, these projects will reduce loading to the North Fork of Rush Creek by 47.2 tons of sediment and 110.9 lbs. of phosphorus annually. Each of these projects was funded through the Commission's CIP, state grant funds, and County and landowner contributions. The County also developed design elements for several projects which will be installed in 2023.

As further described below, the Rush Creek and Diamond Creek subwatershed assessments received funding for additional implementation 2023-2024 through a Board of Water and Soil Resources (BWSR)-sponsored Watershed Based Implementation Funding (WBIF) grant. Applications for a Hennepin County Good Steward grant and a Commission cost-share grant were also submitted for a channel stabilization project in Dayton.

§ Promote river stewardship through Hennepin County's RiverWatch program with three sites in 2022. *Volunteer monitoring did not occur in 2022 but will resume in 2023.*

§ Continue to populate and maintain the Commission's website www.elmcreekwatershed.org to provide news to residents, students, developers and other individuals interested in the water resources of the watershed. *This is an ongoing activity. In 2022 the website had 2,741 total users. Of these, 2,693 were new users. A total of 4,282 sessions occurred among all users, averaging 1.56 pages per session.*

PROJECTS AND CAPITAL IMPROVEMENTS

§ Send call out to member cities, requesting them to provide updates to the projects already included on the Commission's Capital Improvement Program (CIP) as well as inform the Commission of new projects that they would like to have considered for inclusion on the CIP. Hold public meeting, adopt an amendment to the Third Generation Watershed Management Plan to add or modify projects, conduct public hearing, and certify levy to Hennepin County. *The Technical Advisory Committee (TAC) convened April 13, 2022, to update the 2021 CIP. At that meeting the members received revisions, additions, and deletions to the 2021 CIP spreadsheet from the member cities. A total of nine new projects were added to the CIP.*

A public meeting was held on May 11, 2022, for the purpose of adding three projects to the CIP in 2022 and revising Appendix C of the Plan, the Rules and Standards, to (1) make the Commission's Rules consistent with the most recent Minnesota General Stormwater Permit, and (2) clarify the Commission's Standards regarding the required freeboard between the high-water elevation of a constructed or natural water and the low floor or opening of a proposed adjacent structure. The Commission adopted Resolution 2022-01 Adopting a Minor Plan Amendment and setting the 2022 maximum levy at $589,903. The County Board approved the Minor Plan Amendment and adopted a 2022 maximum levy of $589,903 for the Elm Creek Commission on July 19, 2022.

A public hearing was held on September 14, 2022, where the Commission certified a levy totaling $589,903 for three projects to move forward in 2022 – the South Fork Rush Creek Stream restoration project in Maple Grove ($430,828); the 2022 City Cost Share project ($106,050); and the 2022 Partnership Cost Share project ($53,025).

§ Support the City of Corcoran and its partners as they undertake a subwatershed assessment for the South Fork of Rush Creek. A small portion of the South Fork also flows through the cities of Maple Grove and Medina. *The Corcoran City Council has directed its staff to continue reviewing implementation options related to the Stormwater Area Charge Study with results to be presented to the Council in early 2023.*

§ Support the City of Dayton and its partners to continue efforts for completion of the Diamond Lake subwatershed assessment. *The Diamond Lake Subwatershed Assessment Report was finalized and submitted to the City of Dayton in March 2022.*

§ The Board of Water and Soil Resources BWSR held several Listening Sessions to take feedback and help decide how to allocate FY22 Watershed Based Implementation Funds (WBIF). On October 27, 2021, the BWSR Board approved a process that would allocate funds to Metro watersheds with "a $75,000 minimum per watershed planning area inside of the Metro, and a distribution of funds based on a weighting of 90% private land and 10% on public waters to all eligible areas." *In 2022, $267,774 in 2023 WBIF funds were available from BWSR for allocation within the Elm Creek watershed. The Convene Committee allocated $175,000 to continued implementation of projects in the Rush Creek Headwaters SWA as well as projects in the newly completed Diamond Lake SWA. $30,000 was allocated to the education and outreach coordinator described on page 8 of this report, and the balance of $92,274 was allocated to high-priority area*

assessments. No specific assessments were selected but the proposed South Fork Rush Creek SWA, feasibility assessments for the Diamond Lake outlet channel project, and the Rush Creek meandering near Stieg Woods were identified as potential projects to be considered for funding in 2023. Projects must be completed by December 31, 2025.

§ Make application for funding from the newly-created Minnesota Pollution Control Agency (MPCA) resiliency grant program. This program provides grants to communities statewide for climate resiliency planning. The grants can pay for the climate risk assessment, planning, and pre-design needed to inform the development of bonding proposals to upgrade stormwater infrastructure. Grants will be available on a competitive basis to counties, cities, townships and Tribal Nations in Minnesota. *At their November meeting, Staff proposed an application comprised of the following scope of work: (1) Model and map midcentury precipitation scenarios to create projected flood inundation areas for the 1%+ 24-hour rainfall event and the 1%+ 10 day event. (2) Identify potential future flooding risks in the watershed by reviewing known flooding areas, infrastructure, structures, and emergency vehicle routes in or in close proximity to predicted future hazardous flood conditions. (3) Develop policy recommendations for using the scenario data. The TAC decided not to move forward with an application at this time.*

ADMINISTRATION

§ Adopt a 2023 operating budget. *At its June 8, 2022, regular meeting, the Elm Creek Watershed Management Commission approved a 2023 operating budget totaling $1,014,165. To fund the 2023 budget the Commission approved member assessments of $270,000, a 5.4% increase in city assessments, the first increase since 2020.*

§ Prepare a 2021 Audit Report. *The* 2021 Audit Report *was prepared by Johnson and Company, Ltd. and transmitted to the State Auditor and to the Board of Water and Soil Resources on June 30, 2022, per MN Rule 8410.*

§ Conduct the biennial solicitation of interest proposals for administrative, legal, technical and wetland consultants, pursuant to Minnesota Statutes Annotated 103B.227.subd. 5. *The solicitation was published in the November 28, 2022, edition of the* State Register. *Responses will be reviewed at the Commission's January 11, 2023, meeting.*

§ Publish an annual activity report summarizing the Commission's yearly activities and financial reporting. *The* 2021 Annual Activity Report was *transmitted to the Board of*

Water and Soil Resources on April 29, 2022, and uploaded to the Commission's website on that date.

§ Participate with the Board of Water and Soil Resources in a Performance Review and Assistance Program (PRAP) Level II Review. *A PRAP Level II review is conducted by BWSR once every ten years for every local government unit. The review focuses on the degree to which an organization is accomplishing the goals of its water management plan. The Commission underwent a PRAP review in 2021. A committee comprised of Plymouth Commissioner Catherine Cesnik, Commission Chairman Doug Baines, Stantec consultant Diane Spector, and Administrator Judie Anderson were charged with responding to the recommendations brought forward by BWSR. Their first meeting, via Zoom, was held February 16, 2022. The group met, discussed the findings, and agreed by consensus to take BWSR's comments under advisement during development of the Fourth Generation Plan.*

≡ FINANCIAL REPORTING

The following pages show the Elm Creek Watershed Management Commission's approved budget and member assessments for the years 2021 and 2022. The Commission's Joint Powers Agreement provides that each member community contributes toward the annual operating budget based on its share of the total market value of all property within the watershed.

Of the $931,405 operating budget for 2022 approved by the Commission on June 9, 2021, revenue of $149,375 was projected as proceeds from application fees, $6,000 from partnership revenue, $125,000 from grant proceeds, and $5,250 from interest income and dividends, resulting in assessments to members totaling $237,300. $10,792 was projected as coming from reserves.

In 2021, the Commission designated $291,638 as its share of the cost of three CIP projects. A Hennepin County ad valorem levy payable in 2022 was used to fund the Commission's share of the three projects.

$200,000 was projected as project review-related expense; $50,917 for water monitoring; and $17,000 for education. $137,800 was budgeted for administration, planning, and general operating expenses. $5825,688 resides in an assigned fund for special projects, studies and subwatershed assessments.

The Commission maintains a checking account at US Bank for current expenses and rolls

Elm Creek Watershed Management Commission
2021-2022 Operating Budget

Row				2021 Budget	2022 Budget
			EXPENSES		
GENERAL OPERATING EXPENSES					
7	Administrative			95,000	95,000
8		Watershed-wide TMDL Admin		0	0
9	Grant Writing			650	500
10	Website			2,000	3,000
11	Legal Services			2,000	2,000
12	Audit			5,000	6,000
13	Insurance			3,800	3,800
14	Technical support - HCEE - conservation promotion, landowner outreach, and project implementation.			12,000	12,000
15	Contingency			1,000	1,000
16			***Subtotal General Operating Expenses*** *lines 6-15*	***121,450***	***123,300***
EDUCATION					
19	Education				
20		Education - City/Citizen Programs		2,500	2,500
21	West Metro Water Alliance				
22		WMWA General Admin		5,000	5,000
23		WMWA Implementation Activities incl Watershed PREP		6,500	4,500
24		RG Workshop/Intensive BMPs/Special Projects		3,000	2,000
25		Education Grants		1,000	0
26		Macroinvertebrate Monitoring-River Watch		3,000	3,000
27		Ag Specialist		0	0
28			***Subtotal Education*** *lines 18-27*	***21,000***	***17,000***
WATERSHED MANAGEMENT PLAN					
31		Plan Amendments		2,000	2,000
32		Local Plan Review			
33		Contribution to 4th Generation Plan		10,000	12,500
34			***Subtotal Watershed Management Plan*** *lines 30-33*	***12,000***	***14,500***

Elm Creek Watershed Management Commission
2021-2022 Operating Budget

	Row			2021 Budget	2022 Budget
			EXPENSES		
			WATER MONITORING PROGRAMS		
		Expenses			
	38		Stream Monitoring		
	39		Stream Monitoring - USGS	24,000	24,000
	40		Stream Monitoring - TRPD	7,200	9,345
	41		Extensive Stream Monitoring		
	42		DO Longitudinal Survey	1,000	1,200
	43		Gauging Station - Elec Bill	400	420
	44		***Subtotal Stream Monitoring*** *lines 37-43*	***32,600***	***34,965***
	46		Lake Monitoring		
	47		Lake Monitoring - CAMP	760	840
	48		Lake Monitoring - TRPD		
	49		Sentinel Lakes	8,100	8,460
	50		Additional lake	2,500	1,352
	51		Aquatic Vegetation Surveys	1,100	1,300
	52		***Subtotal Lake Monitoring*** *lines 46-51*	***12,460***	***11,952***
			Other Water Monitoring		
	55		Rain Gauge Network	0	0
	56		Source Assessment	0	0
	57		Watershed-wide TMDL-Follow-up-TRPD	0	0
	58		Wetland Monitoring - WHEP	4,000	4,000
	59		***Subtotal Other Monitoring*** *lines 54-58*	***4,000***	***4,000***
	60		**Total Monitoring Expense** *lines 44,52,59*	**49,060**	**50,917**
		FLOODPLAIN MONITORING			
	63		Barr - Floodplain modeling	0	0
	64		**TOTAL GENERAL OPERATING EXP-***lines 63,60,34,28,16*	**203,510**	**205,717**

Elm Creek Watershed Management Commission
2021-2022 Operating Budget

Row		2021 Budget	2022 Budget
	EXPENSES		
	PROJECT REVIEWS and WETLAND CONSERVATION ACT (WCA)		
66	Technical - Barr Engineering/SWS - project reviews	185,000	185,000
69	Administrative Support	12,000	15,000
70	WCA Expense	3,000	0
71	WCA Expense - Legal	500	0
72	WCA Expense - Admin	1,000	0
73	***Subtotal Project Review / WCA Expenses*** *lines 66-72*	***197,000***	***200,000***
	CIPS, GRANTS, SPECIAL PROJECTS, STUDIES, SWAs		
76	CIPs	*175,000*	*294,638*
77	Grants	*125,000*	*125,000*
78	Special Projects, Studies, SWAs	*0*	*106,050*
79	***Subtotal CIPs, Grants, Spec Projects, etc.*** *lines 75-78*	***300,000***	***525,688***
80	**TOTAL EXPENSES** - *lines 64,73,79*	***700,510***	***931,405***
	REVENUE		
	GENERAL OPERATING REVENUE		
84	Membership Dues	237,300	237,300
85	Interest Income	15,000	5,000
85	Dividend Income	250	250
87	TRPD Cooperative Agreement	5,500	6,000
88	DNR Contract - Floodplain Modeling	0	0
90	***Subtotal General Operating Revenue*** *lines 83-88*	***258,050***	***248,550***
	PROJECT REVIEW and WCA REVENUE		
93	Project Review Fees	100,000	149,375
94	WCA Fees and Escrows Earned	0	0
95	Forfeited/Reimbursed Sureties		
96	***Subtotal Project Review / WCA Revenue*** *line 93-95*	***100,000***	***149,375***
	CIPS, GRANTS, SPECIAL PROJECTS, STUDIES, SWAs REVENUE		
99	CIPs	*185,588*	*291,638*
100	Grants	*100,000*	*125,000*
101	Special Projects, Studies, SWAs		*106,050*
102	***Subtotal CIPs, Grants, Spec Projects, etc.*** *lines 99-101*	***285,588***	***522,688***
104	**TOTAL REVENUE** - *lines 90,96,102*	***643,638***	***920,613***
	Surplus/Deficit - *lines 80,104*	***56,872***	***10,792***

Elm Creek Watershed Management Commission
2021-2022 Member Assessments

2021	2020 Taxable Market Value		2020 Budget Share			Increase over Previous Year	
			%age	Dollars		%age	Dollars
Champlin	586,080,150		4.13%	9,801.07		3.34%	33
Corcoran	945,017,350		6.66%	15,803.61		4.12%	171
Dayton	859,590,989		6.06%	14,375.02		9.32%	832
Maple Grove	7,002,119,108		49.35%	117,097.09		90.00%	-2,432
Medina	1,117,455,738		7.87%	18,687.32		1.38%	-298
Plymouth	1,634,614,359		11.52%	27,335.81		9.85%	1,706
Rogers	2,045,081,387		14.41%	34,200.09		2.96%	-12
Totals	**14,189,959,081**		**100.00%**	**237,300.00**		**0.00%**	**0**
2022	**2021 Taxable Market Value**		**2021 Budget Share**			**Increase over Previous Year**	
			%age	**Dollars**		**%age**	**Dollars**
Champlin	603,102,432		3.940	9,349.36		-0.05	-452
Corcoran	1,053,101,089		6.880	16,325.28		0.03	522
Dayton	1,000,693,347		6.537	15,512.85		0.08	1,138
Maple Grove	7,344,495,742		47.979	113,855.14		-0.03	-3,242
Medina	1,187,298,004		7.756	18,405.62		-0.02	-282
Plymouth	1,887,099,770		12.328	29,254.02		0.07	1,918
Rogers	2,231,809,062		14.580	34,597.74		0.01	398
Totals	**15,307,599,446**		**100.000**	**237,300.00**		**0.00%**	**0.00**

uncommitted monies to its account in the 4M Fund, the Minnesota Municipal Money Market Fund.

The 2021 Audit Report*, which was prepared by Johnson & Company, Ltd., Certified Public Accountants, was accepted by the Commission at its June 8, 2022, meeting and submitted to the State Auditor online per compliance guidelines. It is available for viewing on the Commission's website, http://www.elmcreekwatershed.org/uploads/5/8/3/0/58303031/ec_financial_statements_12-31-2021_final.*

The Commission follows Rule 54 of the Government Accounting Standard Board (GASB) to report Fund Balances. The fund balance classifications include:

Nonspendable – amounts that are not in a spendable form. The Commission does not have any items that fit this category.

Restricted – amounts constrained to specific purposes by their providers. One example would be ad valorem levy funds received from the County for capital improvement projects. The unused portion of these funds must be set aside in a restricted account for similar projects. Another example would be BWSR Legacy Grant proceeds where the funds are received prior to the onset of a project and where any unused portion must be returned to the grantor.

Committed – amounts constrained to specific purposes by the Commission itself. An example would be residual funds carried over from one year to the next for Studies, Project Identification and Subwatershed Assessments.

Assigned – amounts the Commission intends to use for specific purposes. Most line items in the Commission's Operating Budget fall under this category.

Unassigned – amounts available for any purpose. These amounts are reported only in the general fund.

Amounts paid by the Commission per the 2021 Audit are as follows:

General engineering	$224,492
General administration	140,890
Education	6,304
Programs	47,154
Projects	29,385
Capital projects	130,851
Total	$579,076

General engineering work includes review of local plans, review of development/ redevelopment projects, attendance at meetings and other technical services. General administration includes support to technical staff, attendance at meetings, insurance premiums, annual audit, legal counsel, tracking grant opportunities, watershed planning, and other non-engineering services.

≡ Projected 2023 Work Plan

What follows below is the projected work plan for the year 2023. It was approved at the Commission's February 8, 2023, meeting.

- Continue to review local development/redevelopment plans for conformance with the standards outlined in the Commission's Third Generation Watershed Management Plan. *Evaluate the project review policy, application form, and fee schedule developed in 2021 to determine how well they are meeting the Commission's goal of funding the costs of reviewing the projects.*

- Continue to partner with the Three Rivers Park District (TRPD) to share in the costs of conducting lake and stream monitoring in the watershed. *In 2023, TRPD will monitor Elm Creek at 77th Avenue (ECF77); Rush Creek at Territorial Road (RT); and Diamond Creek (DC) for continuous flow and water quality. A dissolved oxygen longitudinal survey will also be conducted if adequate flow is available. TRPD will also monitor four sentinel lakes (Fish, Weaver, Diamond, and Rice) and two additional non-sentinel lakes in 2023. Under the cooperative agreement, the Commission and the Park District will also provide financial support to assist the monitoring at the USGS monitoring station in Champlin.*

- Fund the monitoring of one lake through Metropolitan Council's Citizen Assisted Monitoring Program (CAMP). *One lake will be monitored through CAMP in 2023.*

- Continue to operate the monitoring station in Champlin in cooperation with the United States Geological Survey (USGS). *The current cooperative agreement with the USGS extends through September 30, 2023.*

- Promote river stewardship through Hennepin County's RiverWatch program with three sites in 2023. *Hennepin County has resumed this volunteer macroinvertebrate monitoring program, but participation is in ongoing discussion.*

- Continue as a member of the West Metro Water Alliance (WMWA). *The contract Educator will continue to schedule classroom visits in 2023. The four member WMOs: Bassett Creek, Elm Creek, Shingle Creek, and West Mississippi, along with the Richfield-Bloomington WMO, will partner with Hennepin County to provide a one-half time education and outreach coordinator to provide engagement and programming in the five watersheds.*

- Promote "Lawns to Legumes," a program for residents to seed their lawns with a bee lawn mix, targeting habitat for the Rusty-patched bumblebee, an endangered species. *A collaboration between Blue Thumb and the Minnesota Board of Water and Soil Resources (BWSR), provides cost-share funding and other resources to help*

Minnesota residents establish pollinator habitat in their yards. The Commission supports this program on its website and with membership in Blue Thumb.

- Sponsor Resilient Yard Workshops as part of the Commission's Education and Public Outreach Program. The workshops are presented by Metro Blooms. *One of the engagement focus areas of the new half-time coordinator will be helping to market and coordinate workshops, whether sponsored by cities in the watershed, online, or elsewhere in the Metro.*

- Continue as a member of Blue Thumb and WaterShed Partners. *Staff will continue to virtually attend WaterShed Partner meetings and Blue thumb meetings to share resources, bringing back programs and ideas for promotion by the Commission. Administrative staff attend these meetings, offering expertise and otherwise participating to support our shared goals, and providing updates to the Commission at their monthly meetings.*

- Develop and implement a Chloride Education and Outreach Plan. *The Commission and TAC will identify target stakeholders and messages and develop options for delivering programming. This work will be coordinated with WMWA and the Hennepin County Chloride Initiative.*

- Continue to work in partnership with the University of Minnesota's agriculture specialist to help build relationships with the agricultural community in the watershed to achieve TMDL load reductions. *The Commission will continue to work with the agricultural specialist as available to supplement efforts of the Rural Conservation Specialists.*

- Work with the Hennepin County Rural Conservation Specialist. Assist landowners in identifying BMPs for implementation throughout the watershed. Work with member cities to identify projects that will result in TMDL load reductions. *Hennepin County Environment and Energy Staff will collaborate with landowners to identify BMP projects as well as larger, more strategic projects for inclusion on the Commission's Capital Improvement Program (CIP). County Staff will provide updates to the Commissioners through their monthly Staff Reports.*

- Send call out to member cities, requesting them to provide updates to the projects already included on the Commission's Capital Improvement Program (CIP) as well as inform the Commission of new projects that they would like to have considered for

inclusion on the CIP. *Hold public meeting and adopt an amendment to the Third Generation Watershed Management Plan; conduct a public hearing for any projects to be ordered; and certify levy to Hennepin County.*

§ Undertake high priority projects identified in the Rush Creek Headwaters and Diamond Lake Subwatershed Assessments. *This activity will continue and be expanded in 2023. The Commission has dedicated an additional $175,000 in Watershed-Based Implementation Funding to these implementation efforts, centered on the Rush Creek Headwaters and Diamond Lake subwatersheds.*

§ Adopt a 2024 operating budget. *A Budget Committee will draft a 2024 operating budget for consideration by the Commission in May 2023.*

§ Adopt an Adequate Fund Reserve Policy. *A subcommittee has worked with the Commission's auditor to draft this policy, and to modify the financial reporting formats to ease the Commissioners' ability to understand the Commission's financial position throughout the year.*

§ Prepare a 2022 Audit Report. *This report will be prepared by Johnson and Company, LTD and forwarded to BWSR per MN Rule 8410.*

§ Continue to populate and maintain the Commission's website www.elmcreekwatershed.org to provide news to residents, students, developers, and other individuals interested in the water resources of the watershed. *This activity will continue in 2023.*

§ Publish an annual activity report summarizing the Commission's yearly activities and financial reporting. *The* 2022 Annual Activity Report *will be published in April 2023 and made available to the member cities and the public on the Commission website, http://www.elmcreekwatershed.org/annual-reports.html.*

§ Complete the update of the Special Flood Hazard Areas. *The Commission's and cities' work is complete. The DNR is currently exploring options internally to complete the final reviews and mapping for HUC-8 updates across the Metro area.*

§ Using WBIF funding, undertake a subwatershed assessment of the South Fork Rush Creek subwatershed, and conduct feasibility assessments for remeandering North Fork Rush Creek between CR 116/Fletcher Lane and Brockton Road, and the outlet channel from Diamond Lake to Diamond Creek. *Corcoran's City Council will submit a formal*

request for the SWA, including a commitment to provide its cost share, and will assist in seeking any necessary additional funding, and provide any appropriate local assistance. The drainage area also includes small areas of Medina and Maple Grove.

Elm Creek Stream Restoration between Highway 55 and Peony Lane, Plymouth

Have a question about this report? Need more information?
Want to know how to get involved?
http://www.elmcreekwatershed.org/contact-us.html

APPENDICES

Commissioners

Commissioners and Alternate Commissioners are appointed by the communities they represent and serve at will. Officers are elected annually at the March regular meeting and assume office on April 1.

REPRESENTING	NAME/POSITION	ADDRESS	TELEPHONE/EMAIL
Champlin	Bill Walraven Secretary	216 Lowell Road Champlin, MN 55316	763.421.3206 traderstec@aol.com
	Gerry Butcher Alternate	11467 Preserve Lane N Champlin, MN 55316	763.557.1451 gerrybutcher671@yahoo.com
Corcoran	Ken Guenthner Treasurer	6315 Butterworth Lane Corcoran, MN 55430	612.710.0734 kenguenthner@gmail.com
	Tom Anderson Alternate	22385 Rush Creek Drive Rogers, MN 55374	651.216.8125 tompand@yahoo.com
Dayton	Doug Baines Chair	13000 Overlook Road Dayton, MN 55327	763.323.9506 dougbaines@aol.com
	Travis Henderson Alternate	12260 S Diamond Lake Road Dayton, MN 55327	612-743-4506 thenderson@ cityofdaytonmn.com
Maple Grove	Joe Trainor Commissioner	16075 Territorial Road Maple Grove, MN 55369	763.420.4645 joe.trainor@meritain.com
	Dan Riggs Alternate	12822 86th Place North Maple Grove, MN 55369	612.916.4406 driggs@carlsonmccain.com
Medina	Terry Sharp Commissioner	4274 Fairway Drive Medina, MN 55340	612.849.6230 tsharp2972@aol.com
	Steven Lee Alternate	1522 Medina Road Long Lake, MN 55356	952.412.7573 leesteven2001@yahoo,com
Plymouth	Catherine Cesnik Vice Chair		cesnik@gmail.com
	Jake Gateman Alternate	14205 56th Ave N Plymouth, MN 55446	651.726.4759 jake.gateman@gmail.com
Rogers	Kevin Jullie Commissioner	13315 Oakwood Drive Rogers, MN 55374	763.428.9160 kjullie@srfconsulting.com
	Vacant Alternate		

Technical Advisory Committee

Members of the Technical Advisory Committee (TAC) are appointed by the member communities they represent. The TAC reviews guidelines, standards and polices used to evaluate plats, plans and proposals of the members and makes recommendations to the Commission. The TAC meets at the direction of the Commission.

REPRESENTING	NAME	ADDRESS	TELEPHONE/EMAIL
Champlin	Heather Nelson	City of Champlin 11955 Champlin Drive Champlin, MN 55316	763.923.7120 hnelson@ci.champlin.mn.us
Corcoran	Kevin Mattson	City of Corcoran 8200 County Road 116 Corcoran, MN 55340	763.400-7028 kmattson@ci.corcoran.mn.us
Dayton	Nico Cantarero	Wenck Associates/Stantec 7500 Highway 55 Ste 300 Golden Valley, MN 55427	763.252.6904 nicolas.cantarero@stantec.com
Maple Grove	Derek Asche	City of Maple Grove 12800 Arbor Lakes Parkway Maple Grove, MN 55313	763.494.6354 dasche@maplegrovemn.gov
Medina	Matt Danzl	Hakanson-Anderson 3601 Thurston Avenue Anoka, MN 55303	763.852.0496 MattD@HAA-inc.com
Plymouth	Ben Scharenbroich Amy Riegel	City of Plymouth 3400 Plymouth Boulevard Plymouth, MN 55447	763.509.5527 bscharenbroich@plymouthmn.gov 763.509.5531 ariegel@plymouthmn.gov
Rogers	Andrew Simmons	City of Rogers 22350 S Diamond Lake Road Rogers, MN 55374	763.428.0907 asimmons@ci.rogers.mn.us
Stantec Consulting Services	Erik Megow Diane Spector Ross Mullen	7500 Olson Memorial Highway Suite 300 Golden Valley, MN 55427	763.252.6857 Erik.megow@stantec.com 763.252.6880 diane.spector@stantec.com 952.334.4606 ross.mullen@stantec.com
Surface Water Solutions, LLC	James Kujawa	6533 Neddersen Circle Brooklyn Park, MN 55445-3206	952.456.3206 surfacewatersolutions@outlook.com
Resilience Resources, LLC	Rebecca Carlson	3235 Fernbrook Lane Plymouth, MN 55447	612.408.7515 rebecca@resilience-resources.com
Hennepin County Dept. of Environment and Energy	Kris Guentzel Kevin Ellis Paul Stewart	701 Fourth Avenue S. Suite 700 Minneapolis, MN 55415-1600	612.596.1171 kristopher.guentzel@hennepin.us 612.543.3373 Kevin.ellis@hennepin.us 612.543.9409 Paul.Stewart@hennepin.us
Three Rivers Park District	Brian Vlach	12615 County Road 9 Plymouth, MN 55441	763.694.7846 Brian.Vlach@ThreeRiversParks.org

Staff and Consultants

The required biennial solicitation for interest proposals for administrative, legal, and technical consulting services was published in the December 14. 2020 edition of the *State Register*. The next solicitation will occur in January 2023. The Commission has no employees.

NAME/POSITION		ADDRESS	TELEPHONE/EMAIL
Technical Services			
Stantec Consulting Services	Erik Megow Diane Spector Ross Mullen	7500 Olson Memorial Highway Suite 300 Minneapolis, MN 55427	763.252.6857 erik.megow@stantec.com 763.252.6880 diane.spectorstantec.com 952.334.4606 ross.mullen@stantec.com
Surface Water Solutions, LLC	James Kujawa	6533 Neddersen Circle Brooklyn Park, MN 55445-3206	952.456.3206 surfacewatersolutions@outlook.com
Resilience Resources LLC	Rebecca Carlson	3235 Fernbrook Lane Plymouth, MN 55447	612.408.7515 rebecca@resilience-resources.com
Hennepin County Dept. of Environment and Energy	Kris Guentzel Kevin Ellis Paul Stewart	701 Fourth Avenue S. Suite 700 Minneapolis, MN 55415-1600	612.596.1171 kristopher.guentzel@hennepin.us 612.543.3373 kevin.ellis@hennepin.us 612.543.9409 Paul.Stewart@hennepin.us
Legal Services	Joel Jamnik	Campbell Knutson Grand Oak Office Center I 860 Blue Gentian Road #290 Eagan, MN 55121	651.234.6219 jjamnik@ck-law.com
Administrative Services	Judie Anderson Amy Juntunen Beverly Love	JASS 3235 Fernbrook Lane Plymouth, MN 55447	763.553.1144 judie@jass.biz amy@jass.biz beverly@jass.biz

Third Generation Watershed Management Plan

The Elm Creek Watershed Management Commission's Third Generation Watershed Management Plan ("the Plan") was approved by the Board of Water and Soil Resources (BWSR) on September 23, 2015, and adopted by the Commission on October 14, 2015.

The Plan includes information required in the Minnesota Administrative Rules Chapter 8410, Local Water Management: 1) an updated land and water resource inventory; 2) goals and policies; 3) an assessment of problems and identification of corrective actions; 4) an implementation program; and 5) a process for amending the Plan. This Plan also incorporates information and actions identified in the Elm Creek Watershed-wide Total Maximum Daily Load study (TMDL) and Watershed Restoration and Protection Strategy study (WRAPS), completed between 2009 and 2016.

The Commission, along with the Citizen and Technical Advisory Committees (CAC and TAC), identified a number of issues during the planning process. As these issues were identified, the Commission developed a list of priorities to guide water resources planning and management functions. The issues and subsequent priorities are enumerated on pages 3-4 of the Annual Report.

The goals and policies created as a result of this process include the following:

Goals

Water Quantity

- Maintain post-development 2-year, 10-year, and 100-year peak rate of runoff at pre-development level for the critical duration precipitation event.
- Maintain post-development annual run-off volume at pre-development volume.
- Prevent loss of floodplain storage below the established 100-year elevation.
- Reduce peak flow rates in Elm, Diamond, and Rush Creeks and tributary streams to the Crow and Mississippi and preserve conveyance capacity.

Water Quality

- Improve Total Phosphorus concentration in the impaired lakes by 10% over the 2004-2013 average by 2024.
- Maintain or improve water quality in the lakes and streams with no identified impairments.
- Conduct a TMDL/WRAPS progress review every five years following approval of the TMDLs and WRAPS studies.
- Use information in the WRAPS to identify high priority areas where the Commission will partner with cities and other agencies to provide technical and financial assistance.

Groundwater

- Promote groundwater recharge by requiring abstraction/infiltration of runoff from new development/redevelopment.
- Protect groundwater quality by incorporating wellhead protection study results into development and redevelopment Rules and Standards.

Wetlands

- Preserve the existing functions and values of wetlands within the watershed.
- Promote the enhancement or restoration of wetlands in the watershed.

Drainage Systems

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

Operations and Programming

- Identify and operate within a sustainable funding level that is reasonable to member cities.
- Foster implementation of priority TMDL and other implementation projects by sharing in their cost and proactively seeking grant funds.
- Operate a public education and outreach program to supplement NPDES Phase II education requirements for member cities.
- Operate a monitoring program sufficient to characterize water quantity, water quality, and biotic integrity in the watersheds and to evaluate progress toward meeting goals.
- Maintain rules and standards for development and redevelopment consistent with local and regional TMDLs, federal guidelines, source water and wellhead protection requirements, non-degradation, and ecosystem management goals.
- Serve as a technical resource for member cities.

Implementation

The Third Generation Watershed Management Plan continues a number of activities that have been successful in the past and introduces some new activities, including modified development rules and standards and an enhanced monitoring program.

Rules and Standards

The Commission updated policies from their Second Generation Plan and developed new standards based on the 2013 Minnesota NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4s), the 2013 Minnesota NPDES Construction Stormwater General Permit, and the MPCA's Minimal Impact Design Standards and State Stormwater Manual. These were compiled and codified into a Rules and Standards document and adopted in advance of the Third Generation Plan, effective January 1, 2015.

In general, the new Rules and Standards apply to all development and redevelopment that are

- one acre or more in size;
- require at a minimum no increase in pollutant loading or stormwater volume;
- require no increase in the peak rate of runoff from the property;
- require the abstraction/ infiltration of 1.1 inches of runoff from impervious surfaces; and
- clarify the wetland buffer requirements.

The Plan also provides a method by which member cities can take on review responsibilities for smaller projects, reducing the regulatory burden for small developers.

Monitoring Program

The monitoring program continues the partnership with Three Rivers Park District (TRPD) and the United States Geological Survey (USGS) for routine flow and water quality monitoring on Elm Creek, with periodic monitoring on additional Elm Creek sites, and on Rush, North Fork Rush, and Diamond Creeks on a rotating or as-needed basis. Four lakes – Weaver, Fish, Rice, and Diamond Lakes – have been classified as "Sentinel Lakes," and are monitored every year. Other lakes will be monitored on a rotating basis.

Education and Outreach

The Citizens Advisory Committee (CAC) developed a recommended Education and Outreach program that identifies stakeholder groups and key education messages. This Plan expands education and outreach activities to key stakeholders and continues collaborative partnerships with organizations such as the West Metro Water Alliance (WMWA), NEMO (Nonpoint Education for Municipal Officials), and WaterShed Partners.

Other Activities

The Implementation Plan includes funding for BMP assessments and special studies such as feasibility studies and special monitoring that will identify the most cost-effective practices and projects.

WRAPS Implementation

The Plan includes key findings and actions identified in the Elm Creek Watershed Restoration and Protection Strategies (WRAPS) study, which includes Total Maximum Daily Loads (TMDLs) for the impaired waters and improvement and protection strategies and activities for all waters.

Projects
Reviewed in 2022

Project Number	Project Name	City	Reviewed for Rules*					
			D	E	F	G	H	I
2022-01	Dayton Field 2nd Addition	Dayton	•	•		•	•	•
2022-02	Summerwell	Maple Grove	•	•		•		•
2022-03	Fox Briar Ridge East	Maple Grove	•	•				
2022-04	Loram-Scannell Medina Industrial EAW	Medina						
2022-05	Bellwether 7th Addition	Corcoran		•				
2022-06	Hamel Townhomes	Medina	•	•				
2022-07	Weston Commons 2nd Addition	Maple Grove	•	•				•
2022-08	Bechtold Farms	Corcoran	•	•	•	•		•
2022-09	Dunkirk Lane Development	Plymouth	•	•				
2022-10	Unity Tool Building Addition	Dayton	•	•	•	•		•
2022-11	Arrowhead Drive Turn Lane Expansion	Medina	•	•	•	•		
2022-12	Graco Building 2	Dayton	•	•	•	•		•
2022-13	Dayton 94 Industrial Site	Dayton	•	•		•		•
2022-14	Aster Mill	Rogers	•	•				•
2022-15	County Road 47 Reconstruction Phase 1	Plymouth	•	•		•	•	
2022-16	Rogers Activity Center	Rogers	•	•				•
2022-17	City Center Drive	Corcoran	•	•	•	•		•
2022-18	Big Woods	Rogers	•	•		•	•	•
2022-19	Grass Lake Preserve	Rogers	•	•		•		•
2022-20	Skye Meadows Extension	Rogers	•	•		•		•
2022-21	Dayton 94 EAW	Dayton						
2022-22	Cook Lake Highlands	Corcoran	•	•		•		•
2022-23	Asguard	Rogers	•	•				•
2022-24	Bridge 27J70 – 101st Ave	Maple Grove		•	•		•	
2022-25	Harvest View		•	•		•		•

*Rule D – Stormwater
Rule E – Erosion Control
Rule F – Floodplain
Rule G – Wetlands
Rule H – Bridge, Culvert Crossing
Rule I - Buffers

Project Number	Rate Control (cfs) (pre- and post-development)			Net Change Nutrient Control (lbs./yr) (pre- and post-development		Net Change			
	2-yr pre | post	10-yr pre | post	100-yr pre | post	TP load #/yr re-reduction	TSS load #/yr reduction	Runoff volume (AF/yr)	Abstraction (CF)	Filtration/ biofiltration (CF)	Comments/ notes
2022-01	85.7/55.9	160.4/117/4	334/2/270.6	5.5	4260	+38.7	+74,190		
2022-02	30.8/18.0	58.3/41.2	120.7/85.3	14.8	9682	N/A		+52,543	
2022-03	Rate control provided by regional pond			0.01	209	+3.2		+6,884	
2022-04									EAW
2022-05									*See 2018-03
2022-06	5.3/2.5	10.1/9.8	21.3/21.1	0.0	189	+1.1		+7,343	
2022-07	23.0/8.7	43.2/23.3	103.1/52.5	1.5	1159	+8.5	+412		
2022-08	78.0/74.9	166.7/157.6	354.7/315.7	30.0	9281	-0.3	+1.0		
2022-09	10.6/5.8	21.4/13.7	46.6/33.4	5.1	1172	+3.5		+11,389	
2022-10	8.9/4.3	15.0/10.6	28.2/21.0	0.6	161	+0.3	+8.0		
2022-11	10.4/8.5	18.9/18.6	39.0/32.3	2.2	849	-22.6			
2022-12	114.9/79.9	252.6/203.7	559.4/456.4	1.5	3522	+82.0	+36,231		
2022-13									Project withdraw
2022-14	116.7/29.8	228.9/67.8	453.9/123.1	6.4	4,362	+41.0		+100,036	
2022-15	74.6/40.7	132.1/76.5	248.8/152.6	11.9	4648	-2.2	+48,352		
2022-16	3.5/2.9	37.6/25.1	227.2/205.4	0.3	15	+0.2	+222,156		
2022-17	46.1/15.9	103.8/42.8	185.1/101.6	3.1	1883	+16.7	+2366		
2022-18	41.4/27.9	84.1/69.4	159.5/152.7	5.8	2495	+25.6		+105,638	
2022-19	57.0/25.9	94.9/42.6	176.6/76.1	2.1	1802	+5.55	+3482		
2022-20	65.4/21.2	147.8/39.9	275.3/137.9	13.2	7110	+13.8		+263,538	
2022-21									EAW
2022-22	22.5/15.8	65.9/52.1	150.2/114.9	130.0	69231	N/A		+95192	
2022-23	12.6/5.8	21.6/13.5	43.7/38.8	0.3	148	+6.9		+27,742	
2022-24									Bridge and Culvert
2022-25	59.6/30.1	122.6/65.0	258.6/137.9	2.4	1683	+224.1		+37,243	

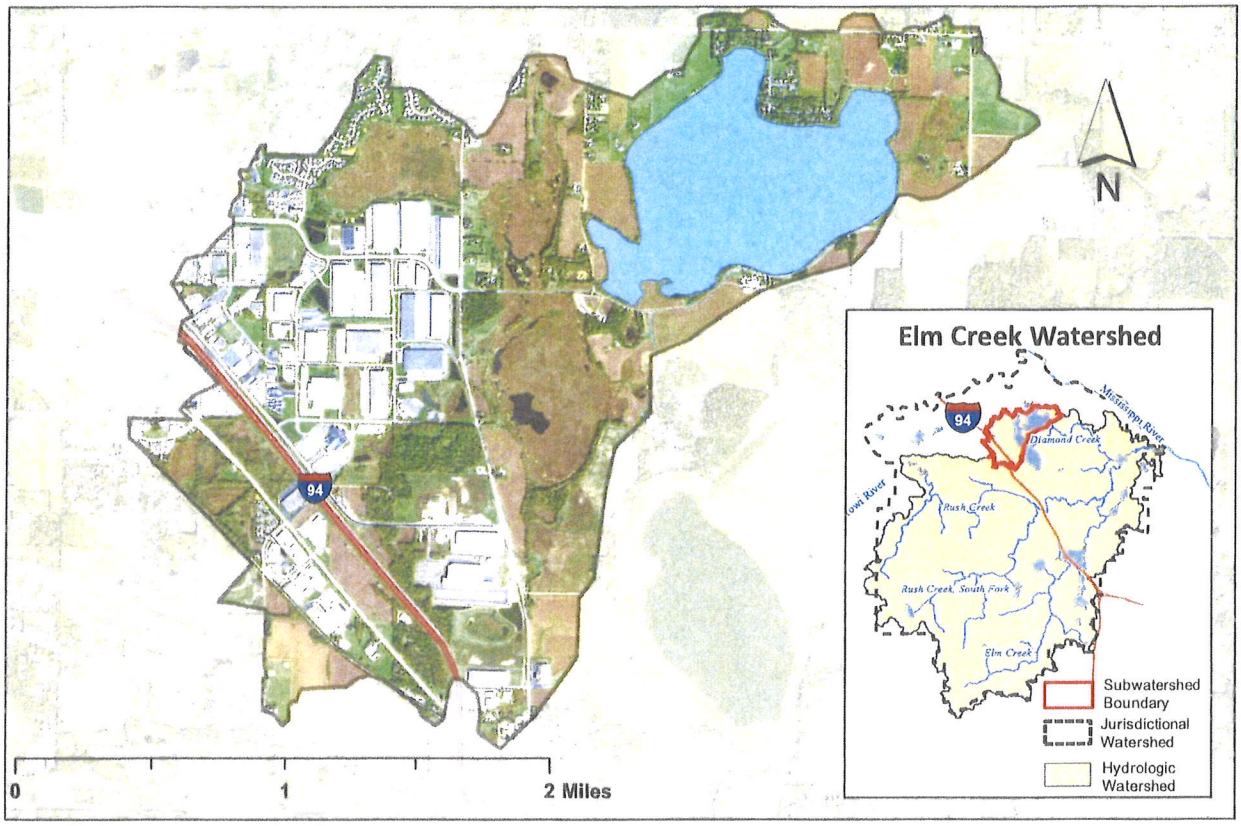
Projects
Reviewed in 2022

Project Number	Project Name	City	Reviewed for Rules*					
			D	E	F	G	H	I
2022-26	Rogers Archway Building	Rogers	•	•				
2022-27	Edison of Maple Grove Apartments	Maple Grove	•	•				
2022-28	Elsie Stephens Park	Dayton	•	•	•		•	•
2022-29	Hayden Hills Park	Dayton		•				
2022-30	Garages Too	Corcoran	•	•		•		•
2022-31	Corcoran II Substation	Corcoran	•	•		•		•
2022-32	Elm Creek Stream Restoration Phase 5	Champlin		•	•		•	•
2022-33	Pet Suites	Maple Grove	•	•				
2022-34	CSAH 101	Maple Grove	•	•				
2022-35	Rush Hollow	Maple Grove	•	•				•
2022-36	West French Lake Road Improvements	Dayton	•	•	•	•	•	•
2022-37	2022 Drainage CSAH 13/CR203	Rogers		•				
2022-38	Tavera North Side	Corcoran	•	•	•	•		•
2022-39	Garland Commons	Maple Grove	•	•				•
2022-40	Kariniemi Meadows	Corcoran	•	•	•	•		•
2022-41	Elm Creek Swim Pond Culvert Replacement	Maple Grove	•	•	•	•		
2022-42	Walcott Glen	Corcoran	•	•		•		•
2022-43	Meander Park and Boardwalk	Medina	•	•	•			•
2022-44	Trail Haven Road Bridge	Corcoran		•	•		•	
2022-45	Corcoran Water Treatment Plant	Corcoran	•	•				
2022-46	CSAH 12 Culvert Guardrail Replacement	Dayton		•	•	•		
2022-47	Suite Living	Maple Grove		•				
2022-48	Hassan Elementary Pavement Replacement	Rogers	•	•				
2022-49	Connexus Energy South Dayton Substation	Dayton	•	•				

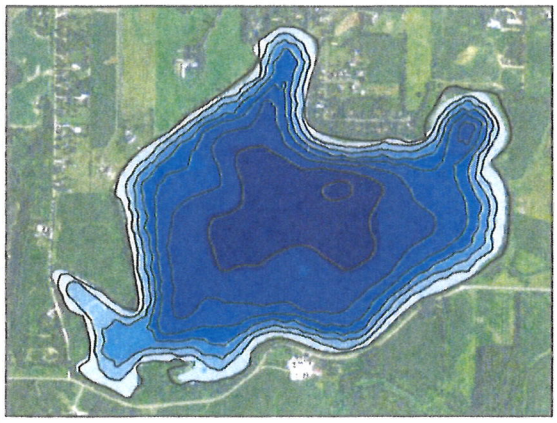
*Rule D – Stormwater
Rule E – Erosion Control
Rule F – Floodplain
Rule G – Wetlands
Rule H – Bridge, Culvert Crossing
Rule I - Buffers

Project Number	Rate Control (cfs) (pre- and post-development)			Net Change Nutrient Control (lbs./yr) (pre- and post-development		Net Change			
	2-yr pre | post	10-yr pre | post	100-yr pre | post	TP load #/yr re-reduction	TSS load #/yr reduction	Runoff volume (AF/yr)	Abstraction (CF)	Filtration/ biofiltration (CF)	Comments/ notes
2022-26									Project Cancelled
2022-27	62.9/61.2	91.6/90.2	135.4/133.6	0.4	455	+2.1		+26,234	
2022-28	2.6/2.7	14.0/11.2	50.8/45.7	0	0	0	9824		All infiltration
2022-29	*								*See 2018-008
2022-30	63.4/61.2	129.3/114.5	292.1/253.3	0	238	+4.0	+4431		
2022-31	4.1/2.6	8.6/6.0	19.4/12.3	0	133	+1.9	+55		
2022-32									Stream Restoration
2022-33	1.8/1.1	3.5/2.1	7.5/7.0	0	35	-1.8	+5,809		
2022-34	21.4/18.6	39.4/32.1	94.3/81.4	0	402	+40.3		+12,498	
2022-35	111.6/54.9	219.4/136.2	480.2/295.3	1.2	5,368	+95.0		+206,772	
2022-36	39.1/28.7	70.4/52.3	142.1/119.5	0.1	963	+3.9	+10233		
2022-37									Culvert Replacement
2022-38	9.6/7.8	26.6/24.9	151.5/115.9	27.6	9744	N/A	+40,729		
2022-39	7.9/5.2	25.8/11.0	55.3/40.9	0.8	2831	+35.0		+22,633	
2022-40	52.1/38.9	94.6/80.7	180.8/171.7	0	702	+11.4	+3409		
2022-41									No Stormwater
2022-42									
2022-43	8.74/7.11	19.5/14.1	47.3/45.2	0.5	464	+6.2		+7533	
2022-44	*								*Rules E & F only
2022-45	6.5/6.2	18.4/15.8	41.4/28.3	0.7	555	+1.6	+203		
2022-46	*								*Rules E, F and G only
2022-47									Erosion Control Only
2022-48	26.8/23.4	58.5/52.6	132.4/124.5	2.3	377	-2.7	+9,624		
2022-49	12.3/11.3	28.8/28.3	69.1/69.1	1.7	535	N/A		+3,185	

Diamond Lake Watershed Map



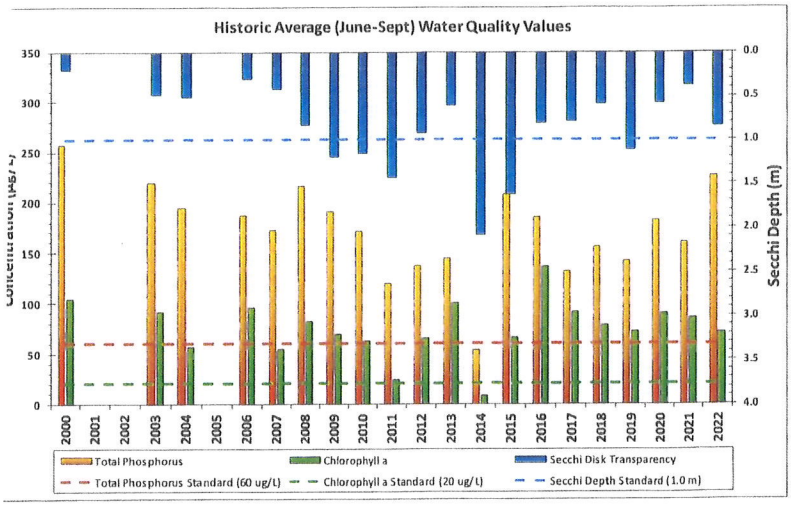
Diamond Lake Bathymetry

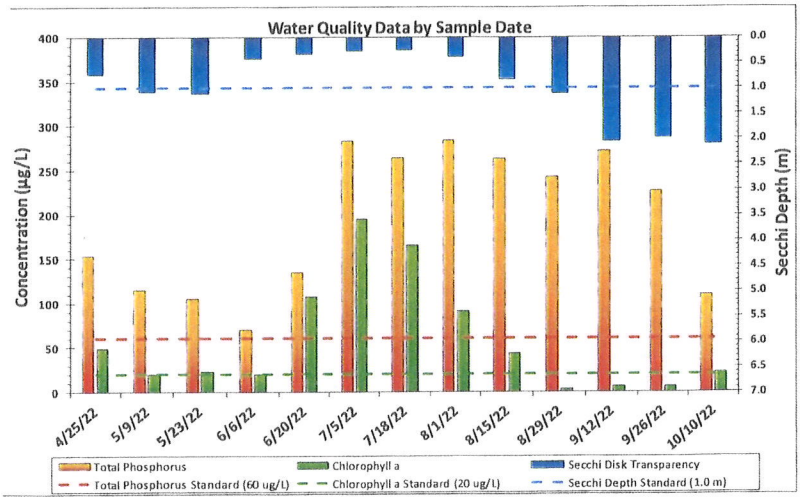


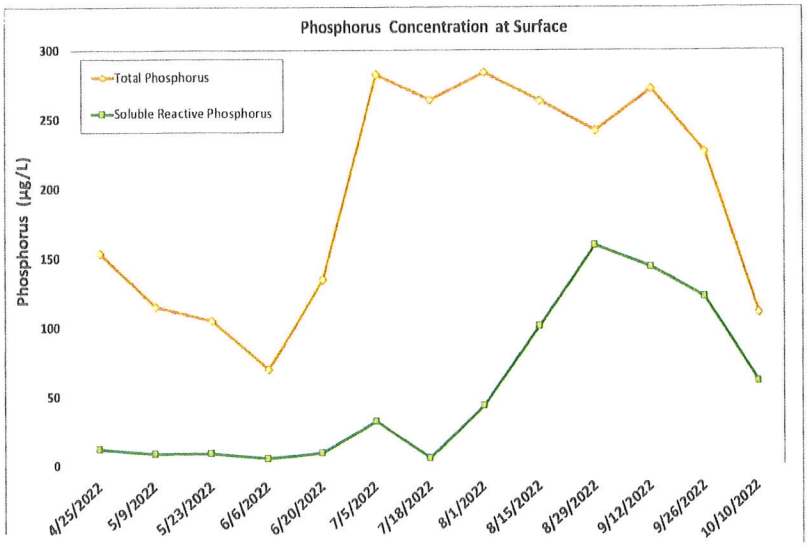
Lake and Watershed Characteristics	
DNR #	27012500
Watershed Area	2,367 Acres
Lake Area	382 Acres
Percent Littoral Area	100%
Average Depth	3.97 ft.
Maximum Depth	7.37 ft.
Watershed:Lake Ratio	6.2:1
Impairment	Excess Nutrients in 2006
Classification	Shallow Lake

Water Resource Department
Map Created: 11/24/2017
Revised Date: 12/4/2017

ThreeRivers PARK DISTRICT







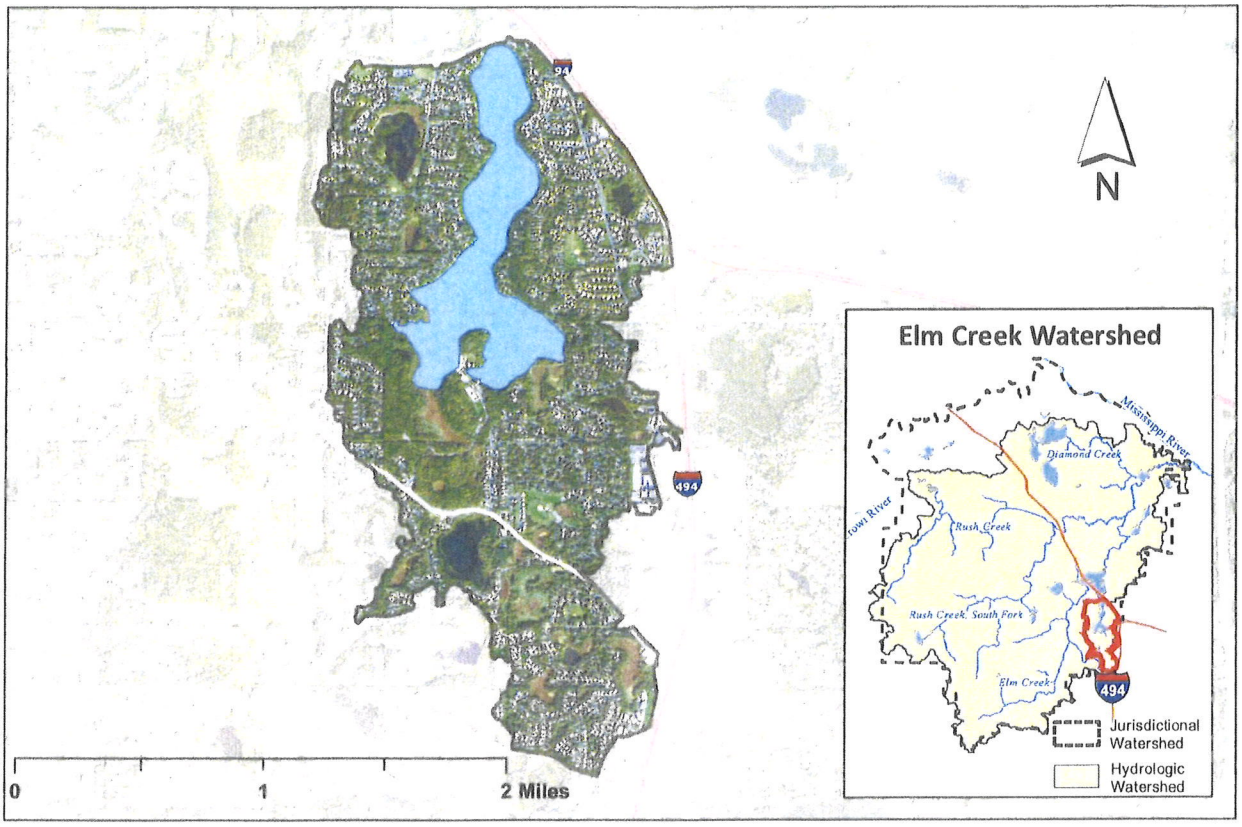
Diamond Lake Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grad
1998	D	D	F	D-
1999				
2000	F	F	F	F
2001				
2002				
2003	F	F	F	F
2004	F	D	F	F
2005				
2006	F	F	F	F
2007	F	D	F	F
2008	F	F	D	F
2009	F	D	C	D
2010	F	D	D	D-
2011	D	C	C	C-
2012	D	D	D	D
2013	D	F	F	F
2014	C	A	C	B-
2015	F	D	C	D
2016	F	F	D	F
2017	D	F	D	D-
2018	F	F	F	F
2019	D	D	D	D
2020	F	F	F	F
2021	F	F	F	F
2022	F	D	D	D-
MPCA Standard	C	C	D	C-

Met Council Grading System for Lake Water Quality

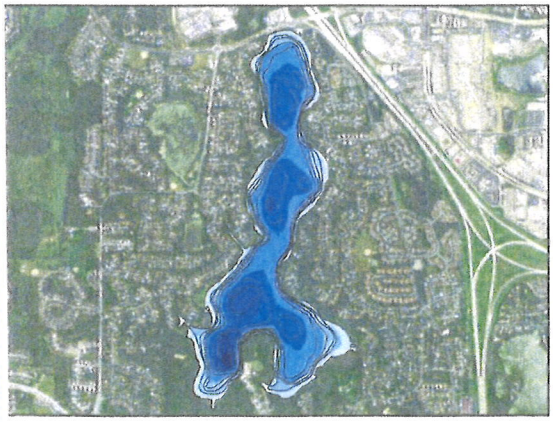
ThreeRivers PARK DISTRICT

Division of Water Resources
December 2022

Fish Lake Watershed Map



Fish Lake Bathymetry

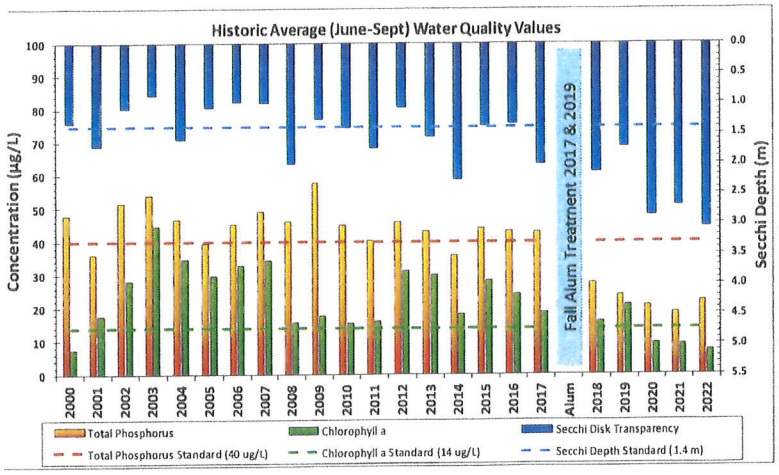


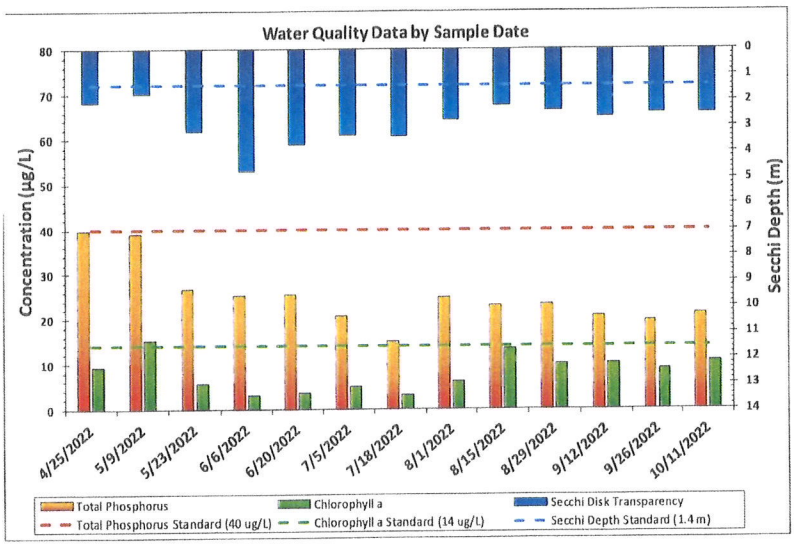
Lake and Watershed Characteristics	
DNR #	27011800
Watershed Area	1,611 Acres
Lake Area	232 Acres
Percent Littoral Area	32%
Average Depth	20.5 ft.
Maximum Depth	49 ft.
Watershed:Lake Ratio	6.9:1
Impairment	Excess Nutrients in 2008
	Approved Removal in 2024
Classification	Deep Lake

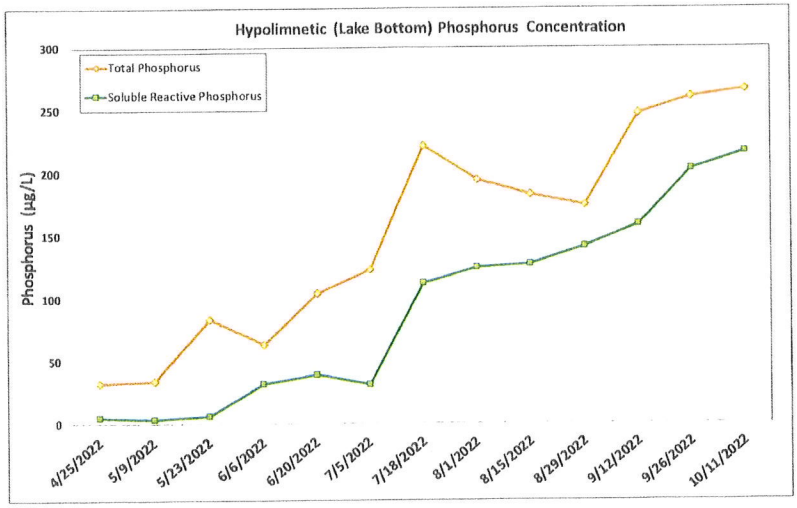
Water Resource Department
Map Created: 11/24/2017
Revised Date: 2/3/2022

This map is a compilation of data from various sources and is provided "as is" without warranty of any representation of accuracy, timeliness, or completeness. The user acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and in a constant state of maintenance, correction, and update.

ThreeRivers PARK DISTRICT







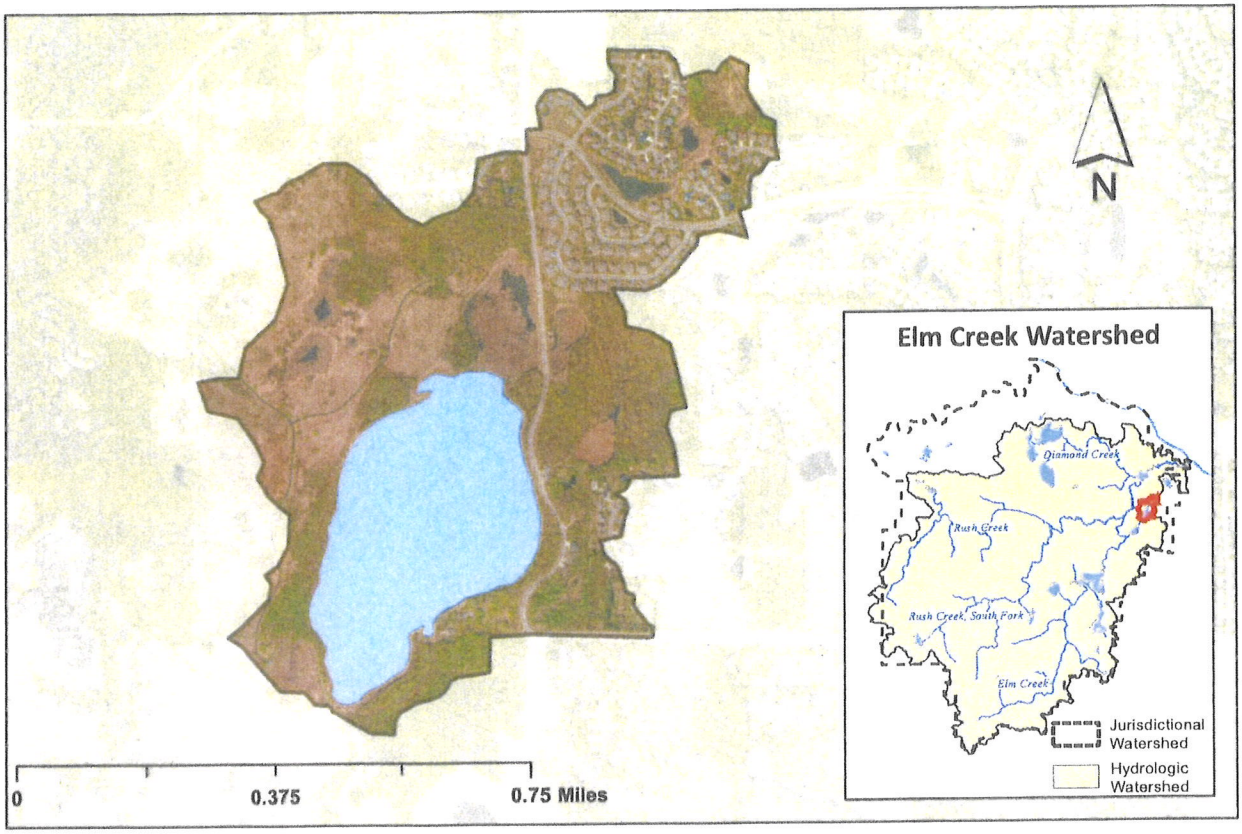
Fish Lake Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
1995			C	C
1996			B	B
1997	C	C	C	C
1998	C	B	C	C+
1999	C	B	C	C+
2000	C	A	C	B-
2001	C	B	C	C+
2002	C	C	D	C-
2003	C	C	D	C-
2004	C	C	C	C
2005	C	C	D	C-
2006	C	C	D	C-
2007	C	C	D	C-
2008	C	B	C	C+
2009	C	B	C	C+
2010	C	B	C	C+
2011	C	B	C	C+
2012	C	C	D	C-
2013	C	C	C	C
2014	C	B	B	B-
2015	C	C	C	C
2016	C	C	C	C
2017	C	B	C	C+
2018	B	B	C	B-
2019	B	C	C	C+
2020	A	A	B	A-
2021	A	A	B	A-
2022	A	A	A	A
MPCA Standard	C	B	C	C+

Met Council Grading System for Lake Water Quality

ThreeRivers PARK DISTRICT

Division of Water Resources
December 2022

Goose Lake Watershed Map



Goose Lake

Lake and Watershed Characteristics	
DNR #	27012200
Watershed Area	305 Acres
Lake Area	59 Acres
Percent Littoral Area	100%
Average Depth	4.5 ft.
Maximum Depth	5.9 ft.
Watershed:Lake Area	19.4:1
Impairment	Excess Nutrients 2017
Classification	Shallow Lake

Water Resource Department
Map Created: 1/31/2022
Revised Date: 2/1/2022

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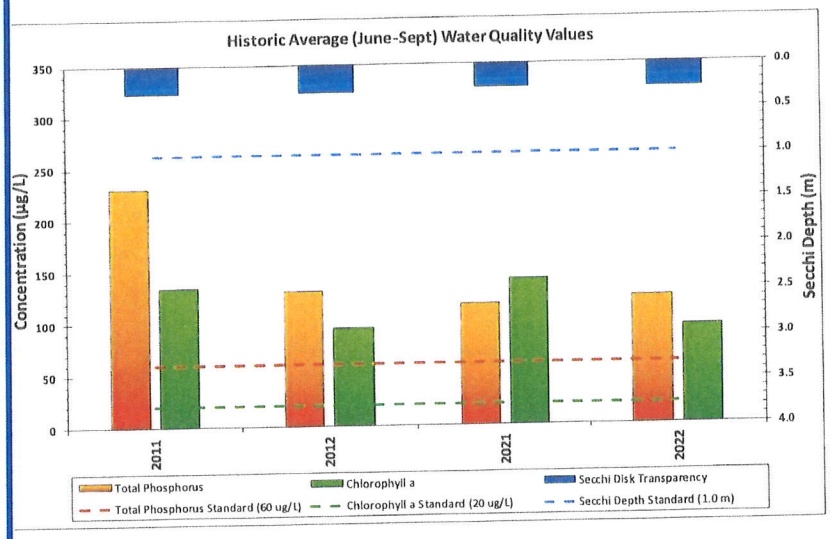
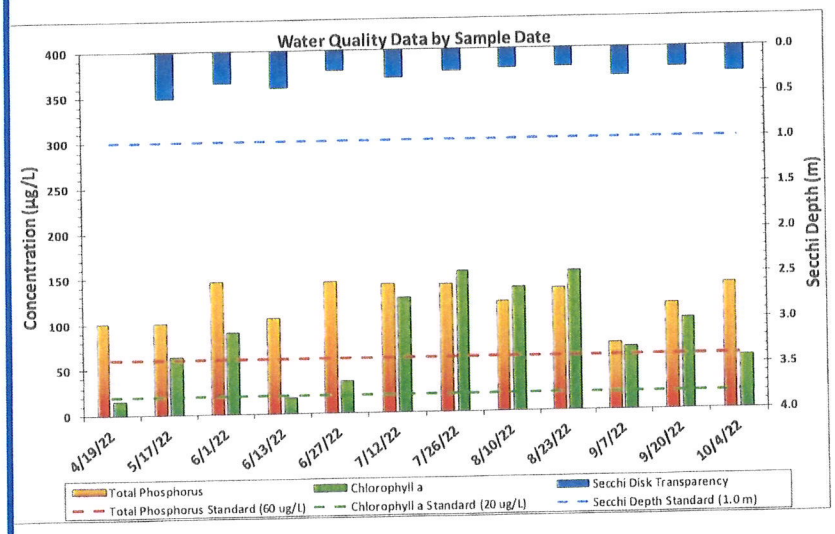
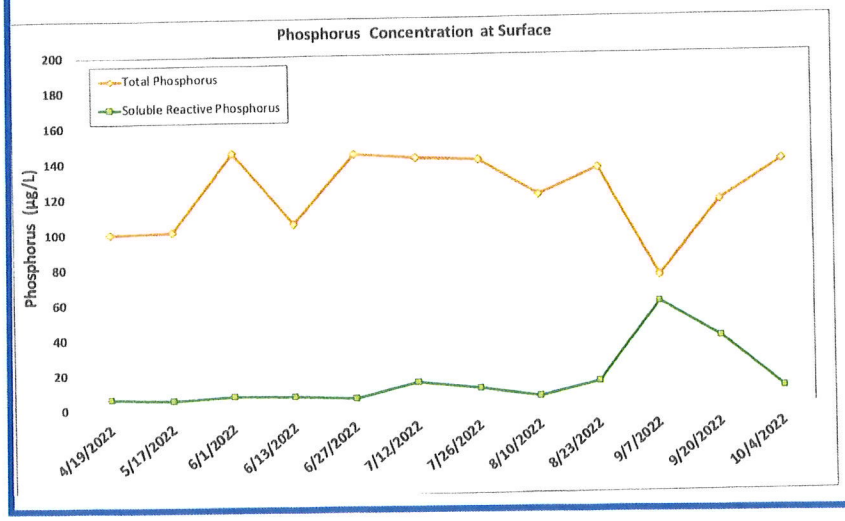
ThreeRivers PARK DISTRICT



Goose Lake Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
2011	F	F	F	F
2012	D	F	F	F
2021	D	F	F	F
2022	D	F	F	F
MPCA Standard	C	C	D	C-

Met Council Grading System for Lake Water Quality

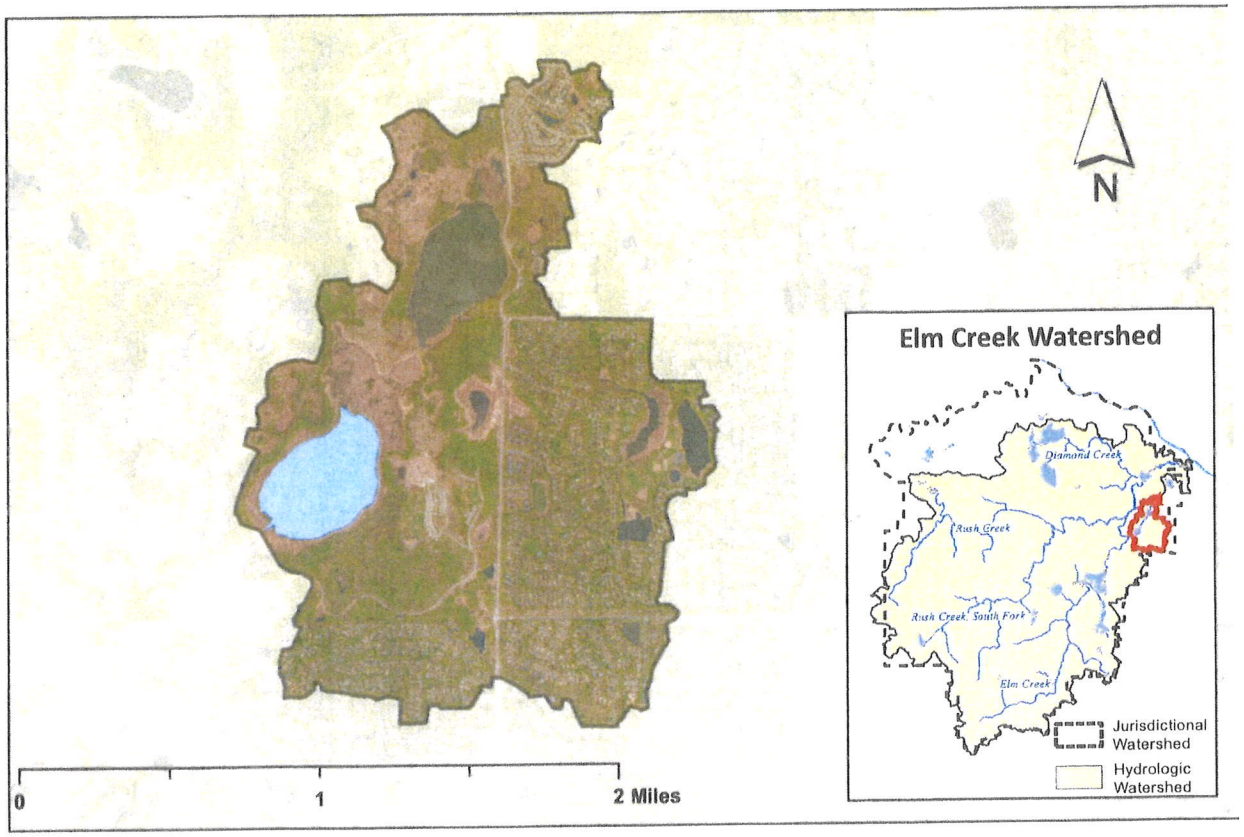




ThreeRivers PARK DISTRICT

Division of Water Resources
December 2022

Mud Lake Watershed Map

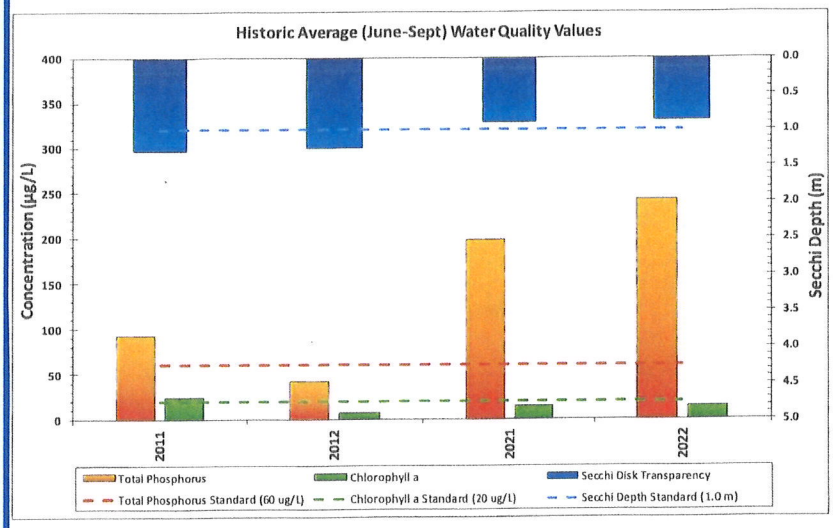


Mud Lake

Lake and Watershed Characteristics	
DNR #	27011200
Watershed Area	1,396 Acres
Lake Area	72 Acres
Percent Littoral Area	100%
Average Depth	4.5 ft.
Maximum Depth	7 ft.
Watershed:Lake Area	5.2:1
Impairment	None
Classification	Shallow Lake

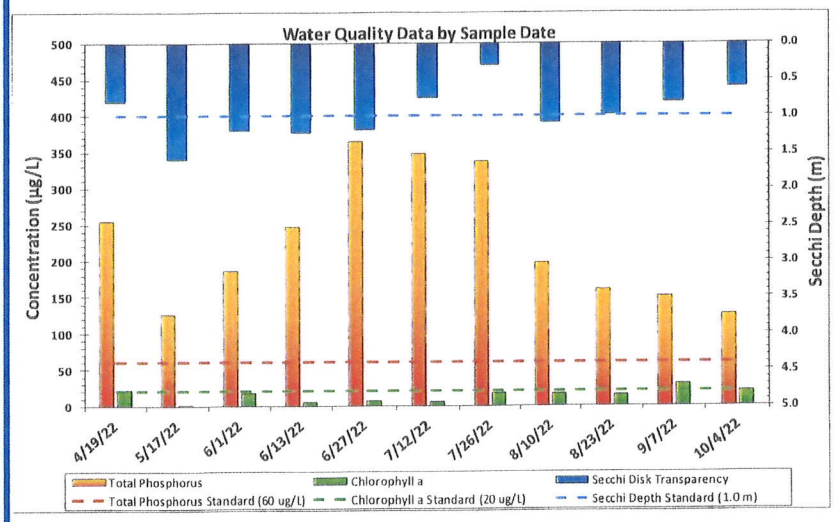
Water Resource Department
Map Created: 1/31/2022
Revised Date: 2/1/2022

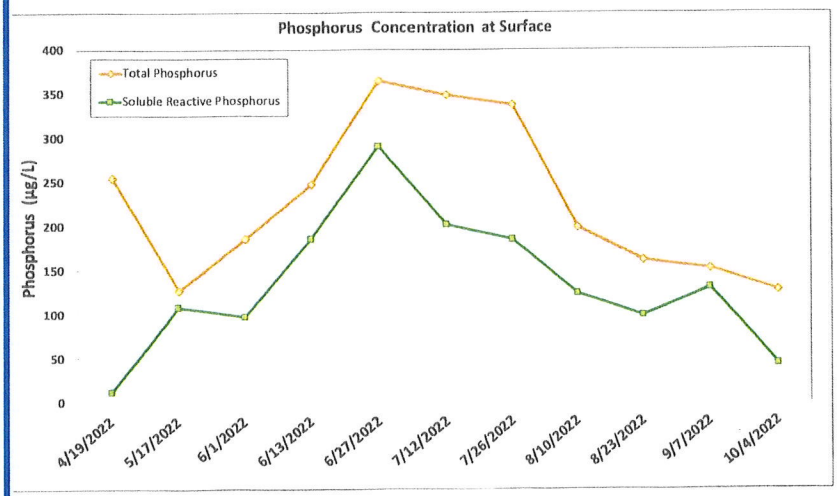
ThreeRivers PARK DISTRICT



Mud Lake Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
2011	D	C	C	C-
2012	C	A	C	B-
2021	F	B	D	D+
2022	F	B	D	D+
MPCA Standard	C	C	D	C-

Met Council Grading System for Lake Water Quality

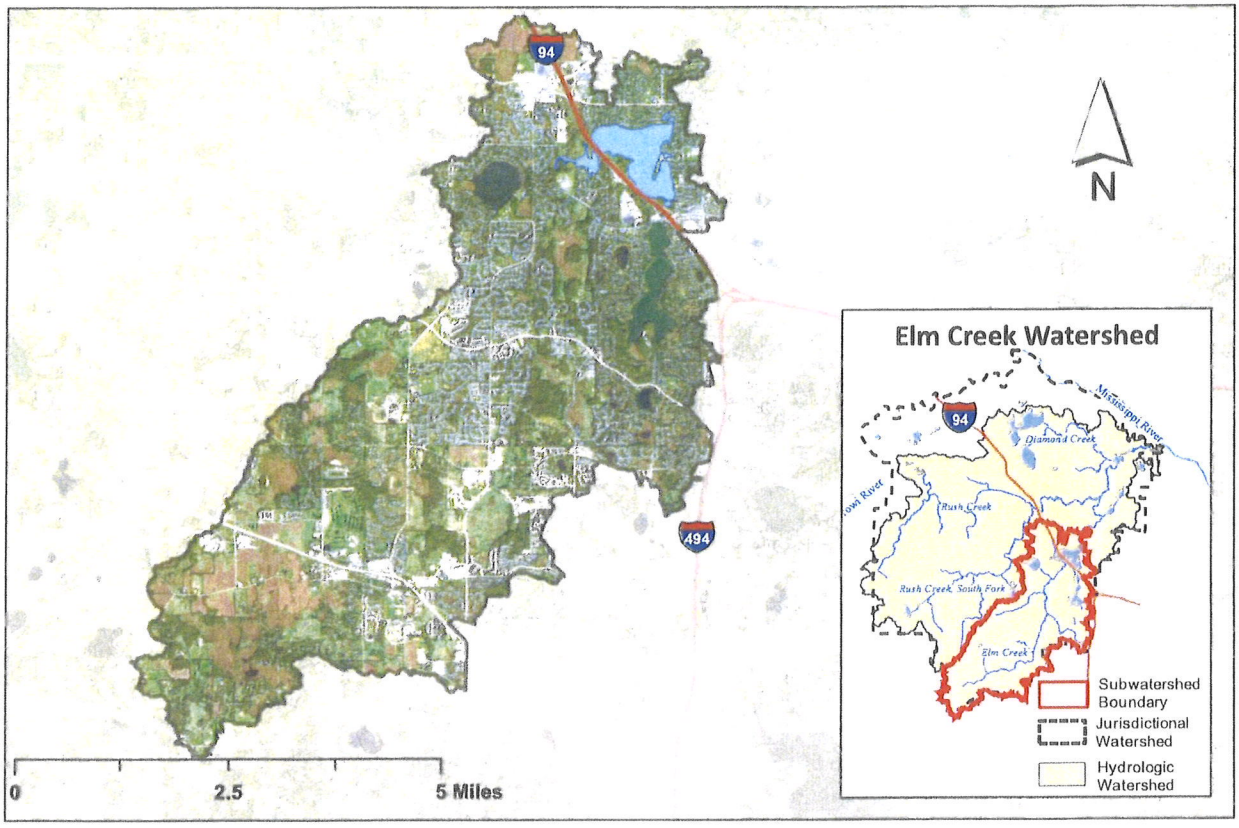




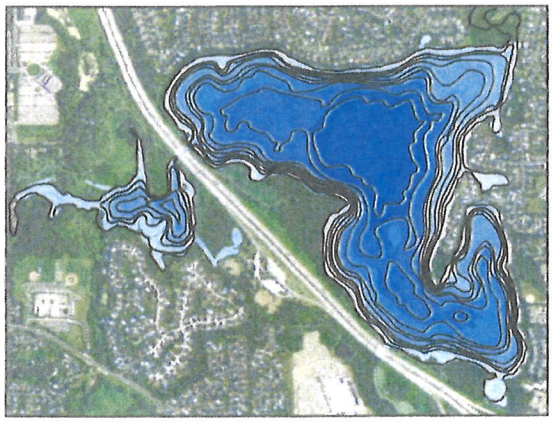
ThreeRivers PARK DISTRICT

Division of Water Resources
December 2022

Rice Lake Watershed Map



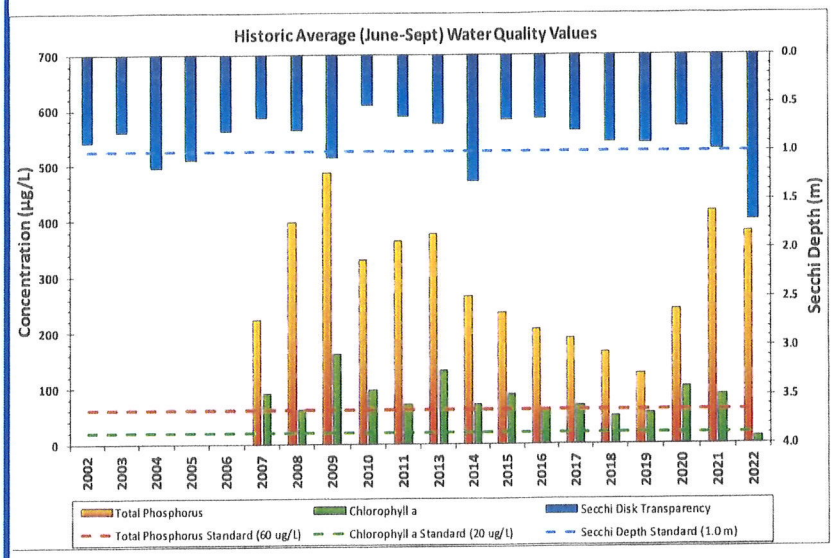
Rice Lake Bathymetry

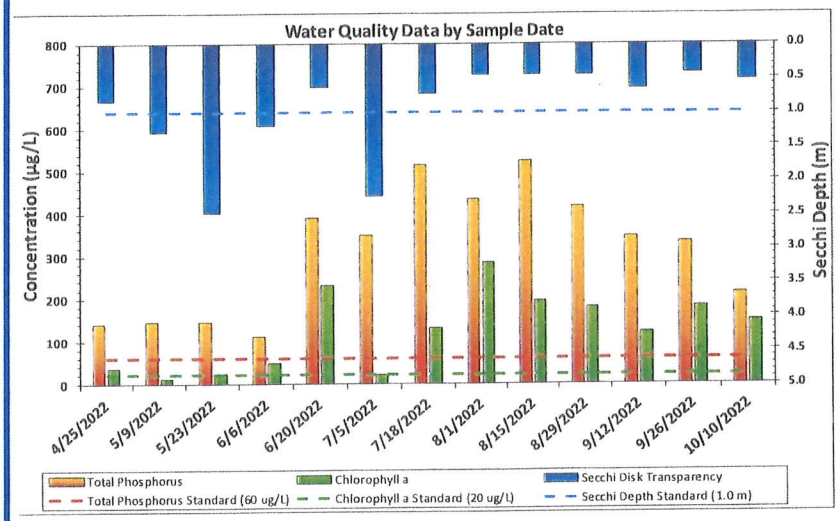


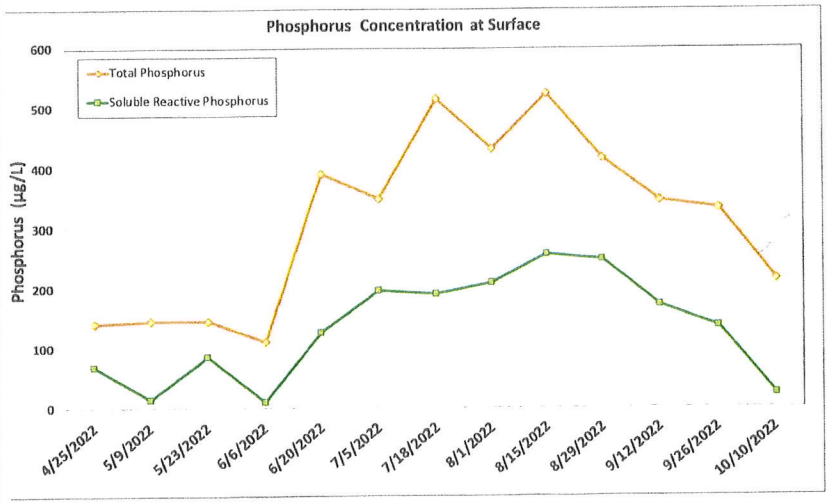
Lake and Watershed Characteristics	
DNR #	27011601
Watershed Area	16,092 Acres
Lake Area	307 Acres
Percent Littoral Area	100%
Average Depth	7.02 ft.
Maximum Depth	10.14 ft.
Watershed:Lake Ratio	52.4:1
Impairment	Excess Nutrients in 2010
Classification	Shallow Lake

Water Resource Department
Map Created: 11/24/2017
Revised Date: 12/4/2017

ThreeRivers PARK DISTRICT







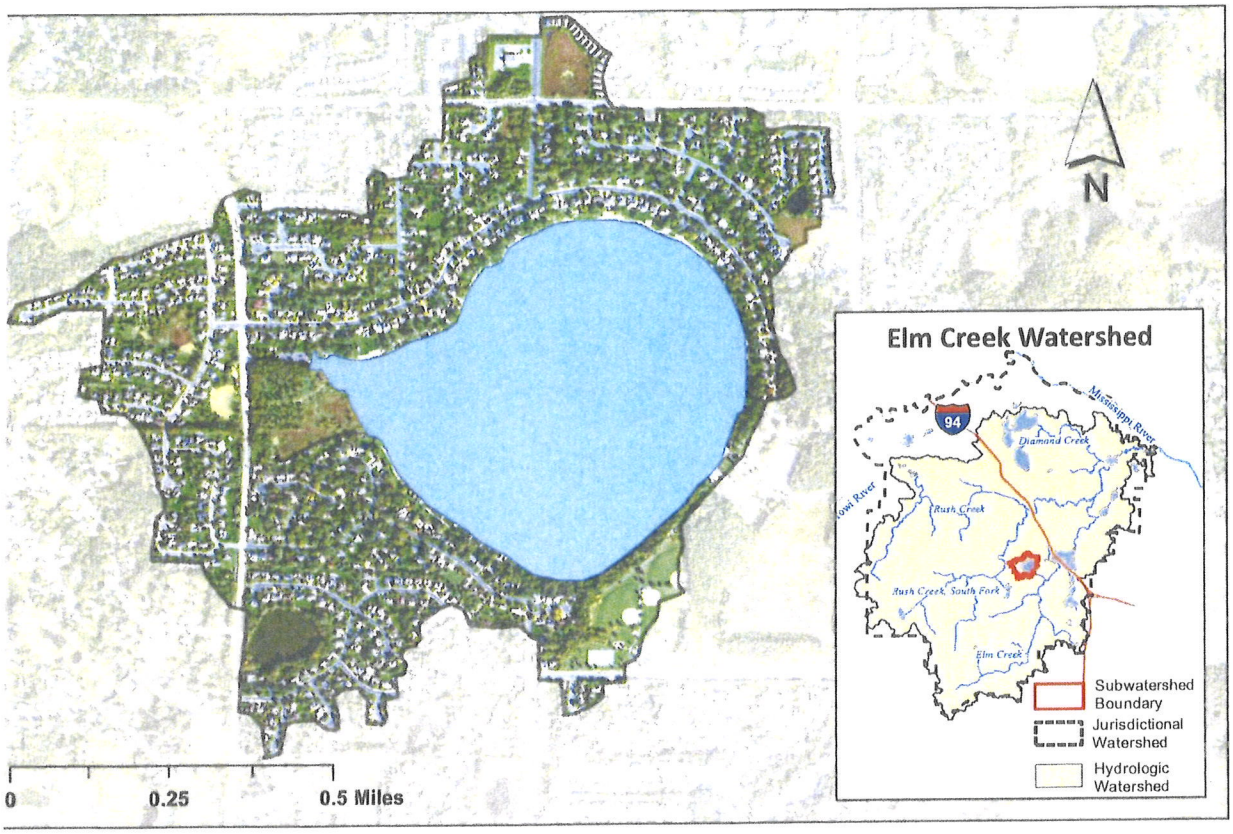
Rice Lake - Main Basin Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grade
2002			D	D
2003			D	D
2004			D	D
2005			D	D
2006			D	D
2007	F	F	F	F
2008	F	D	D	D-
2009	F	F	D	F
2010	F	F	F	F
2011	F	D	F	F
2013	F	F	D	F
2014	F	D	C	D
2015	F	F	F	F
2016	F	D	F	F
2017	F	D	D	D-
2018	F	D	D	D-
2019	D	D	D	D
2020	F	F	D	F
2021	F	F	D	F
2022	F	B	C	C-
MPCA Standard	C	C	D	C-

Met Council Grading System for Lake Water Quality

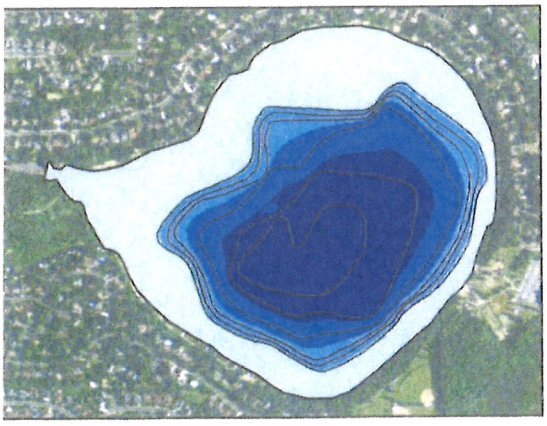
ThreeRivers PARK DISTRICT

Division of Water Resources
December 2022

Weaver Lake Watershed Map



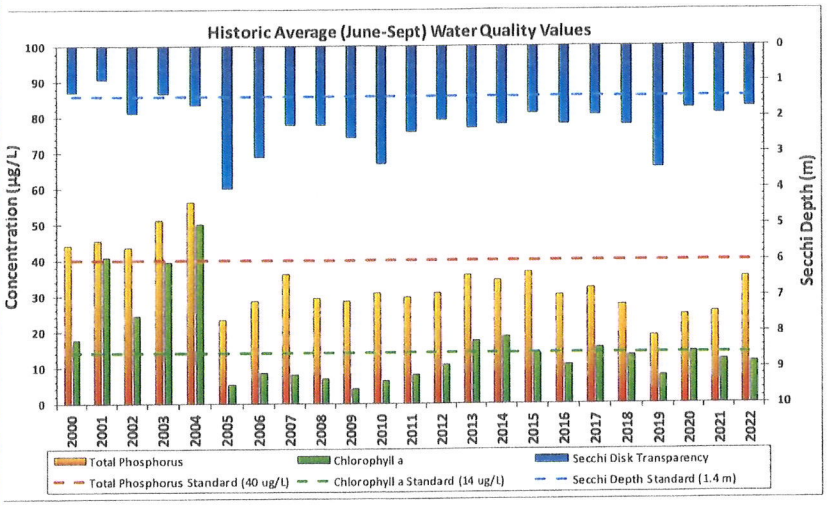
Weaver Lake Bathymetry

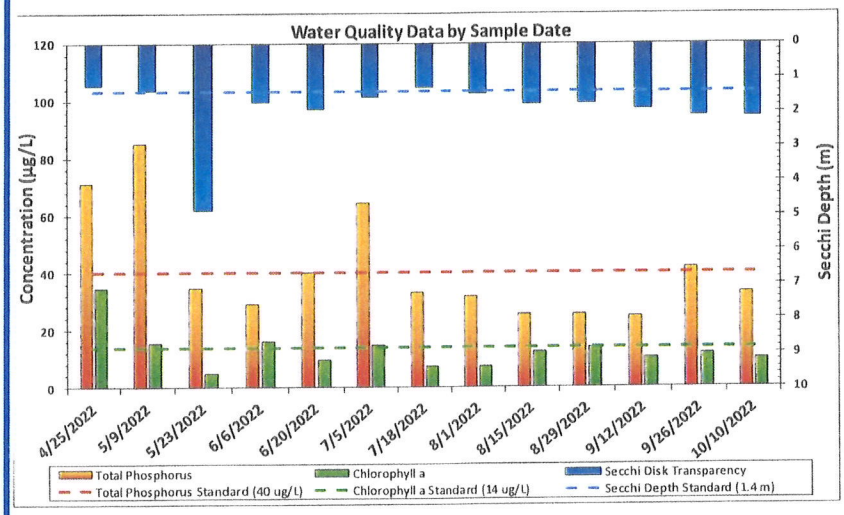


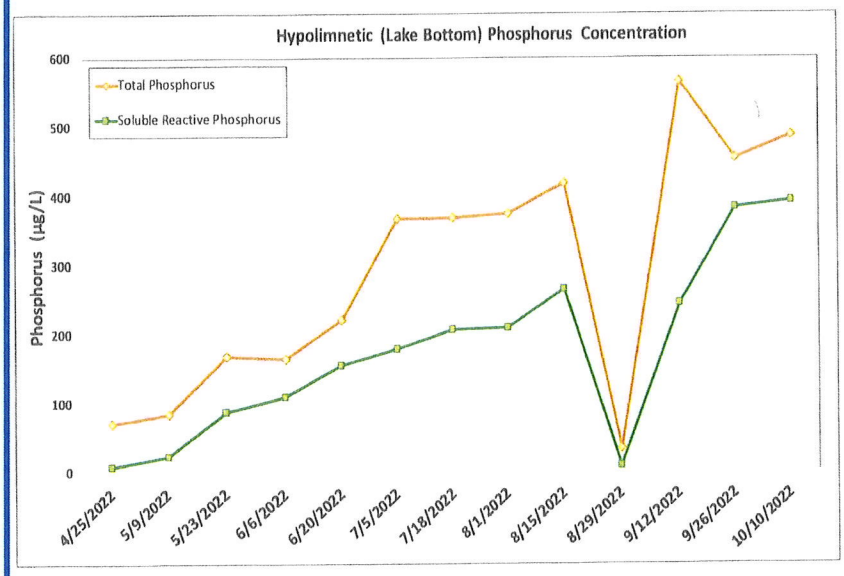
Lake and Watershed Characteristics	
DNR #	27011700
Watershed Area	187 Acres
Lake Area	150 Acres
Percent Littoral Area	47%
Average Depth	21.1 ft.
Maximum Depth	52 ft.
Watershed:Lake Ratio	1.3:1
Impairment	None
Classification	Deep Lake

Water Resource Department
Map Created: 11/24/2017
Revised Date: 12/4/2017

ThreeRivers PARK DISTRICT







Weaver Lake Water Quality Report Card				
Year	TP	Chl-a	Secchi	Avg Grad
1997	B	A	C	B
1998	C	B	C	C+
1999	C	C	C	C
2000	C	B	C	C+
2001	C	C	D	C-
2002	C	C	C	C
2003	C	C	C	C
2004	C	D	C	C-
2005	B	A	A	A-
2006	B	A	A	A-
2007	C	A	B	B
2008	B	A	B	B+
2009	B	A	B	B+
2010	B	A	A	A-
2011	B	A	B	B+
2012	B	B	C	B-
2013	C	B	B	B-
2014	C	B	B	B-
2015	C	B	C	C+
2016	B	B	C	B-
2017	C	B	C	C+
2018	B	B	B	B
2019	A	A	A	A
2020	B	B	C	B-
2021	B	B	C	B-
2022	C	B	C	C-
MPCA Standard	C	B	C	C-

Met Council Grading System for Lake Water Quality

ThreeRivers PARK DISTRICT

Division of Water Resources
December 2022

ThreeRivers PARK DISTRICT
Water Resources Team

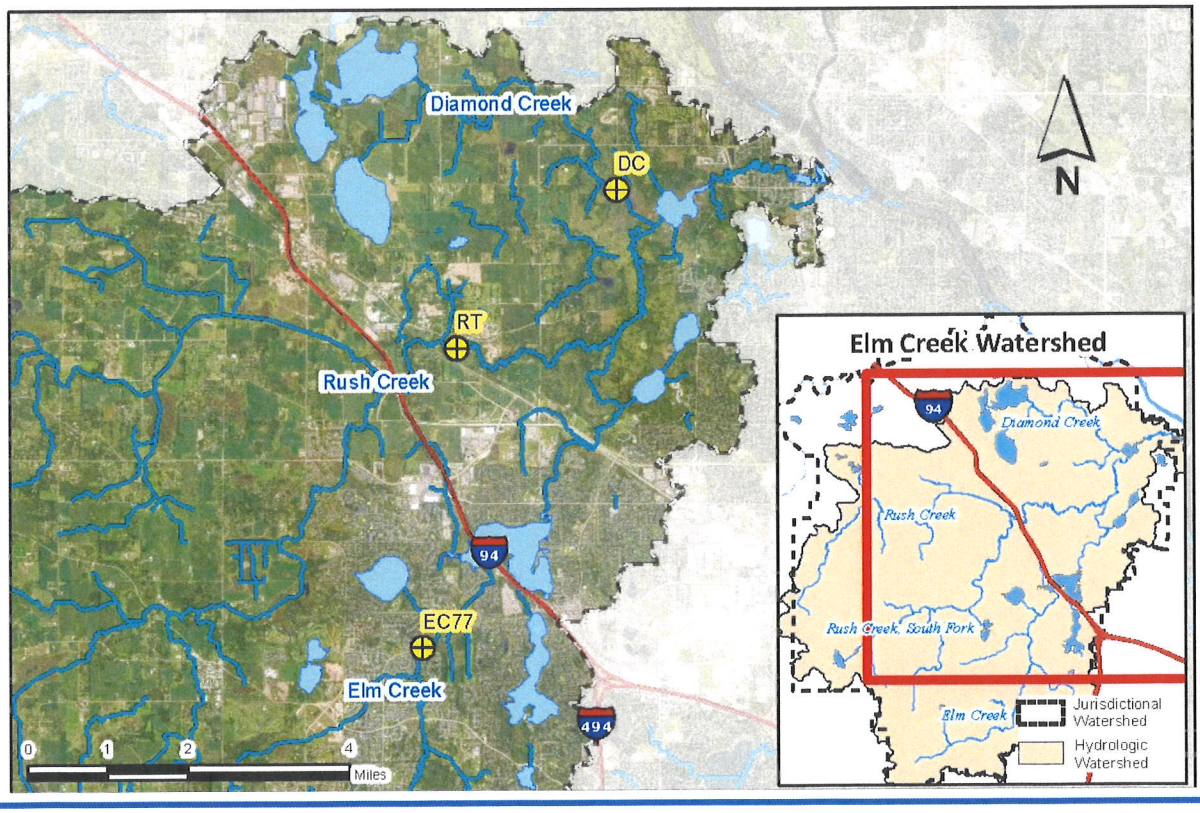
Elm Creek Stream Monitoring

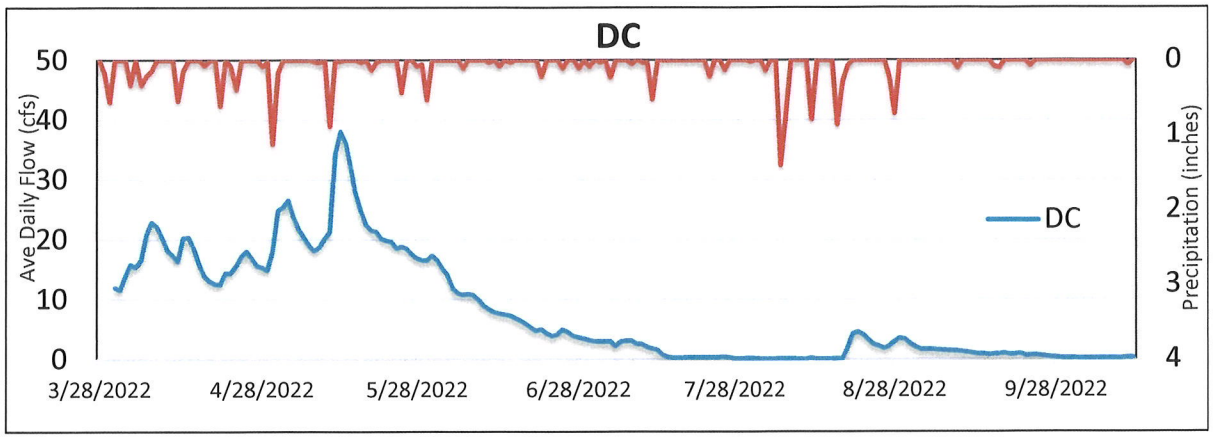
2022 Monitoring occurred from March 29, 2022, to October 28, 2022. During the monitoring period, there were 15.4 inches of rain. It was another year of below average precipitation, with 23.4 inches for the year. Three sites were monitored.

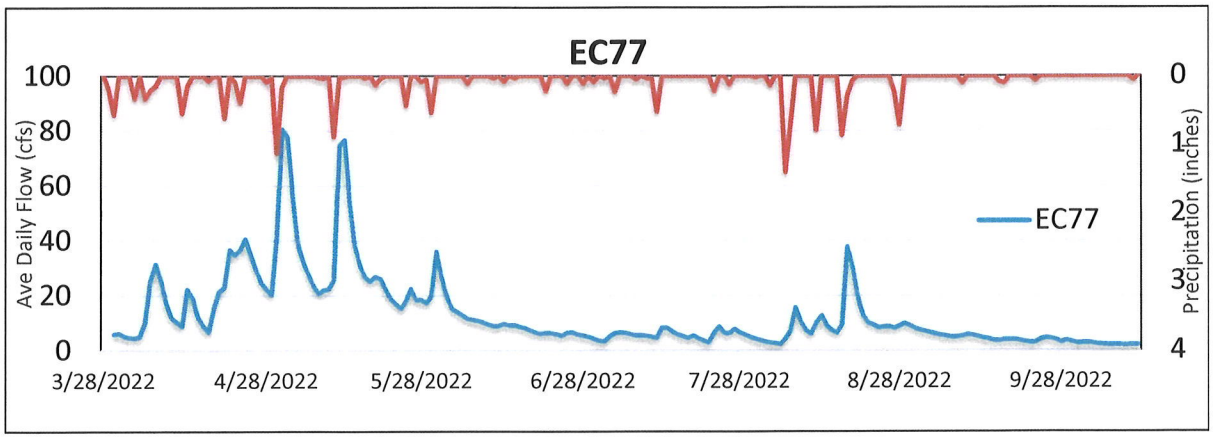
- DC Diamond Creek within Elm Creek Park Reserve (had continual beaver influence in 2022)
  Average flow: 7 cfs Minimum flow: 0 cfs Maximum flow: 38 cfs

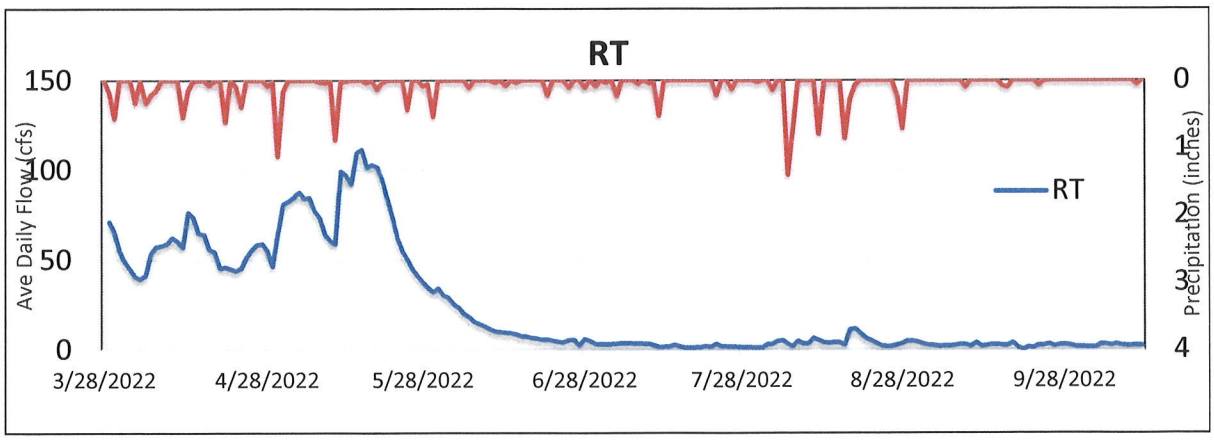
- EC77 Elm Creek at Medicine Lake Regional Trail
  Average flow: 12.3 cfs Minimum flow: 1.8 cfs Maximum flow: 81 cf

- RT Rush Creek at Territorial Road
  Average flow: 22.3 cfs Minimum flow: 0 cfs Maximum flow: 112 cfs









ThreeRivers
PARK DISTRICT
Water Resources Team

Methods:

Monitoring

- Bi-weekly water grab samples were collected to characterize base flow conditions
- Sites equipped with ISCO auto-samplers measured water flow using ISCO flow meters and collected water samples during storm events
- Rating curve required for open stream sites to better estimate amount of water flow
- Parameters: TP: Total Phosphorus; SRP: Soluble reactive phosphorus; TN: Total Nitrogen; TSS: Total Suspended Sediments

To estimate annual loads:

- Used U.S. Army Corps of Engineer's FLUX model version 5.0 (Soballe, 2020)
- Concentrations and flow during sample period were input to FLUX to determine the sample period nutrient load
- Sample period nutrient load was extrapolated to yearly load based on precipitation
- Concentrations are flow weighted

Concentration data:

- DC: 17 Samples collected; 3 from auto sampler
- EC77: 14 samples collected; all grab samples
- RT: 15 samples; 2 from auto sampler

Site	Ave TP (min-max) (µg/L)	Ave SRP (min-max) (µg/L)	Ave TN (min-max) (mg/L)	Ave TSS (min - max) mg/l
DC	294 (126 - 512)	113 (34 - 216)	1.8 (1.3 - 2.5)	13.0 (0.8 - 48.7)
EC77	249 (104 - 384)	126 (33 - 196)	1.3 (1.0 - 2.0)	20.6 (1.4 - 197.0)
RT	373 (144 - 686)	240 (103 - 396)	1.5 (0.4 - 3.1)	7.7 (1.2 - 51.3)

Flux results:

Site	Year	Nutrient Loading				Nutrient Concentration					
		TP (lbs/yr)	SRP (lbs/yr)	TN (lbs/yr)	TSS (lbs/yr)	TP (µg/L)	SRP (µg/L)	TN (mg/L)	TSS (mg/L)	Flow Volume (x 10^6 m^3)	Annual Precipitation (inches)
DC	2022	3125.2	1199.1	24,907	193,522	238.2	91.4	1.90	14.75	5.95	23.43
EC77	2022	5433.0	2627.0	27,248	432,477	252.4	122.0	1.27	20.09	9.77	23.43
RT	2022	13103.8	8328.3	77,114	331,189	339.1	215.5	2.00	8.57	17.53	23.43

ThreeRivers PARK DISTRICT Water Resources Team

2022 Stream Monitoring

United States Geological Survey

There are three hydrologic watersheds within the administrative boundaries of the Elm Creek Watershed Management Commission – Elm Creek, Crow River and Mississippi River. The Elm Creek watershed contains several large depressions and drainageways. Stormwater within Elm Creek watershed is generally directed from the south and west to northeast via four main drainage ways – Rush Creek, North Fork Rush Creek, Diamond Creek, and Elm Creek. These drainage ways converge in the Elm Creek Park Reserve and enter Hayden Lake. Water is eventually discharged to the Mississippi River near the Mill Pond in Champlin.

Northwest areas of Rogers drain to Crow River. Within this area, Fox Creek is the main drainage way that collects stormwater along the I-94 corridor and the area between I-94, Territorial Road and Fletcher Lane. Areas north of I-94 and along the Highway 101 corridor drain north to the Crow River, mostly along the corridor. The northern quarter of Dayton flows north into the Mississippi River with a small area on the northwest side of Dayton draining to the Crow River. There are no major drainageways in these areas.

Elm Creek has been monitored since 1976 by a station located in Champlin. The monitoring station for Elm Creek is located at Elm Creek Road crossing in the Elm Creek Park Reserve and is operated in cooperation with the United States Geological Survey (USGS). The exact location is: latitude 45°09'48", longitude 93°26'11" referenced to North American Datum of 1927, in NE ¼ NW ¼ Sec.35, T.120 N., R.22 W., Hennepin County, MN, Hydrologic Unit 07010206, on left bank, 33 feet downstream from bridge on Elm Creek Road, 2.5 mi southwest of Champlin. Datum of the gage is 850.70 ft above sea level (NGVD of 1929). The Commission shares the costs of operating the station, which collects continuous flow data and periodic event and base water quality data. The watershed area above the gauging station is 86 square miles, or 81% of the hydrologic watershed.

Both grab samples and storm runoff samples are collected and analyzed for various parameters. Analyses of the streamflow and water quality monitoring data for Elm Creek and its tributaries are summarized below. Real time data from the monitoring station in Champlin may be viewed at http://waterdata.usgs.gov/mn/nwis/uv/?site_no=05287890&PARAmeter_cd=00065,00060.

Flow Monitoring

Storm event samples are collected using an automatic sampler. Routine manual sampling occurs approximately monthly. The average mean discharge for the 2022 WY (October 1, 2021 through September 30, 2022) was 23.75.

The average daily discharge for the 2021 water year (October 1, 2020, to September 30, 2021) was 27.9 cubic feet per second.

Data shows an annual mean discharge of 27.9 cfs during the 2021 water year. The water year for 2021 (October 1, 2020, to September 30, 2021) was a below average for the Elm Creek Discharge as compared to the 2020 water year that was still somewhat historically high at 57.7 cfs for the mean

average discharge. As an extreme comparison, the 2019 water year was higher and discharged more water downstream of the station than any time during the 42 years the station has been in place. During the 2021 water year the minimum and maximum observed average daily discharge values were 1.06 cfs on August 24, 2021 and 177 cfs on March 14,2021. The long-term average daily discharge at the station is 43.9 cfs or 6.93 inches (years 1979-2020).

Elm Creek Annual Instantaneous Peak Discharge Rates

Date	Peak Flow (cfs)	Date	Peak Flow (cfs)	Date	Peak Flow (cfs)	Date	Peak Flow (cfs)
4/4/79	307	6/1/91	371	6/28/03	695	7/19/15	127
3/25/80	199	3/8/92	380	6/03/04	350	9/24/16	1,220**
6/15/81	44	6/22/93	315	10/30/04	118	5/23/17	482
4/3/82	471*	4/30/94	669*	10/09/05	295	4/25/18	405
3/9/83	408	3/17/95	237	3/17/07	223	3/24/19	836
2/25/84	341	3/19/96	407	5/4/08	205	4/2/20	229
3/18/85	579*	4/1/97	511*	3/27/09	119	3/14/21	177
3/27/86	812*	4/5/98	306	3/17/10	369	5/16/22	183***
8/1/87	185	5/15/99	538*	3/24/11	803		
3/27/88	39	7/13/00	112	5/29/12	568		
3/31/89	159	4/25/01	875	6/26/13	389		
8/1/90	225	5/11/02	554	5/1/14	803		

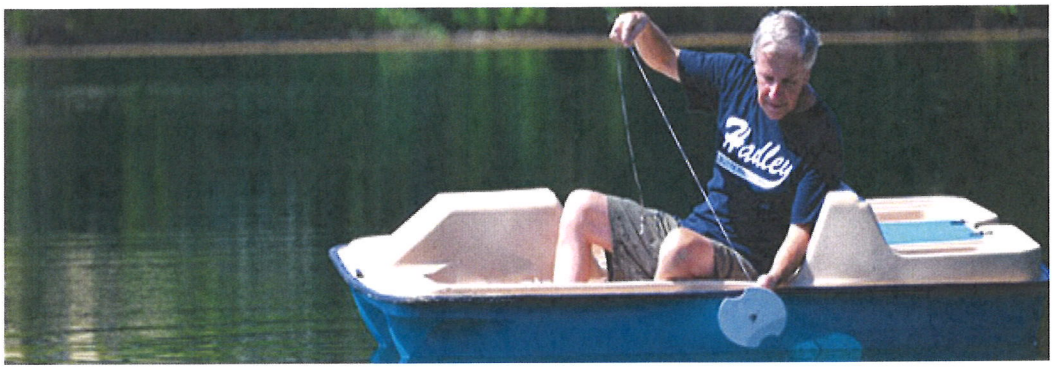
*These values have been revised based on the 2001 rating curve.

**All-time instantaneous peak discharge. The estimated 100-year flood discharge at this site is 2,290 cfs.

*** Provisional.

CITIZEN-ASSISTED MONITORING PROGRAM (CAMP)

Engaging residents to address lake water quality issues



The Metropolitan Council's Citizen-Assisted Monitoring Program (CAMP) is a partnership to collect and analyze scientifically valid water-quality data from lakes in the seven-county Twin Cities area. Organizations and residents use the data to make better decisions about lake management.

Citizen-Assisted Monitoring Program Brochure (pdf)

Under CAMP, sponsor organizations recruit volunteers to track water quality in local lakes. Sponsor organizations include counties, cities, watershed districts and other local governments.

Each volunteer monitors a specific site on a lake on a regular basis from mid-April through mid-October (every two weeks is most common). Volunteers collect a surface water sample, measure water temperature and clarity, and report weather and lake conditions.

With help from their sponsors, volunteers provide the data and samples to Metropolitan Council Environmental Services (MCES). MCES analyzes the samples, reviews and analyzes data, assesses and reports on current lake conditions, and manages the CAMP program. CAMP is part of Met Council's Lake Monitoring & Assessment Program.

Contract No: A2311707

COOPERATIVE AGREEMENT

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

RECITALS:

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

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

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

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

1. TERM AND COST OF THE AGREEMENT

The DEPARTMENT agrees to furnish technical services set forth in Attachment A to the COMMISSION commencing January 1, 2023 and terminating December 31, 2023.

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

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

Attachment A: 2023 Watershed General Technical Assistance

- **Technical Services:** Not-to-exceed $20,000.00
- **Rush Creek and Diamond Creek BMP Cost Share:** Not-to-exceed $297,963.00 or 80% of documented project costs, whichever is lower.

The total cost of this Agreement, including all reimbursable expenses, shall not exceed **Three Hundred Seventeen Thousand Nine Hundred Sixty-three and no/100 Dollars ($317,963.00)**, as determined and specified in Attachment A. Any additional costs for extended work after the "not-to-exceed" limit has been reached, special studies, or capital projects, must be set forth in a written amendment to this Agreement and will be billed on an hourly basis set forth in Section 2.

2. BILLING RATES AND PAYMENT FOR SERVICES

A. Services in Attachment A are billed at the rates based on personnel and task, except where exceptions are noted.

Environmentalist, Supervising	$82.70 per hour
Senior Environmentalist, Water Resources	$74.38 per hour
Environmentalist	$67.37 per hour

B. DEPARTMENT shall perform all services hereunder to the satisfaction of COMMISSION, in accordance with the provisions herein, and in compliance with applicable law. If COMMISSION determines that DEPARTMENT has not complied with the foregoing, COMMISSION shall not have any obligation to pay DEPARTMENT for the non-complying services.

C. Payment for services shall be made directly to the DEPARTMENT after completion of the services upon the presentation of a claim in the manner provided by law governing the COMMISSION'S payment of claims and/or invoices. The DEPARTMENT shall submit an invoice for services provided in Attachment A on a quarterly basis. Payment shall be made within thirty-five (35) days from receipt of the invoice.

D. Reimbursable expenses are limited to the actual cost for parking, mileage or transportation fees, or copying and postage related fees. Any reimbursable expense which exceeds Zero Dollars and no/100 ($0.00) shall receive prior written approval from the Contract Administrator.

E. Payments shall be made pursuant to the provisions herein and COMMISSION's then applicable payment policies, procedures, rules, and directions. COMMISSION is not responsible for remedying fraudulent or unauthorized payments requested in COMMISSION's name.

F. COMMISSION may withhold from any payment due to DEPARTMENT any amount which is due and owing COMMISSION under this or any other agreement between the parties due to overpayment or as a result of an audit.

3. EQUAL EMPLOYMENT OPPORTUNITY- CIVIL RIGHTS

During the performance of this Agreement, the DEPARTMENT agrees to the following: no person shall, on the grounds of race, color, religion, age, sex, disability, marital status, public assistance, criminal record, creed, or national origin, be excluded from full

employment rights in, be denied the benefits of, or be otherwise subjected to discrimination under any program, service, or activity under the provisions of and all applicable federal and state laws against discrimination including the Civil Rights Act of 1964.

4. STANDARDS

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

5. INDEPENDENT CONTRACTOR

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

6. INDEMNIFICATION

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

7. INSURANCE

Each party warrants that it has a purchased insurance or a self-insurance program sufficient to meet its liability obligations and, at a minimum, to meet the maximum liability limits of Minnesota Statutes Chapter 466. This provision shall not be construed as a waiver of any immunity from liability under Chapter 466 or any other applicable law.

8. DATA PRACTICES

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

American Recovery and Reinvestment Act of 2009. The COMMISSION agrees to abide by these statutes, rules, and regulations and as they may be amended.

9. MERGER AND MODIFICATION

A. The entire Agreement between the parties is contained herein and supersedes all oral agreements and negotiations between the parties relating to the subject matter. All items that are referenced or that are attached are incorporated and made a part of this Agreement. If there is any conflict between the terms of this Agreement and referenced or attached items, the terms of this Agreement shall prevail.

COUNTY and/or COMMISSION are each bound by its own electronic signature(s) on this Agreement, and each agrees and accepts the electronic signature of the other party.

B. Any alterations, variations, or modifications of the provisions of this Agreement shall only be valid when they have been reduced to writing as an amendment to this Agreement signed by the parties. Except as expressly provided, the substantive legal terms contained in this Agreement, including but not limited to Indemnification, Insurance, Merger, Modification and Severability, Default and Cancellation/Termination or Minnesota Law Governs may not be altered, varied, modified, or waived by any change order, implementation plan, scope of work, development specification, or other development process or document.

C. If any provision of this Agreement is held invalid, illegal, or unenforceable, the remaining provisions will not be affected.

9. DEFAULT AND CANCELLATION

This Agreement may be canceled/terminated with or without cause by either party upon thirty (45) days' written notice. If the COMMISSION terminates this Agreement, it may specify work to be performed by the DEPARTMENT before termination is effective and shall pay the DEPARTMENT for services performed by the DEPARTMENT up to the time specified for termination. If the COUNTY terminates the Agreement, it will not be compensated for part completion of a task except to the extent part completion has value to the COMMISSION.

10. OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

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

11. CONTRACT ADMINISTRATION

In order to coordinate the services of DEPARTMENT with the activities of the COMMISSION so as to accomplish the purposes of this Agreement, Judie Anderson, Commission Administrator, or successor ("Contract Administrator"), shall manage this Agreement on behalf of COMMISSION and serve as liaison between COMMISSION and DEPARTMENT.

Kris Guentzel (612-596-1171; kristopher.guentzel@hennepin.us), Senior Water Resources Specialist, or successor shall manage the agreement on behalf of DEPARTMENT. DEPARTMENT may replace such person but shall immediately give written notice to COMMISSION of the name, phone number, and email of such substitute person and of any other subsequent substitute person.

12. AMENDMENTS TO AGREEMENT

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

13. NOTICES

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

14. MINNESOTA LAWS GOVERN

The laws of the state of Minnesota shall govern all questions and interpretations concerning the validity and construction of this Agreement and the legal relations between the parties and their performance. The appropriate venue and jurisdiction for any litigation will be those courts located within the County of Hennepin, state of Minnesota. Litigation, however, in the federal courts involving the parties will be in the appropriate federal court within the state of Minnesota.

COUNTY ADMINISTRATOR AUTHORIZATION

Reviewed by the County Attorney's Office

_____
Assistant County Attorney

COUNTY OF HENNEPIN
STATE OF MINNESOTA

By: _____
David J. Hough, County Administrator

By: _____
Assistant County Administrator - Public Works

Date:_____

Recommended for Approval

By:_____
Director, Environment and Energy Department

Date:_____

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

Printed Name:_____

Signed: _____

Title: _____

Date: _____

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

ATTACHMENT A

2023 WATERSHED GENERAL TECHNICAL ASSISTANCE

TASKS

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

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

1. **Meeting attendance & Preparation of Staff Report**

   Staff will prepare a staff report covering cooperative efforts and will attend regular Board and technical advisory committee (TAC) meetings to facilitate partnership and advise the COMMISSION on technical items. Time required to attend meetings will not be an expense to the COMMISSION.

   Estimated Effort:
   A Senior Environmentalist will attend each Board and TAC meeting. An Environmentalist and Supervising Environmentalist will attend meetings as necessary. Assuming 12 Board meetings and 4 TAC meetings.

	Estimated Hours	COMMISSION NTE
Senior Environmentalist	48	$0
Environmentalist	48	$0

2. **Respond to Inquiries from the public and conservation promotion in targeted subwatersheds**

   Due to the high priority nature of this work to the DEPARTMENT'S goals, DEPARTMENT agrees to request reimbursement for the following services at 50% the rate of other tasks. See agreement Section 2.

   A. General outreach and assistance: At the request of the COMMISSION, as prompted by public inquiry, DEPARTMENT staff will reach out to landowners within the Elm Creek watershed to develop best management practice (BMP) projects, respond to inquiries from the public to provide conservation program information, technical assistance, and information regarding COMMISSION requirements. In 2023 this will largely but not exclusively relate to promoting, assessing, and developing projects in the Diamond Creek and Rush Creek subwatersheds.

   Estimated Effort:

	Estimated Hours	COMMISSION NTE	Estimated Cost (DEPARTMENT)
Senior Environmentalist	160	$0	$11,885
Environmentalist	910	$20,000	$61,307

3. Rush Creek and Diamond Creek Subwatersheds Project Implementation

Over the last several years, subwatershed assessments (SWAs) have been completed for both the Diamond Creek and Rush Creek subwatersheds. In 2022, the convening group organized to distribute watershed-based implementation funds (WBIFs) from the Board of Water and Soil Resources chose to allocate $175,000 for implementation of BMPs identified in the SWAs in both subwatersheds. In addition, the COMMISSION has levied for and received capital project funds to provide a 25% cost share on BMP projects that improve water quality. These are capital projects 2020-01 ($53,025 for Livestock Exclusions, Buffers, Stabilizations in Corcoran and Rogers), 2020-02 ($53,025 for Agricultural BMPs, Cost-Share in Corcoran and Rogers), and 2022-03 ($50,000 for Partnership Cost Share, to implement BMPs in partnership with private residents). If projects are identified in the Rush Creek or Diamond Creek subwatersheds, they may be eligible to utilize these funds for cost share, with COMMISSION approval.

The DEPARTMENT will include project cost estimates and estimated COMMISSION share on projects in the monthly staff report as they become available, as well as an accounting of remaining WBIF grant and capital project funds available to support BMP projects. The COMMISSION shall provide feedback on project prioritization and COMMISSION cost share during monthly meetings.

The DEPARTMENT will invoice the COMMISSION for up to 80% of project installation costs, utilizing either WBIF or the Partnership Cost Share, after a project has been completed and the landowner has been reimbursed for project costs, as determined by the DEPARTMENT and COMMISSION prior to installation of the BMP(s). The DEPARTMENT will contribute 10% of project costs, in addition to design costs. Landowners will be expected to contribute 10% of project costs.

At the time of contract execution, the amount available in WBIF is $175,000, capital project 2020-01 is $36,482, capital project 2020-02 in $36,481, and capital project 2022-3 is $50,000.

Summary of total estimated effort and costs Tasks 1-3

	Estimated Hours	COMMISSION NTE
Task 1: Meeting attendance & Preparation of Staff Report	96	$0
Task 2: Respond to public inquiries and conservation promotion in targeted subwatersheds	1,070	$20,000
Task 3: Rush Creek and Diamond Creek Subwatersheds Project Implementation	N/A	$297,963
Total (estimated)	**1,166**	**$317,963**

Stantec

Memo

To: Elm Creek WMO Commissioners
Elm Creek TAC

From: Erik Megow, PE
Brian Vlach
Diane Spector

Date: April 4, 2023

Subject: Elm Creek Watershed TMDL 10-Year Review UPDATED

Recommended Commission Action	Discuss and provide guidance.

The Commission and Technical Advisory Committee (TAC) are interested in reviewing progress toward achieving the goals of the Elm Creek Watershed TMDL (Total Maximum Daily Load) study. At your March meeting you reviewed the TMDL findings and a framework for potential approaches to such a progress review. At that meeting you requested more information about monitoring data in the watershed, which is included in this updated memo. Our goal for this continued discussion is to obtain input and guidance from the TAC and Commissioners on how to proceed.

BACKGROUND

As a reminder, the Elm Creek Watershed TMDL process was completed in phases over several years, starting with additional monitoring and data gathering in 2009-2010, analysis and development of the TMDL in 2012-2014, and then final completion of the TMDL document and accompanying Watershed Restoration and Protection Strategies document in 2015. The final reports were approved by the MPCA and EPA in 2016.

The Elm Creek TMDL study addresses

- Seven lake *nutrient* impairments
- Four stream *E. coli* impairments.
- Three stream *DO* impairments.
- Four stream *fish and macroinvertebrate* impairments, with primary stressors *total phosphorus (TP) and total suspended solids (TSS)*.

Since completion of the Watershed TMDL, additional impairments have been designated or are pending in the watershed:

- Elm Creek and the lower reach of S Fork Rush Creek are impaired for excess *chloride*.
- The MPCA is processing two new impairments: *TSS* in Elm Creek and *fish biotic integrity* (*F-IBI)* in Fish Lake.
- The nutrient impairment for Fish Lake is proposed for “delisting” as the lake now meets state standards.

REVIEW OF PROGRESS

The MPCA does not have a formal process or guidance for undertaking reviews of progress toward meeting TMDLs. Entities such as cities and counties that are MS4s are required to annually report certain TMDL implementation activities that they take in the watershed, but that is not a comprehensive assessment, and does not include actions taken within the waterbodies such as stream restorations, lake alum treatments, or rough fish management.

When we have undertaken other TMDL reviews of progress, we have considered the following analytical steps:

1. Update watershed runoff and pollutant loading and lake response modeling to reflect most current land use information and monitoring data.
2. Collect new monitoring and other data to fill data gaps.
3. Collect data on BMPs undertaken since the TMDL baseline year(s) to estimate progress toward meeting the identified pollutant load reductions and non-numeric requirements.
4. Evaluate monitoring data to determine water quality trends and progress toward meeting the standards.
5. Review implementation strategies and recommend any course corrections for the coming period.

Update Models

Updating the various models used to quantify pollutant loading can range from simple to very detailed. Generally, this step is considered only when there has been significant land use change or where new data is available, for example, updating a lake response model to use measured sediment phosphorus release rates rather than literature values. While there has been development in the watershed, we don't think it is significant enough to warrant the expense and effort to update the watershed pollutant loading models.

> ***Recommendation:*** Do not include updated modeling in the Progress Review.

Collect New Monitoring Data

Lakes. The Commission has been annually monitoring four sentinel lakes – Fish, Weaver, Diamond, and Rice – and occasionally monitoring other lakes on a rotating basis. While the sentinel lakes have a good set of data available, it would be helpful to obtain more data on Henry, Jubert, Dubay, Laura, and French, where there is very little data (see Table 1). The cost of monitoring those lakes for two consecutive years would be about $8,000 per year. The annual budget includes monitoring the sentinel lakes and two additional lakes, which in 2023 will likely be Sylvan and either Henry or Cowley. It has been the Commission's practice to obtain at least two years' worth of data in the event the first year is non-representative of conditions, so those lakes would likely be repeated in 2024.

Table 1. Lake monitoring history since 2009.

Year	Cook	Cowley	Diamond	Dubay	Fish	French	Goose	Henry	Jubert	Laura	Medina	Mill Pond	Mud	Rice	Sylvan	Teal	Weaver
2025			T	???	T	???			???	???				T			T
2024		??	T	???	T	???		??	???	???				T	??		T
2023		?	T		T			?						T	?		T
2022			T		T		T						T	T			T
2021			T		T		T					T	T	T			T
2020			T		T									T		C	T
2019			T		T									T			T
2018			T		T				C					T			T
2017			T		T				C					T			T
2016		C	T		T				C					T			T
2015			T		T				C	C				T			T
2014			T	C	T					C		T		T	C		T
2013			T	C		T				C		T		T	C		T
2012			T	C	T	T					C	T			C		T
2011			T	C	T	T		C				T		C			T
2010		C	T		T	T		C				T	T	C/T			T
2009		C	T		T	T		C				T		C			T

C = CAMP; T = Three Rivers; ? = possible 2023 "other" lakes; ?? = 2nd year for "others; ??? = future?
Shaded = Impaired Waters; Sentinel Lakes: Diamond, Fish, Rice, Weaver

Streams. In addition to the partnership with the USGS to monitor flow and water quality on Elm Creek in the regional park, the Commission currently routinely monitors flow and water quality at three sites in the watershed: Elm Creek at its crossing of the Medicine Lake Regional Trail in Maple Grove; Rush Creek at Territorial Road; and Diamond Creek (see Figure 1). Some additional data is available at other sites in the watershed, most of it collected during the development of the TMDL. There is also a good data set at Hwy 55 and CR 101 in Plymouth. It may be helpful to collect additional data to help with the trend analysis. The Commission currently budgets $10,020 annually for stream monitoring; adding another site would be an estimated $3,500 annually.

Biological. The Commission has completed a minimal amount of biological (fish and macroinvertebrates) monitoring in the streams. There is 2010 and 2020 data at a few sites on each stream completed by the MPCA and/or the DNR, and the 2023 budget includes funding to undertake sampling at a few sites. It is our recommendation that the Commission focus this review on quantifying chemical parameters and in the review develop a plan for more systematically undertaking biological monitoring for evaluation during the next progress review.

> **Recommendation:** Monitor up to 5 additional lakes and one additional stream site in 2024-2025. The estimated cost to do both would be about $11,500 per year, or $23,000 total.

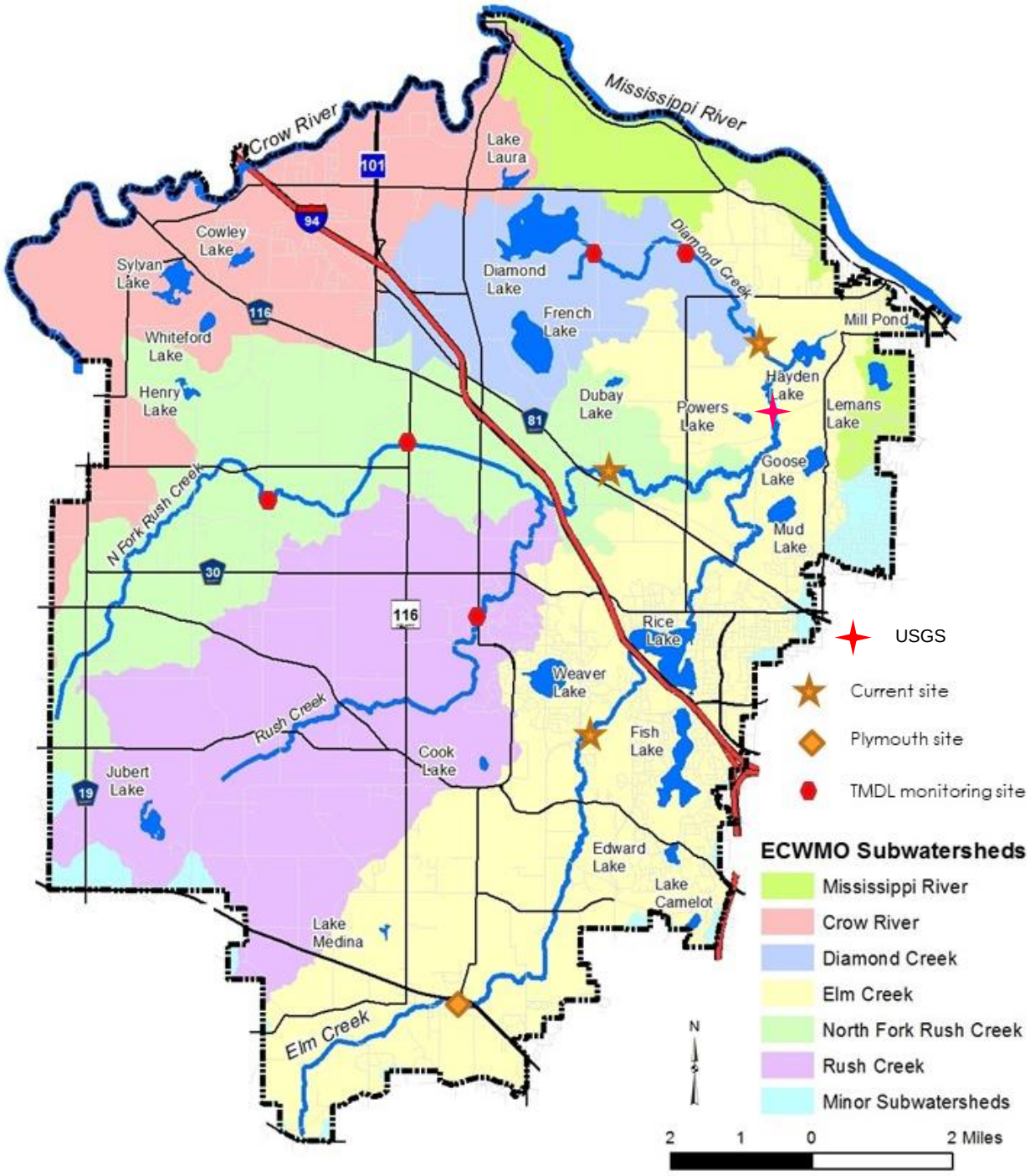


Figure 1. Monitoring locations.

Collect BMP Data

This task is compiling information about the BMPs undertaken in the watershed and estimating the pollutant load reductions achieved by each. Cities have been collecting and reporting watershed load reductions, including any structural BMPs or nonstructural such as enhanced street sweeping. In addition, load reduction data is estimated for development and redevelopment activity that requires a Commission project review. This data could be collected, assembled, and geolocated to document and summarize load reductions by receiving water. For example, the TMDL established TP load reductions for the entire length of Elm Creek; the individual cities through which Elm Creek flows are reporting data just for what occurs in their city.

There are also other types of actions taken that the cities are not required to report on in the NPDES permit annual reports. These may include lake internal load reductions from an alum treatment, or habitat improvements achieved through stream restoration. These should also be documented as progress toward achieving the goals established in the TMDL.

The compiled BMPs data would b e helpful in identifying the need for additional stream monitoring. There has been quite a bit of development in the watershed since the monitoring for the TMDL was completed. If the BMP compilation suggested there has been a significant load reduction from that land use conversion, it may be interesting to see if that is reflected in the in-stream data.

Depending on how much data is available and how it is organized, and the number of BMPs for which removals would need to be calculated, this could be a simple GIS exercise, or it may be more extensive. We estimate level of effort to be in the $5,000-8,000 range.

> **Recommendation:** Include the BMP collection and load reduction compilation by drainage area task in Phase 1 of the Progress Review.

Evaluate Monitoring Data

Three Rivers has been collecting and maintaining data for many years, and the annual report includes figures and tables showing water quality by year. It may be interesting to run some trend analysis statistics for where there is a good data set to determine if there are any statistically significant trends. This might be a $2,000-3,000 effort.

> **Recommendation:** Include this task in Phase 1 of the Progress Review.

Review Implementation Strategies & Report

This task would include compiling the information developed in the previous tasks to provide an overall summary of actions taken and progress made to date. The Watershed Restoration and Protection Strategies (WRAPS) report, which is the “implementation plan” of the TMDL, identified a universe of potential actions the various stakeholders could take to make progress toward the TMDL. This task would identify what has been successful and what not so successful and develop a prioritized action plan for the next several years. This then could be rolled into the Commission’s Fourth Generation Watershed Management Plan that will be underway at about the same time. Due to that timing, we would expect that this progress review would become an appendix to the Watershed Plan. It is likely that this would be an $8,000-10,000 effort.

Recommendation: Summarize the results in a report that includes an assessment of progress and evaluation of the implementation strategies set forth in the WRAPS. Include this task in Phase 1 of the Progress Review.

SUMMARY AND RECOMMENDATION

It is likely that this TMDL 10-year Progress Review would be about a $40,000 effort, depending on how much additional monitoring is desired. We recommend that the Commission consider proceeding in two phases:

Phase 1: Collect and map BMPs completed to date to estimate progress toward achieving both the watershed and internal load reductions identified in the TMDL. Perform trend analysis on lake and stream data. Use the results of both these tasks to refine a monitoring program for 2024-2025. Summarize the results in a report that can be used to inform the Fourth Generation Plan. This phase would be about $16,000-20,000.

Phase 2: Collect additional lake and stream data in 2024 and 2025. Update the monitoring data trend analysis in 2026 and adjust the implementation plan as desired. This phase would be about $18,000-20,000.

Stantec

Memo

DRAFT

To: Elm Creek WMO Commissioners
Elm Creek TAC

From: Erik Megow, PE
Diane Spector

Date: March 30, 2023

Subject: WBIF-Funded Feasibility Assessments
Scopes of Work

Recommended Commission Action

The BWSR Watershed-Based Funding grant awarded to the Elm Creek basin included $92,774 allocated to the Commission to help complete high-priority feasibility and subwatershed assessments. The Commission has identified three potential studies: 1) South Fork Rush Creek Subwatershed Assessment (SWA) primarily in Corcoran but also covering portions of Medina and Maple Grove; 2) North Fork Rush Creek Stream Remeandering in Rogers; and 3) Diamond Lake outlet channel remeandering in Dayton.

Detailed proposed scopes of work for the first two referenced studies are attached for review and consideration as Attachments One and Two. Based on a review of the work done to assess options for the Diamond Lake outlet channel as part of the Diamond Creek SWA, we do not recommend the Commission at this time proceed with any additional work to flesh out a potential project. The SWA included a generalized design and cost estimate (Attachment Three) that is a reasonable assumption in the absence of a redevelopment proposal.

Cost and Funding

The $92,774 grant requires a minimum 10% match from local sources. The approved work plan specifies a minimum of $10,000. Table 1 shows the total estimated cost of the two studies, which is $1,127 more than the funds available from the grant and the required minimum $10,000 match.

Table 1. Scope of work estimated cost and funding sources.

Study	Cost/ Funding	Notes
COST		
S Fork SWA	$66,351	(includes optional Open House)
N Fork Remeander	$37,550	
TOTAL	$103,901	
FUNDING		
Grant Funds	$92,774	
Match	$10,000	Minimum required
TOTAL	$102,774	
No source identified	$1,127	Additional match to fully fund

The Commission does have a policy requiring affected cities to share 25% in the cost of SWAs, which is detailed on Table 2. The City of Corcoran has confirmed that they are aware of and have budgeted for their share of the SWA. The 2/3 / 1/3 split between the cities was suggested by Corcoran.

Table 2. S Fork Rush Creek SWA financing.

Project cost	$66,351		
Grant	$59,716		
Match	$6,635		Total Match
ECWMC contribution		$4,976	75% of total
LGU contribution		$1,659	25% of total
Corcoran		$1,111	2/3 of match
Medina/MG 1/3		$548	1/3 of match

The Commission does not have a policy regarding the local match for feasibility studies such as the North Fork Rush Creek Remeandering.

Table 3. N Fork Rush Creek Remeander financing.

Project cost	$37,550	
Grant	$33,058	($92,774 total grant - $59,716 allocated to SWA)
Match	$4,492	

Staff Recommendation

It is staff's recommendation that the Commission proceed with both the subwatershed assessment and the stream remeandering feasibility study. As of the 2021 Audit, there was a balance of $181,817 available in the account Fund Balance Assigned for Studies and Projects. Table 4 details the recommended financing of the two studies.

Table 4. Total cost and recommended financing for 2023 WBIF-funded special studies.

Study	Cost/ Funding	Source
South Fork Rush Creek SWA		
Total cost	$66,351	
Grant	$59,716	WBIF Grant
Match	$6,635	
Commission	$4,976	Assigned funds for projects and studies
Cities	$1,659	Cities
TOTAL	$103,901	
North Fork Rush Creek Remeander		
Total Cost	$37,550	
Grant	$33,058	WBIF Grant
Match	$4,492	Assigned funds for projects and studies

Stantec

Attachment 1

March 29, 2023

Elm Creek Watershed Management Commission
3235 Fernbrook Lane North
Plymouth, MN 55447

Dear Elm Creek Watershed Management Commission,

We appreciate the opportunity to present this scope of services and fee proposal for the **South Fork Rush Creek Subwatershed Assessment.**

SCOPE OF WORK

The 2016 Elm Creek Watershed Total Maximum Daily Load (TMDL) study established pollutant load reductions for numerous impaired lakes and streams in the Elm Creek watershed. Among the implementation actions identified in the TMDL and the subsequent Watershed Restoration and Protection Strategy (WRAPS) report was the systematic completion of Subwatershed Assessments (SWA). A SWA is a more intense, finer-scaled look at a subwatershed to identify pollutant load-reducing Best Management Practices (BMPs) down to the field or lot level. A SWA provides the framework for targeting BMPs to where they will be most effective at improving and protecting downstream water resources, and where they make the most sense based on soils and topography.

Proposed services include an inventory of the South Fork Rush Creek watershed (Hydrologic Unit Code 070102060101, see Figure 1) that characterizes sediment and phosphorus sources as well as high-quality areas and areas with designated protections. This inventory will be used as the basis for the identification and prioritization of potential Best Management Practices (BMPs) to reduce phosphorus and sediment loading). For simplicity, we will subdivide the Subwatershed into smaller Management Units for analysis. The baseline data and pollutant source data and BMP identification and prioritization will be summarized for each Management Unit.

Stantec's work will be similar to the 2018 Rush Creek Headwaters and 2022 Diamond Creek assessments and will primarily be a desktop-based geospatial assessment. These summaries will include the following primary components:

- inventory of impaired waters
- inventory of protected lands and their biologic significance
- inventory of livestock counts and feedlot locations
- identification of areas likely artificially drained via drainage tile
- estimation of septic system location and age
- implementation of the Agricultural Conservation Planning Framework (ACPF) to identify opportunities for, and the prioritization of, BMPs at the Management Unit scale.

TASK 1 - MEETINGS AND COORDINATION

Following authorization to proceed, we will schedule a project kickoff meeting with Stantec and a project Task Force comprised of the affected cities and Hennepin County. We will discuss the proposed workplan and schedule with the goal to refine the project extents and resources of concern, establish project objectives and design standards, and identify relevant stakeholders to be involved in project meetings.

Task 1 includes the following:

- Kick-off meeting and initial project review meeting with a Task Force of impacted cities and Hennepin County staff
- Two presentations at Technical Advisory Committee (TAC), Task Force, or Commission meetings
- Regular project updates

Stantec will provide meeting agendas and summaries to all invitees. Unless otherwise noted, all meetings are assumed to be virtual.

Task 1 Deliverables: Meeting agendas and summaries.

TASK 2—DATA COLLECTION AND REVIEW

Stantec will review the publicly available statewide datasets from various local, regional, and state sources as well as national data sources such as the US Geological Survey (USGS) and the Natural Resources Conservation Service (NRCS). The available data and recommendations will be discussed at the project kick-off meeting discussed in Task 1 with a goal of ensuring Stantec has the best-available data to understand existing areas of concern and define how to fill any data gaps. Data will be collected to characterize the following conditions including, but not limited to, the datasets summarized in **Table *1*** below.

Table 1. Summary of datasets to be collected by Stantec for the South Fork Rush Creek Subwatershed Assessment.

Dataset Name (Year/Version)	Dataset Description	Dataset Type	Dataset Source
303(d) Impairments Shapefile (2022)	Most recent inventory of streams and lakes listed as impaired	Geospatial/tabular	MPCA
U.S. Protected Areas Database (version 1.1., April 2021)	Inventory of protected lands in the United States	Geospatial	USGS
Areas of Biodiversity Significance	Minnesota Biological Survey (MBS) biodiversity significance dataset	Geospatial	MN DNR
Regionally Significant Ecological Areas (RSEA)	Metro area Regionally Significant Ecological Areas (RSEA) dataset	Geospatial	MN DNR
MN Wetland Banking Program Easements	MN wetland banking program parcel locations	Geospatial	BWSR
Hennepin County Potential Wetlands Assessment	Hennepin County Potential Wetlands dataset	Geospatial	Hennepin County
MPCA Registered Feedlots	Registered feedlot locations	Geospatial	MPCA
Livestock Windshield Surveys	Livestock windshield survey results	Geospatial/tabular	Hennepin County/cities
Septic System Inventories (cities/Hennepin County)	Septic systems inventory results	Geospatial/tabular	Hennepin County/cities
National Wetlands Inventory (NWI)	National wetlands layer optimized for southern and eastern MN	Geospatial	MN DNR
National Land Cover Database (NLCD) Land Cover Dataset (2019)	30-meter resolution land cover dataset	Geospatial	Multi-Resolution Land Character-istics Consortium
SSURGO Soils Dataset	Detailed soils dataset from the National Cooperative Soil Survey results compiled by NRCS	Geospatial/tabular	NRCS
MN Topo 3-meter resolution DEM	Digital elevation map at 3-meter resolution	Geospatial	MN DNR

Task 2 Deliverables: Results of dataset summaries from Task 2 will be included in the deliverables summarized under Task 3.

TASK 3—DATASET SUMMARIES

Using the datasets identified under Task 2, Stantec will subdivide the South Fork Rush Creek subwatershed into smaller Management Units and hydro-condition the Digital Elevation Model (DEM). We will summarize existing conditions in each of the Management Units by baseline conditions and potential pollutant sources.

Stantec will evaluate the following *baseline conditions* within each Management Unit:

- location and extent of intact natural cover (forest/wetland)
- location and extent of public lands, summarized by level of protection
- hydrologic soil group composition
- mean slope

Stantec will evaluate and summarize the following *pollutant sources* within each Management Unit:

- location and extent of anthropogenic cover (urban/developed)
- location extent of 303(d) listed streams and waterbodies
- location and extent of potentially tiled drained agricultural land
- location of potentially failing septic systems, where applicable
- location and extent of feedlots
- location of relative impact of livestock

Task 3 Deliverables: Geospatial and numerical summaries of each Management Unit that describe key dataset comparisons in PDF format.

TASK 4—BMP IDENTIFICATION

Using the Agricultural Conservation Planning Framework (ACPF) toolbox, Stantec will identify potential projects per Management Unit, focusing on the top ten that could yield the greatest benefit toward reducing sediment and phosphorus input to the South Fork Rush Creek. Stantec will review and refine the list of potential projects through a review with the Task Force to determine which are most feasible.

Task 4 Deliverables: Project progress meeting and preliminary list of top BMPs

TASK 5—BMP PRIORITIZATION

Using the ACPF outputs and standard literature values, Stantec will estimate pollutant removals and construction cost for BMPs summarized under Task 4 and prioritize them based on impact and cost effectiveness. The work to date will be presented at the Technical Advisory Committee (TAC) and Commission meeting. The results generated under Task 5 will also be available via the interactive map created under Task 6, creating an opportunity for field verification of BMPs and general BMP assessment tracking and documentation.

Task 5 Deliverables: Final prioritized BMP list for Task Force/ECWMC approval and/or selection; presentation at TAC and Commission meetings.

TASK 6 – INTERACTIVE MAP APPLICATION

Stantec will create an interactive map application using ESRI's online map platform. The map application will display the layers and their attributes to describe baseline conditions, pollutant sources, and protected areas or areas of high integrity identified under Task 3.

This application may also be used for field verification, implementation, and tracking of BMP assessment and recommendations. The application can also be shared and used with project partners/stakeholders in the watershed.

Task 6 Deliverables: ESRI online map application hosted by Stantec.

TASK 7—TECHNICAL SUMMARY

Upon initial review of summarized datasets and BMP prioritization by ECWMD, Stantec will compile a PDF report including pertinent maps, numerical summaries, and narrative summaries of datasets and BMPs.

Task 7 Deliverables: Deliverable will be a PDF document including pertinent maps of each identified Management Unit in the South Fork Rush Creek HUC12 watershed with companion summaries of datasets outlined under Task 3.

Additional maps of BMPs identified for prioritization under Task 5 will be included and will have companion tabular data stored in Excel (.xlsx) format. These will also be made available in the interactive map under Task 6.

PROJECT STAFF

- Project Manager — Erik Megow
- Senior Environmental Scientist — Tom Beneke
- GIS Specialist — Aaron Hyams
- Environmental Scientist — Katie Kemmitt
- Senior Water Resources Planner — Diane Spector

FEE ESTIMATE

The fee estimate below in Table 2 has been prepared on a time and materials basis, per the Terms and Agreements set forth in our Professional Services Agreement dated March 5, 2021 and will not exceed the amount indicated without prior authorization from the ECWMC. This estimate does *not* include any field work to evaluate stream or ditch conditions in the subwatershed and assumes a windshield or aerial photo livestock inventory is readily available. This cost estimate does not include meetings with the public such as a general Open House but could be added as an Optional Task.

Stantec

Attachment 1

Table 2. Estimated cost to complete the proposed SWA.

Task No.	Description	Task Totals			
		Hours	Labor	Expenses	Fee
1	Meetings & Coordination	46	$7,360		$7,360
2	Data Collection & Review	55	$8,080		$8,080
3	Dataset Summaries	72	$10,180		$10,180
4	BMP Identification	50	$7,460		$7,460
5	BMP Prioritization	43	$6,785		$6,785
6	Interactive Map Application	47	$6,765		$6,765
7	Technical Summary and Report	108	$15,954		$15,954
	TOTAL	421	$62,584		$62,584
8	Optional: Open House	22	$3,517	$250	$3,767

We look forwarding to discussing this proposal and are happy to review our approach and scope of work with you. Should you have any questions, please don't hesitate to contact me via phone or email.

Best regards,

STANTEC CONSULTING SERVICES INC.

Erik Megow, PE (MN)
Senior Water Resources Engineer, Associate
Direct: 763 252-6857
erik.megow@stantec.com
733 Marquette Avenue Suite 1000
Minneapolis MN 55402-2309

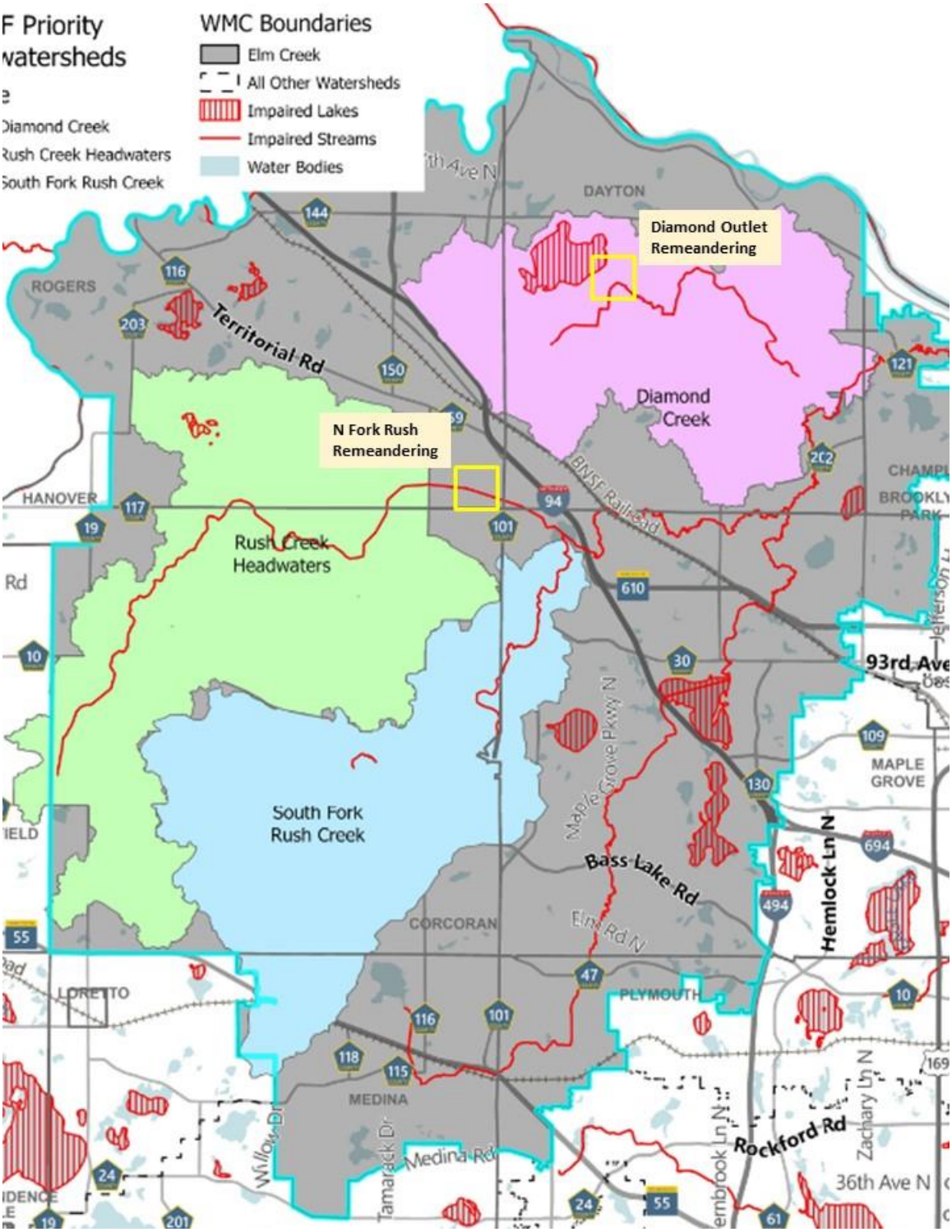


Figure 1. Project location.

Stantec Consulting Services Inc.
One Carlson Parkway North, Suite 100
Plymouth MN 55447

March 29, 2023

Elm Creek Watershed Management Commission
3235 Fernbrook Lane North
Plymouth, MN 55447

Dear Elm Creek Watershed Management Commission,

Stantec appreciates the opportunity to present this scope of services and fee proposal for the North Fork Rush Creek Remeander project. The primary project objectives are to survey the proposed project corridor and to prepare a feasibility study of options and probable cost to remeander the Creek using natural channel design techniques, to improve water quality and fish and wildlife habitat through biological enhancements and improve aesthetics and for future regional trail and open space users.

Scope of Work

Proposed services include desktop analysis and base-mapping; field data collection and assessment / evaluation; topographic and utility survey; development of remeander alternatives, Basis of Design memorandum, and conceptual costs. The focus of this project area is a segment of the North Fork of Rush Creek from CR 116 to CR 101, approximately 5,500-feet in length. This reach of the North Fork is part of Hennepin County Ditch #21. About 1,300 LF on the west end of this reach is in private property and is included in the analysis but will not be studied in depth (Figure 2).

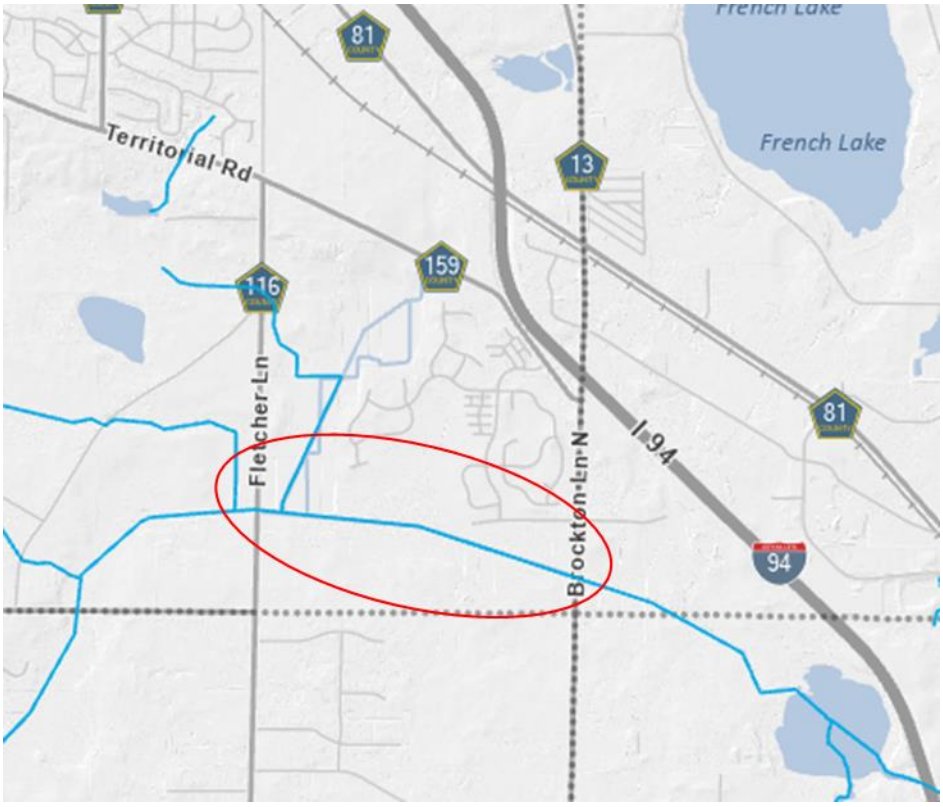


Figure 1. Study area between CR 116 (Fletcher Ln) and CR 101 (Brockton Ln).

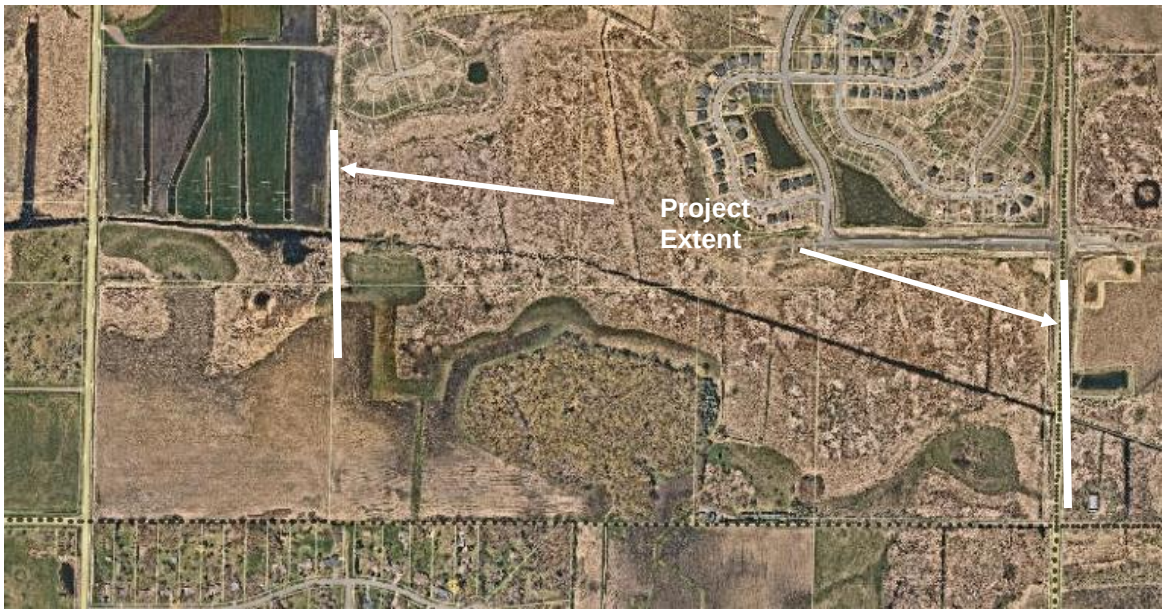


Figure 2. North Fork Rush Creek and project extent.

The 4,100 LF of ditch that will be part of the feasibility study are on land owned by or of interest to the City of Rogers. The stream flows through a wide wetland, offering an opportunity to restore a more natural channel design that incorporates significant habitat and functional uplift. There are also significant upland opportunities adjacent to the stream, including the ecologically significant Stieg Woods.

A future Hennepin County project will extend County Road 117 though the project area, and the Three Rivers Park District's future Rush Creek Regional Trail extension will also cross the study area. We understand the City of Rogers has worked with an engineering consultant to broadly identify the potential locations of the roadway and trail crossings of the creek, but that neither Hennepin County nor Three Rivers have completed any engineering work to establish the specific locations nor the type of stream crossings. An important component of this feasibility study will be to work with those agencies to understand their transportation requirements to better identify stream restoration options that will meet both City and Commission objectives and County and Three Rivers future needs.

We understand that the stream segment from CR 116 east to the start of the project extent, while not included in the feasibility study project extent, should be included in the study area to be sure that any proposed design options within the project extent will have no negative impact on the properties adjacent to the ditch.

We will coordinate our work with the City, Hennepin County Environment and Energy, and the Department of Natural Resources to explore stream restoration options that will improve water quality, enhance habitat, and stabilize the stream. We recently partnered with the DNR and the Coon Creek Watershed District on the Middle Sand Creek Natural Channel Restoration project in Coon Rapids (Middle Sand Creek Corridor Restoration Project - Coon Creek Watershed District (cooncreekwd.org) and have just started working with the DNR, City of Brooklyn Park and the Shingle Creek Watershed Commission on a similar natural channel project in Brookdale Park.

The following task descriptions provide more detailed explanations of the work proposed and the associated deliverables.

Task 1 – Data Collection and Review

Subtask 1.1 – Desktop Analysis and Base-mapping

- Facilitate a project kick-off meeting among Stantec, City, County, Three Rivers and DNR staff to review project scope, goals, and schedule (virtual).
- Review previous studies, planning documents, and publicly available soils, hydrology, wetland, vegetation, and historical aerial imagery of the creek area, gather available utility information, and review modelling, water quality, and flow data.
- Identify data gaps potential sources to fill critical data gap needs.
- Review existing hydraulic model data, features, and results.

Subtask 1.2 – Site Assessment

- Visit site to note potential constraints, current channel conditions, eroded banks, hydrogeologic factors like springs and seeps, vegetation quality, and infrastructure within the project area.
- Observe wildlife and plant communities within and around the current and potential creek route to identify opportunities for habitat and aesthetic improvements in addition to water quality improvements.
- Undertake fish and macroinvertebrate surveys to establish baseline ecological condition.
- Establish baseline stream conditions using the Minnesota Stream Quantification Tool and Debit Calculator (MNSQT) to assess potential for functional lift.

Subtask 1.3 - Topographic Field Survey

- Perform topographic and public utility survey along a 125-ft wide corridor for the proposed creek alternative. We will survey channel cross sections on 150 – 200-ft intervals as well as site features and locating trees over 6-inches DBH within the survey corridor limits. Survey will be completed in the late spring while leaves are not present.

Task 1 Deliverables: Kickoff meeting minutes, compiled data basemaps (PDF), topographic survey plan (PDF and CAD data), field investigation site observations, biotic and water quality findings.

Task 2 – Alternatives Evaluation and Basis of Design Memorandum

Subtask 2.1 – Alternatives Evaluation. We will use the Task 1 deliverables to inform two design meetings among City, County, Three Rivers, DNR and Stantec staff. We will discuss potential solutions, permitting considerations and funding opportunities, and adjacent landowner/stakeholder involvement. We will use the Elm Creek hydraulic model to evaluate potential hydraulic impacts to adjacent properties. We will work with Hennepin County Transportation and Three Rivers Park District Planning staff to determine their needs for the future road and trail extension through the area and their design requirements.

Based on direction and outcomes of this meeting, our team will analyze and use Task 1 findings to inform possible design options, and generate up to two (2) feasible, conceptual design alternatives, calculating estimated pollutant reduction and feasibility study level opinion of probable costs (AACE Class 4) for each alternative. These alternative designs will address bank stabilization, erosion and sediment control practices, water control practices, infrastructure impacts, habitat quality and 'fit' within the surrounding area, and the enhancement of aesthetics, ecological benefit, and recreation.

Subtask 2.1 – Basis of Design Memorandum. The conceptual design alternatives will be presented in a Basis of Design memo describing and summarizing the desktop and field data collection and analysis, design alternative elements and impacts to the surrounding areas, probable project cost estimates for the two alternatives, pollutant reduction estimates, stream functional lift, and a comparison table of each alternative focusing on cost and pollutant reduction / water quality improvement potential. After transmitting

the conceptual design alternatives Basis of Design memo, we will schedule a final meeting with the working group to discuss the proposed designs and any desired changes.

Task 2 Deliverables: Draft basis of design memorandum with supporting exhibits, meeting minutes

Assumptions

- Stantec assumes that City of Rogers will grant or otherwise arrange Stantec access to walk through the project area for field visit and assessment purposes.
- Scope of work assumes channel is safely wadeable and the adjacent area walkable. If not, field measurement methods may be modified to gather the data sufficient to complete the preliminary evaluation.
- Scope of work does not include wetland delineation, soils investigation, initial permitting engagement with ACOE and DNR.

PROJECT STAFF

Project Manager	Erik Megow
Senior Engineer	Ed Matthiesen
Project Engineer	Rob Monk
Senior Landscape Designer	Sarah Harding
Environmental Scientist	Katie Kemmitt

Fee Estimate

Stantec will execute the scope of work described above for the fee outlined below on a time and materials basis and according to the attached amendment to our Professional Services Agreement dated March 5, 2021. We will not exceed the amount indicated without prior authorization from the ECWMC.

Task No.	Description	Task Totals			
		Hours	Labor	Expenses	Fee
1.1	Desktop Analysis & Base Mapping	34	$5,392		$5,392
1.2	Site Assessment	58	$9,682	$1,000	$10,682
1.3	Topographic Field Survey	36	$5,568	$500	$6,068
2.1	Alternatives Evaluation	50	$8,286		$8,286
2.2	Basis of Design Memorandum	44	$7,122		$7,122
	TOTAL	222	$36,050	$1,500	$37,550

We look forwarding to discussing this proposal and are happy to review our approach and scope of work with you. Should you have any questions, please don't hesitate to contact me via phone or email.

Best regards,

STANTEC CONSULTING SERVICES INC.

Erik Megow, PE (MN)
Senior Water Resources Engineer, Associate
Direct: 763 252-6857
erik.megow@stantec.com
733 Marquette Avenue Suite 1000
Minneapolis MN 55402-2309

Design with community in mind

1.0 STREAM CHANNEL IMPROVEMENTS

1.1 BACKGROUND

The Diamond Creek Channel Study, TMDL report, WRAPS report, and local water plans all identified stream restoration and channel improvements as a strategy to improve hydrology, water quality, and habitat conditions in Diamond Creek. In some cases, these studies identified specific locations along Diamond Creek and its tributaries that exhibited bank erosion, altered hydrology, and/or degraded habitat conditions. This appendix highlights specific locations that could be targeted for in-stream improvements.

1.2 DIAMOND LAKE OUTLET TRIBUTARY CHANNEL RESTORATION (DIAMOND CREEK MANAGEMENT UNIT)

Diamond Lake outlets to the southeast to a small tributary channel which flows a relatively short distance to its confluence with Diamond Creek (Figure F-1). This channel is approximately 2,050 linear feet and runs through a combination of woods and wetlands. The channel is adjacent to agricultural fields and has been heavily ditched and straightened. Thus, this channel has been identified by local stakeholders as a potential location to restore natural hydrology and improve in-stream habitat conditions. A desktop analysis and cost estimate to stabilize the channel using Natural Channel Design is presented in Table F-1. The probable cost of this project is estimated to be $400,000 or about $195 per linear foot stabilized. In addition to the stabilizing the channel, length could be added to the channel by re- meandering (see Table F-1). Historical aerial photos show much greater sinuosity to the channel than currently exists. The planning level cost analysis presented in Table F-1 does not include estimated land purchase. The current value of the property is ~$520,000 (based on Hennepin County GIS 2021 mapping values) and is classified as residential.

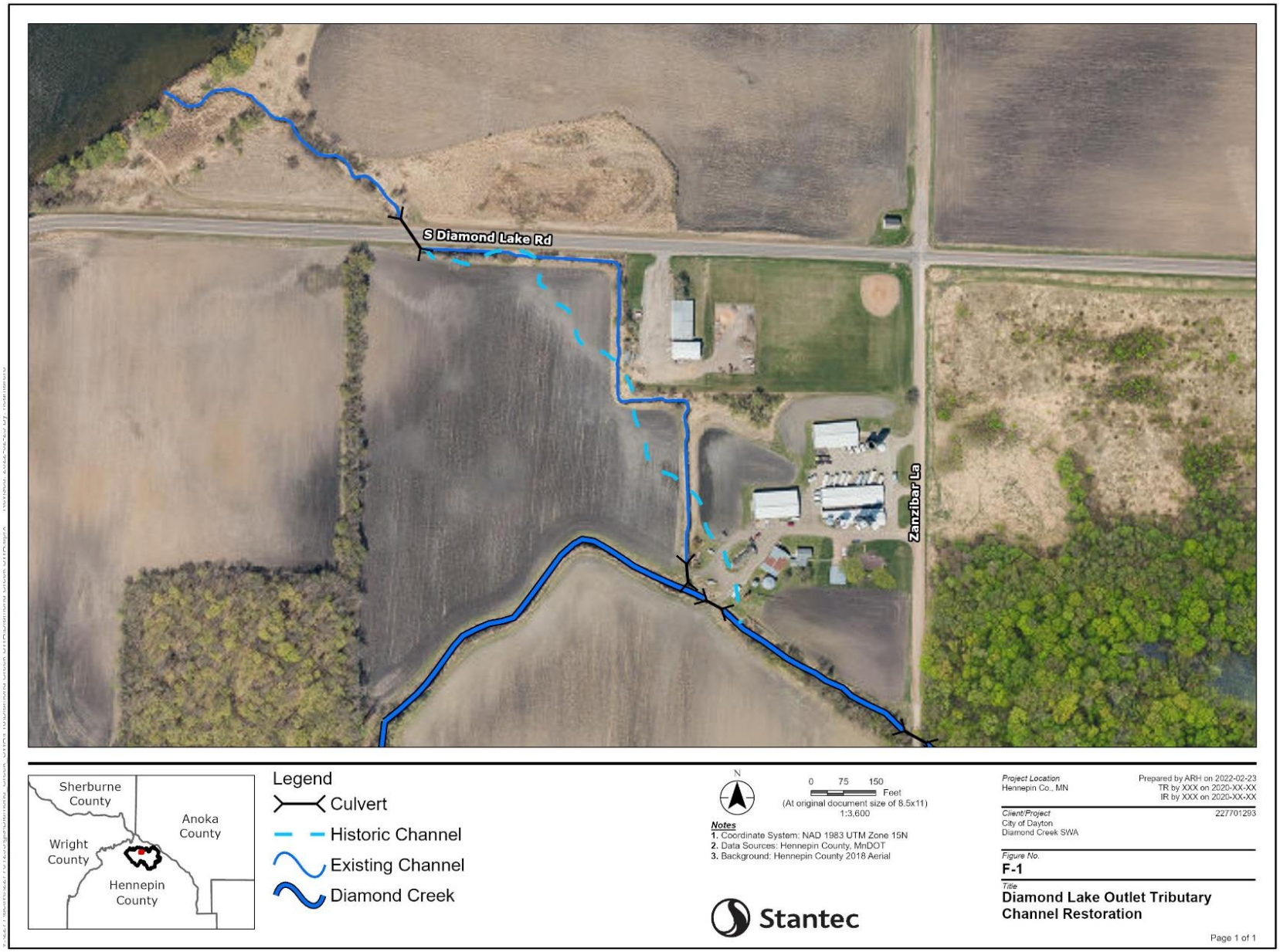


Figure F-1. Diamond Lake outlet tributary channel restoration.

Table F-1. Planning-level cost estimate for Diamond Lake outlet tributary channel restoration.

Bid Item	Description	Units	Quantity	Unit Cost	Extension
1	MOBILIZATION & DEMOBILIZATION (5% of total cost)	LS	1	$15,500.00	$15,500.00
2	TEMPORARY CONSTRUCTION ENTRANCE - MAINTAINED	EA	1	$2,000.00	$2,000.00
3	FLOTATION SILT CURTAIN, TYPE MOVING WATER - MAINTAINED	LF	60	$35.00	$2,100.00
4	SILT FENCE, TYPE MS - MAINTAINED	LF	400	$5.00	$2,000.00
5	SEDIMENT CONTROL LOG, TYPE STRAW	LF	2100	$5.00	$10,500.00
6	CONSTRUCT, MAINTAIN, & RESTORE SITE ACCESS AND STAGING AREAS	LS	1	$5,000.00	$5,000.00
7	TREE CLEARING & PROCESSING	EA	100	$350.00	$35,000.00
8	STREET SWEEPING	HOUR	10	$110.00	$1,100.00
9	GRADED BANK	LF	2,050	$20.00	$41,000.00
10	COARSE WOOD TOE w/ FABRIC ENCAPSULATED SOIL LIFTS (FES)	LF	2,050	$60.00	$123,000.00
11	WOVEN ECB, ROLANKA BIOD-MAT 40	SY	5000	$5.00	$25,000.00
12	NON-WOVEN ECB CAT 3 TYPE STRAW 2S (NO POLY NETTING)	SY	5000	$3.00	$15,000.00
13	NATIVE SEEDING	AC	5.0	$2,500.00	$12,500.00
14	NATIVE SEED MIX	LB (PLS)	150	$20.00	$3,000.00
15	COMMON EXCAVATION ONSITE (EV)	CY	2000	$15.00	$30,000.00
SUBTOTAL					$322,700.00
20% CONTINGENCY					$64,500.00
TOTAL					$387,200.00
If re-meandered to add additional length (500 LF)					$461,700.00

CSAH 12 RAVINE STABILIZATION
WATER RESOURCES MANAGEMENT PROJECT
COOPERATIVE AGREEMENT

BETWEEN

Three Rivers Park District
AND
Elm Creek Watershed Management Commission

1. BACKGROUND

This is a Cooperative Agreement that defines the responsibilities and cost-share contributions of each party for the County State Aid Highway (CSAH) 12 Ravine Stabilization Project. The project is located within the Elm Creek Watershed along Hennepin County CSAH 12 on Three Rivers Park District property that will provide future access to the West Mississippi River Regional Trail from Dayton to Champlin. This stabilization of the ravines will reduce excessive sediment and nutrients discharged directly to the Mississippi River as well as providing stability to adjacent roadway infrastructure. The parties enter into this Agreement to better facilitate the water quality improvements through the development and implementation of best management practices. The Agreement will memorialize the partnership and outline each party's cost-share contributions and maintenance responsibilities for the Project.

2. PARTIES

Elm Creek Watershed Management Commission (hereinafter referred to as "the Commission") and the Three Rivers Park District (hereinafter referred to as the "the Park District"), both being governmental units of the State of Minnesota, and acting through their respective governing bodies, hereby enter into this Joint Powers Agreement ("agreement"). The Commission and the Park District from time to time may be referred to hereinafter as "the parties."

3. AUTHORITY

The parties enter into this Agreement pursuant to Minn. Stat. § 471.59, regarding joint exercise of powers which allows two or more governmental units, by agreement entered into through action of their governing bodies, to jointly or cooperatively exercise any power common to the contracting parties or any similar powers, including those which are the same except for the territorial limits within which they may be exercised.

4. DUTIES OF THE PARK DISTRICT

In recognition of the staff resources and capabilities of the Park District, the Park District will be responsible for:

I. The Park District will administer the construction for the stabilization of two ravines on Three Rivers Park District property in collaboration with Hennepin County. Hennepin County will be the lead agency in Project designs, engineering, permitting, and construction administration on the project. The Park District will mediate the administration of all construction activity through Hennepin County.

II. Performance Criteria – At the request of the Commission, the Park District shall provide the Commission with any design plans or reports at any time during the construction process. The Park District will ensure that all work for the Project shall be completed in compliance with the approved plans and specifications; and will ensure any changes in plans or construction will be performed and completed in a satisfactory manner. At the request of the Commission, the Park District shall coordinate access with Hennepin County Engineer staff to enter upon the job site to make any inspections deemed necessary.

III. Project Reporting Summary – The Park District will provide project progress and construction updates at the request of the Commission. The Park District will also provide the Commission an update on any proposed construction work order changes that reasonably deviate from approved plans and specifications. The Commission shall have the right to review any proposed changes which necessitate a re-engineering of the design and/or specifications within the original scope of the Project.

IV. Cost Participation – The Park District's Cost participation shall be a sum of $182,000 as their cost-share commitment to the Project.

V. Project Maintenance – The Park District will be responsible for all maintenance activities of the drainage area to fully support hydrology while minimizing future sediment erosion and nutrient loading to the Mississippi River.

i. Culverts and Storm Sewer Structures – The Park District shall be responsible for maintenance of the culverts and storm sewer structures revised or installed as part of the Project within its property without any cost or expense to the Commission.
ii. Slopes – The Park District shall maintain and inspect the slopes stabilized under the Project, within its property without any cost or expense to the Commission, according to its practices to ensure no erosion or ground water and drainage problems exist which may cause potential slide areas. Park District staff shall ensure that enough surface cover such as vegetation or turf are established to mitigate erosion.
iii. Maintenance Access Paths – The Park District shall be responsible for maintenance of the maintenance access paths installed as part of the Project within its property without any cost or expense to the County.

5. **DUTIES OF THE ELM CREEK WATERSHED MANAGEMENT COMMISSION**

In recognition of the staff resources and capabilities of the Commission, the Commission will be responsible for:

I. Review of Design Plans – The Commission shall have the right to review any proposed changes which necessitate a re-engineering of the design and/or specifications within the original scope of the Project to ensure conformance to the watershed rules and standards identified in their Watershed Management Plan.

II. Site Access – The Commission shall request and coordinate any site access through the Park District. At the request of the Commission, the Park District shall coordinate access with Hennepin County Engineer staff to enter upon the job site to make any inspections deemed necessary.

III. Project Updates – The Commission shall have the right to request project updates from the Park District at any time during the construction of the project.

IV. Cost Participation - The Commission's Cost Participation shall be a sum of $110,000 as their cost-share commitment to the Project.

6. PAYMENT

I. The Park District will submit payment for the Project on behalf of both Parties to Hennepin County as defined in a previous Agreement for a total cost-share sum of $292,000.

II. The Park District will request reimbursement from the Commission not-to-exceed a sum of $110,000 as their cost-share commitment to the Project. The Park District will invoice the Commission for their portion of the Cost Participation after the project has been substantially completed. The Park District cost-share contribution will be $182,000 after receiving reimbursement from the Commission.

III. Any additional costs for extended workload after the "not-to-exceed" limit must be approved by both parties and set forth in a written amendment to this Agreement.

7. AMENDMENT

Any amendment to this Agreement must be in writing and approved by the Commission and the Park District. The parties shall have full power to amend this agreement to add or delete items from the scope of this agreement upon such terms as are agreed to between the parties.

8. TERMINATION

This Agreement will terminate upon submittal and receiving payment reimbursement after the project has been completed. Notwithstanding, either party may terminate this Agreement for any reason by providing 30 days written notice to the other party. In the event of termination, the Parties will remain responsible for cost participation as provided in this Agreement for obligations incurred up through the effective date of the termination subject to any equitable adjustment that may be required.

IN WITNESS WHEREOF, the parties have caused this cooperative contract agreement executed and effective as of the date of signature of the last party to the agreement.

ELM CREEK WATERSHED MANAGEMENT COMMISSION

Dated: _____

_____

Doug Baines, Chair

_____

Judie Anderson, Executive Secretary

THREE RIVERS PARK DISTRICT

Dated: _____

_____

John Gibbs, Chair

_____

Boe Carlson, Superintendent

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	City of Dayton
Contact Name	Nico Cantarero – Jason Quisberg
Telephone	(952)334-3944/(763)-252-6873
Email	Nicolas.cantarero@Stantec.com/Jason.Quisberg@Stantec.com
Address	12260 S Diamond Lake Rd, Dayton, Mn, 55327
Project Name	CSAH 12/Dayton River Road Ravine Stabilization Project

	1. Is project in Member's CIP? (X) yes ( ) no	Proposed CIP Year = 2023
	2. Has a feasibility study or an engineering report (circle one) been done for this project? (X) yes ( ) no	

		Amount
	Total Estimated Project Cost	$1,329,408.86
	Estimated Commission Share (up to 25%, not to exceed $250,000)	$110,000
	Other Funding Sources (Three Rivers Park District)	$182,000
	Other Funding Sources (Hennepin County)	$1,037,408.86

	3. What is the scope of the project? The project proposes to complete drainage and stabilization improvements along CSAH 12 while considering future development and resilient design. Hennepin County will stabilize two ravines that drain to the Mississippi River as part of a culvert replacement project on CSAH 12. The ravines are located on Three Rivers Park District Property that are planned for future construction of the West Mississippi River Regional Trail from Dayton to Champlin. The ravines have severe/significant erosion that will need stabilization prior to the construction of the regional trail.
	4. What is the purpose of the project? What water resource(s) will be impacted by the project? The project proposes to stabilize the channels of two ravines that will significantly reduce sediment and nutrient loading to the Mississippi River.
	5. What is the anticipated improvement that would result from the project? (Include size of area treated and projected nutrient reduction.) The anticipated water quality improvements for the project are the following: Site 6: Ravine receives drainage from 18.8 acres on the south side of CSAH 12. The ravine stabilization will reduce sediment loading by 514 tons/year and phosphorus loading by 277 pounds/year. Site 7: Ravine receives drainage from 125 acres on the south side of CSAH 12. The ravine stabilization will reduce sediment loading by 630 tons/year and phosphorus loading by 315 pounds/year. Total loading reduction for both ravine sites: 1,144 tons/year of sediment; 592 pounds/year phosphorus
	6. How does the project contribute to achieving the goals and programs of the Commission? The project is located within the Upper Mississippi River watershed of the Elm Creek Watershed Management Commission's jurisdictional boundary. The project is aligned with the Commission's purpose set forth in Minnesota Statues 103B.210 identified in the 3rd Generation Watershed Management Plan: (1) Identify and plan for means to effectively protect and improve surface and groundwater quality. (2) Prevent erosion of soil into surface water systems. (3) Minimize public capital expenditures needed to correct water quality problems. (4) Protect and enhance fish and wildlife habitat and water recreation.
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? The project fully accomplishes the desired outcome of reducing excess sedimentation and nutrients contributed to the Mississippi River from the erosion of these two ravines. The project design adds resiliency by stabilizing the ravine to withstand the erosive effects of future more intense runoff events. (1) South Metro Mississippi River TSS TMDL – sets a goal of 20% reduction in TSS from the Upper Mississippi River basin to improve water quality in the river and reduce sedimentation in Lake Pepin. (2) The Lake Pepin and Mississippi River Eutrophication TMDL – sets a goal of reducing non-permitted sources of nutrients to the estimated natural background rate.

0/10/20	9. Does the project have an educational component? (X) yes ( ) no Describe. The project area is planned for future development of the Three Rivers Park District West Mississippi River Regional Trail from Dayton to Champlin. Native pollinator-friendly planting will be used to help stabilize the slopes of the ravines. The area adjacent to portions of the future regional trail will also be managed as a small pollinator prairie that will provide further educational opportunities such as interpretive signage. There will be the opportunity to educate the public about the project's nutrient and sediment reduction to the Mississippi River and how that is part of the State's overall reduction and improvement strategies.	
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 Dayton & Three Rivers Park District & Hennepin County	
10/20	11. Is the project in all the LGUs' CIPs? (X) yes ( ) 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

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Stantec

Memo

To: Elm Creek WMO Commissioners
Elm Creek TAC

From: Erik Megow, PE
Diane Spector

Date: April 4, 2023

Subject: Preliminary CIP

Recommended TAC/ Commission Action	Submit requested revisions to the CIP by April 28, 2023.

Attached is the preliminary CIP reflecting comments received to date. The Commission requests that cities submit proposed revisions to the CIP by **April 28, 2023** so any required minor plan amendments may be initiated at the May meeting.

Note that there is one required revision that can be completed without a plan amendment. The CSAH 12/ Dayton River Road Ravine Stabilization project cost estimate was updated based on final design, and the City of Dayton requests that the Commission's share be increased from $95,500 to $110,000. The Third Generation Plan provides that no plan amendment is necessary to either reschedule projects from year to year or if the cost estimated increases by less than 125%.

Note also that smaller projects where the Commission's share is $50,000 or less should be directed to the Cost Share program rather than the CIP.

Table 1. Elm Creek Third Generation Plan CIP as of April 2023.

CAPITAL IMPROVEMENT PROGRAM	Location	2021	2022	2023	2024	Future	Comments
Cost Share Program	Varies		200,000	200,000	200,000	200,000	
Commission Contribution			100,000	100,000	100,000	100,000	
Local Contribution			100,000	100,000	100,000	100,000	
Partnership Cost-Share BMP Projects	Varies		50,000	50,000	50,000	50,000	
Commission Contribution			50,000	50,000	50,000	50,000	
Local Contribution			0	0	0	0	
Elm Creek Restora Ph 5, to Hayden Lk	Champlin	900,000					
Commission Contribution		150,000					
Local Contribution		750,000					
Elm Road Area/Everest Lane Stream Restora	Maple Grove	500,000					
Commission Contribution		125,000					
Local Contribution		375,000					
S Fork Rush Creek Restora	Maple Grove			3,250,000			
Commission Contribution			406,250	406,250			
Local Contribution				2,437,500			
CSAH 12/Dayton River Rd Ravine Stabilization	Dayton			382,000			Revise for most recent cost estimate
Commission Contribution				95,500			$110,000?
Local Contribution				286,500			
Downtown Pond Exp & Reuse	Rogers			406,000			Getting info from Andrew
Commission Contribution				101,500			
Local Contribution				304,500			

CAPITAL IMPROVEMENT PROGRAM	Location	2021	2022	2023	2024	Future	Comments
Corcoran City Hall Parking Lot	Corcoran						Removed per Kevin
Commission Contribution							
Local Contribution							
Fox Cr, South Pointe	Rogers			90,000			Cost share?
Commission Contribution				22,500			Getting info from Andrew
Local Contribution				67,500			
Lowell Pond Rain Garden	Champlin				400,000		
Commission Contribution					100,000		
Local Contribution					300,000		
The Meadows Playfield	Maple Grove				5,300,000		
Commission Contribution					250,000		
Local Contribution					5,050,000		
Brockton Ln WQ Improv	Maple Grove				150,000		
Commission Contribution					37,500		Cost share?
Local Contribution					112,500		
Tower Dr W Stormwater Impro	Medina				271,250		
Commission Contribution					67,813		
Local Contribution					203,437		
Reconstruct Bridge at Cartway and Elm Creek	Champlin				950,000		
Commission Contribution					237,500		
Local Contribution					712,500		

CAPITAL IMPROVEMENT PROGRAM	Location	2021	2022	2023	2024	Future	Comments
Eastman Nature Ctr Oxbow Tr Rush Ck Stabil	Maple Grove				100,000		
Commission Contribution					25,000		Cost share?
Local Contribution					75,000		
Ranchview Wetland Restora	Maple Grove					2,500,000	
Commission Contribution						250,000	
Local Contribution						2,250,000	
Goose Lake Rd Area Infiltr Improv	Champlin					200,000	
Commission Contribution						50,000	
Local Contribution						150,000	
Mill Pond BMPs Water Quality Project Area	Champlin					200,000	
Commission Contribution						50,000	
Local Contribution						150,000	
Lemans Lake Water Quality Improvements	Champlin					100,000	
Commission Contribution						25,000	
Local Contribution						75,000	
TOTAL PROJECT COST		**1,400,000**	**250,000**	**4,378,000**	**7,421,250**	**3,250,000**	
TOTAL COMMISSION SHARE		**275,000**	**556,250**	**775,750**	**867,813**	**525,000**	
TOTAL CITY SHARE		**1,125,000**	**100,000**	**3,196,000**	**6,553,437**	**2,725,000**	

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STAFF REPORT
April 4, 2023

a. 2017-050W Ernie Mayers Wetland/floodplain violation, Corcoran. The City of Corcoran contacted the Commission in 2017 concerning drainage complaints on Mayers' property. Technical Evaluation Panels (TEPs) were held to assess the nature and extent of the violations and a restoration order was issued to Mayers. In 2018, an appeal of the restoration order was received by the Board of Water and Soil Resources. BWSR placed an order of abeyance (stay) on the appeal looking for a resolution between the LGU and Mayers. The parties came to an agreement to resolve the violation in 2021. The agreement was signed by BWSR, Corcoran and Mayers. Commission Staff have not been provided with a copy of the agreement and the agreement does not resolve the Commission's floodplain fill issue from the wetland work. Staff sent correspondence to that effect to Mayers on February 1, 2022, requesting an application and site plan. *No actions were taken by Mayers in 2022. Corcoran will send correspondence to Mayers to a set timeline to come into complaince on the agreement.* Once the Commission is informed of how the violations will be resolved, we can follow up on scope of any outstanding Elm Creek floodplain issues. A verbal update will be provided to the Commission at their meeting if there are any new developments.

b. 2021-025 Hackamore Road Reconstruction, Corcoran/Medina. The cities of Corcoran and Medina plan to reconstruct 1.3 miles of Hackamore Road from just west of CR 116 to CR 101. The project will add 4.4 acres of new impervious surface by widening the roadway and adding turn lanes, pedestrian facilities, and utility improvements. To meet the Commission's stormwater requirements, the project will largely rely on adjacent developments (existing and proposed) to incorporate BMPs to provide rate control, volume control, and water quality control. The project was approved at the December 2022 Commission meeting with the following recommendations: 1) Approval is contingent upon final application escrow fee balance determination. 2) A buffer strip plan with proper wetland buffer monumentation, and 3) Future Development 1 BMPs providing volume control to offset the remaining 4,180 cfs, and water quality to offset the interim increases of 1.0 lb/yr TP and 179.5 lbs/yr TSS to Wetland 1. Staff's findings dated December 27, 2022, were prepared to reflect these recommendations.

c. 2021-029 TriCare Grocery, Maple Grove. The project will construct a grocery store, retail, and associated parking on approximately 2.5 acres of the 62.7-acre TriCare parcel, located just north of County Road 30 and southwest of I-94. The project was reviewed for Rules D and E. Staff issued a denial in 2016 when the regional stormwater BMP project was constructed. On November 10, 2021, the Commission approved this project contingent upon receipt of the escrow balance and the City reconstructing the basin to meet Commission rules and standards per Staff findings dated November 1, 2021.

d. 2021-034 BAPS Temple, Medina. This project includes construction of a Hindu Temple, dining hall, gymnasium, parking lot and a permanent residency for the temple's priest on a 19.7-acre parcel at 1400 Hamel Road. The parcel currently serves as a farmstead with a farmhouse and barns. The project was reviewed for Rules D, E, G, and I and approved at the October 2021 meeting contingent on three Conditions outlined in Staff's findings dated October 4, 2021: (1) receipt of the escrow balance, (2) an operation and

maintenance agreement with the City, and (3) a geotechnical report provided to the Commission. An update from the applicant's engineer on July 21, 2022, stated, "The client is holding on[to] construction documents temporarily; once they give us the go-ahead we will work to finalize the items below, likely by this fall [2022]." On November 3, 2022, Dusty Finke informed the Commission that the applicant has amended the site layout a bit and anticipates construction in 2023.

e. 2021-044 Balsam II Apartments, Dayton. The Commission approved this project in January 2022. The final infiltration testing of the stormwater basin and receipt of the escrow balance are the only conditions outstanding from Staff's findings dated December 22, 2021. As of November 2, 2022, the City and the Commission are awaiting the test results so that the outstanding escrow balance can be invoiced, and this project can be closed. The applicant informed the City they will provide the City and Commission with the test results when completed in the spring/summer of 2023.

f. 2021-050 Evanswood, Maple Grove. This proposed development will construct 227 single-family and 138 townhomes in the northwest corner of the City, disturbing 108.5-acres, and creating 45.8-acres of impervious surfaces, 41.4-acres of which is net, new impervious surfaces. The project was reviewed for Rules D, E, F, G, and I. Staff's March 2, 2022, findings were approved at the March meeting with five conditions. Two conditions remain outstanding: (1) receipt of the final escrow balance, and (2) receipt of a Stormwater Maintenance Agreement acceptable to the City and the Commission. The City is working on the agreement.

g. 2021-052 Norbella Senior Living, Rogers. This project will construct a 40-unit senior living facility on South Diamond Lake Road. The proposed disturbance is 2.4-acres with net, new impervious surfaces of 1.4-acres. The project was reviewed for Rules D and E. Staff findings dated February 14, 2022, were approved by the Commission at their March 9, 2022, meeting with three conditions: (1) final escrow balance being reconciled, (2) a stormwater maintenance agreement being put in place between the owner and the city with terms acceptable to the Commission, and (3) a detail being added to the construction drawings showing the inspection ports being installed along the isolator row of the underground filtration system. On January 25, 2023, Andrew Simmons reported that this project has not yet proceeded.

h. 2022-002 Summerwell Townhomes, Maple Grove. This project is for construction of a 26-acre site into a residential townhome community. It will create 13-acres of impervious, all of which is net, new impervious. The project triggers Rules D, E, G, and I and was approved at the Commission's June meeting with three conditions: (1) determination of escrow fee balance; (2) receipt of an Operations and Maintenance Plan approved by the City, and (3) provision of a wetland monitoring plan with four conditions. These conditions are found in Staff findings dated June 2, 2022. The monitoring plan was received on November 3, 2022. This project will removed from the report upon receipt of the escrow balance.

i. 2022-003 Fox Briar Ridge East, Maple Grove. The proposed project is for construction of eight townhomes and one single family home with associated sidewalks, roads, and stormwater infrastructure. The project will create 1.81-acres of impervious, 1.68-acres of which is net, new impervious. The project triggers Rules D and E. This project received approval at the Commission's April meeting with two conditions as cited in Staff findings dated April 4, 2022: final escrow determination and provision of a stormwater maintenance agreement acceptable to the City and the Commission within 90 days after the plat is recorded for all stormwater BMPs on the site that will not be operated and maintained by the City. This project will removed from the report upon receipt of the escrow balance.

j. **2022-006 Hamel Townhomes, Medina**. The proposed project is for construction of 30 townhomes with associated sidewalks, roads, and stormwater infrastructure. The project will create 1.76-acres of impervious,

1.54-acres of which is net, new impervious. The project triggers Rules D and E. The applicant provided the latest resubmittals on July 11, 2022. In their findings dated August 2, 2022, Staff recommended approval with two conditions: receipt of an Operations and Maintenance Agreement acceptable to the City and final escrow determination. The project was approved at the Commission's August meeting. The project is currently on hold and Staff are working with the engineer and owner to pay the escrow.

k. 2022-008 Bechtold Farms, Corcoran. This is two parcels that total 117.6 acres proposed to be sub-divided into 12 large, single-family lots. The project will create 6.3-acres impervious areas, 4.5-acres which are net, new impervious. The project triggered Rules D, E, F, G, and I The vegetation management plan for the wetland buffers and preservation areas was approved by Commission staff on May 3, 2022. The City is working on the conservation easements and O & M agreements. Staff provided the Commission's livestock guidelines to the applicant and the City. Staff's April 13, 2022 (updated) recommendations were approved at the Commission's April 13, 2022, meeting. All the contingencies have been accomplished and the escrow balance will be refunded.

l. 2022-009 Dunkirk Lane Development, Plymouth. This project is located in the southwest quadrant of the intersection of Dunkirk Lane and 59th Avenue N. The proposed development includes construction of 21 single-family home units and associated streets, utilities, and stormwater management basin. The Commission review covered Rules D and E and the project received approval at the April meeting per three contingencies outlined in Staff findings dated April 4, 2022: (a) final escrow determination; (b) an updated detail for OCS 105 (Sheet 8 of 21) showing the 2'-wide by 1'-deep notch in the weir modeled in HydroCAD; and (c) Elimination of the redundant 5-foot weir in the HydroCAD model for the pond outlet. It is understood that removal of this weir will not affect hydraulics or results for the 2-, 10- and 100-year storm HydroCAD modeling results but should be updated to be consistent with what is being constructed.

m. 2022-011 Arrowhead Drive Turn Lane Expansion, Medina. This project consists of a linear project for the City of Medina and a private site expansion for Open Systems International (OSI). The City will be constructing a stormwater BMP on the OSI site to accommodate for rates and water quality from two projects: (1) Arrowhead Drive Turn Lane Expansion and the future (2) Open Systems International, Inc. (OSI) Expansion. The projects are being reviewed as a planned development being treated by the proposed basin. Updated plans were received April 1, 2022, and supplemental updates were received on April 14, 2022. This project received approval at the Commission's May Meeting pending three conditions found in Staff findings dated May 2, 2022: (1) final escrow determination, (2) payment of the additional floodplain alteration review fee, and (3) plans for the OSI, Inc. parking expansion being developed. A Commission application for Rule E will be necessary, assuming the stormwater management is consistent with this approval. An erosion control and grading plan for the OSI site should include no more than 1.56 acres of impervious surface and all impervious surfaces shall be directed to the proposed stormwater BMP.

n. 2022-012 Graco Building 2, Dayton. Graco purchased this property that was the Liberty Industrial Center, approved by the Commission under project 2015-011. Graco is proposing to replat this site and construct a 515,400 SF distribution center. Additionally, mass grading on the remaining portion of Outlot H, and Outlots A and B will occur to accommodate two future buildings, regional ponding, and the construction of French Lake Road West. In total, 74 acres will be graded. The Commission's review covers Rules D and E on the 74 acre site. The site plan proposes to encroach into an existing conservation and preservation easement approved by the Commission for project 2015-011. At the July 2022 meeting the Commission reviewed this project and approved site plans for the area west of French Lake Road, contingent upon Staff recommendations found in their findings dated July 6, 2022: (1) final wetland buffer monumentation meeting Commission requirements, (2) an operations and maintenance agreement approved by the City that implements conditions that bind current and

future owners of the project shall be recorded on this property and (3) the escrow balance reconciliation. The areas east of French Lake Road were tabled.

Revised plans for the West French Lake Road project area were submitted on November 23, 2022, January 6, 2023, and February 17, 2023. *At the March 2023 meeting, the Commission approved the updated plans for West French Lake Road for erosion and sediment controls, buffers, and the conservation easement. The only outstanding item is the escrow balance.*

o. 2022-013 Dayton Industrial Site, Dayton. This project is a 25.04 acre site located on the north side of CR 81 between Brockton Lane and Dayton Parkway. The applicant is proposing to construct a 334,750 SF industrial building with associated parking for passenger vehicles and tractor trailers. Construction of an extension of Troy Lane Extension from its current cul-de-sac terminus continuing eastward to a future intersection with West French Lake Road is also planned, but will be permitted separately by the City. The proposed project will create 17 acres of new impervious, disturbing 30 acres. The area of the two existing parcels is 25.04 with 0.44 acres of existing impervious. Staff received the signed application March 21, 2022. Staff completed an initial review and requested additional documents from the applicant, which were received March 29, 2022. At their May 11, 2022 meeting the Commission approved this project with eight conditions per Staff's findings dated May 2, 2022.

p. 2022-016 Rogers Activity Center. Redevelopment and additions to the Rogers Municipal Complex are proposed at 14160 James Road. The project includes site clearing, demolition of the existing asphalt pavement, and grading for a future turf and ice rink facility. The Commission review covered Rules D, E, G and I. At their May 11, 2022 meeting the Commission approved Staff's findings dated May 2, 2022, with five conditions.

q. 2022-017 City Center Drive, Corcoran. This site is approximately 30-acres, adjacent to and east of CR 116. The City is proposing to provide infrastructure and a regional stormwater system for the ultimate development of this area. This plan proposes to grade and construct City Center Drive, 79th Place, CR 116 turn Lanes, the proposed St. Therese Senior housing facility and a linear city park and trail along CR 116. At the June meeting the Commission approved this project with four conditions 1) Wetland impacts and replacement plans must be approved by the LGU. 2) Final erosion and sediment control plans must be submitted that meet the Commissions requirements. 3) Post construction drawdown rates of >3" per hour must be verified on the filter bench to the NE regional pond and 4) Final escrow balance determination, as cited in Staff findings dated May 31, 2022. Items 3 and 4 are the only remaining items.

r. 2022-018 Big Woods, Rogers. This site is approximately 72.1 acres, with 61.0 acres being disturbed. The project will create 207 residential lots and include 23.6 acres of impervious surface after development. The Commission review covers Rules D, E, and I. Per Staff findings dated June 1, 2022, the Commission approved this project at the June meeting conditioned on: (1) reconciliation of the escrow fee balance; (2) receipt of a wetland alteration plan approved by the WCA LGU [the City]; and (3) approval of an operations and maintenance plan approved by the City.

s. 2022-019 Grass Lake Preserve, Dayton. This is two parcels that are 38.45 acres in size, located east of Brockton Road (CR 13) approximately halfway between North and South Diamond Lake Roads. The applicant is proposing 120 twin homes and 6 single family detached homes with corresponding utilities, and streets. Based on Staff findings dated June 2, 2022, the Commission approved this project at their June 2022 meeting with the following conditions. (1) reconciliation of the escrow fee balance; (2) final SWPPP plan submittal prior to grading; (3) receipt of a wetland alteration plan approved by the WCA LGU [the City] and MNDNR {if applicable]; (4) additional sump manholes at CBMHs 205 and 210; and (5) City approval of a long-term operation and maintenance plan on the stormwater facilities. Items 2, 4 and 5 are adequate. The WCA wetland replacement

plan was approved in November by the LGU. The balance of the escrow will be refunded.

t. 2022-020 Skye Meadows Extension, Rogers. This is a development on a 45.3 acre parcel which will disturb 44.1 acres and result in 14.1 acres of impervious surface. The impervious surface includes 129 lots and associated streets. The Commission review covered Rules D, E, G, and I. The project was approved at the Commission's June meeting with the three conditions cited in Staff's findings dated June 1, 2022: (1) final escrow balance reconciliation; (2) approved wetland mitigation plan for the proposed disturbance of Wetlands A and B; and (3) an operation and maintenance plan approved by the City. On January 25, 2023, Andrew Simmons reported that project includes a road vacation that doesn't look as though it will be approved. The applicant may need to come back for a re-review, depending on what the developer is planning to do.

u. 2022-022 Cook Lake Highlands, Corcoran/Maple Grove. This is a 53.58-acre development comprised of four existing parcels in both cities. The western parcel in Corcoran totaling 27.3 acres is under consideration for this review. The adjacent Cook Lake Edgewater, 2021-031 was previously approved in October 2021. The site is located along the north side of CR 10 (Bass Lake Road) just west of the CR 101 crossing and southwest of Cook Lake. The applicant is proposing to create a detached residential rental community with 59 units creating 10.4 acres of new impervious areas in Maple Grove, and 8.1 acres of new impervious in Corcoran (a total of 18.5 acres). The applicant reports incorporation of some impervious that is planned for the future acres of new impervious areas in Maple Grove, 8.1 acres of new impervious in Corcoran (totaling 18.5 acres) as well as for the future expansion of CR 10. This phase of the project will disturb 18.6 acres. A stormwater pond with bio-filtration bench and a smaller filtration basin are proposed for the Corcoran portion of the site. At the June meeting Staff recommended approval of this project with six conditions. The Commission granted approval of the six conditions cited in Staff findings dated June 1, 2022.

v. 2022-026 Rogers Archway Building, Rogers. The project site is located between 129th Avenue North and Territorial Road, west of Main Street and east of Elm Parkway. The applicant reconfigured their construction activities in order to maintain the volume of the existing pond, thereby not triggering the Commission's rules. Upon receipt of as-built plans confirming the reconfiguration, this project will be closed out and the surplus escrow returned to the applicant. On January 26, 2023, Andrew Simmons reported that construction has not yet commenced.

w. 2022-028 Elsie Stephens Park, Dayton. This is existing park property (~20 acres) located about a mile north of the junction of County Roads 144 (N. Diamond Lake Road) and 12 (Dayton River Road). The project proposes to construct two entrance roads off CR 12, 1,300 feet of park roadways with a parking area and loop road, and a trail system to connect existing and future trails. Site revisions received July 5, 2022, were reviewed by the Commission at their July 2022 meeting. Staff recommended approval in their findings dated July 6, 2022, contingent upon: 1) pre- and post-construction soil analysis on each infiltration basin to determine that infiltration rates meet or exceed design assumptions; 2) erosion and sediment control meeting the Commission's requirements and approved by Staff; and 3) escrow fee reconciliation. No new information has been received.

x. 2022-029 Hayden Hills Park, Dayton. This is an existing 6.5-acre vacant park property located in the Hayden Hills Development about one-half mile south of Dayton City Hall near Deerwood Lane at 132nd Avenue. The City proposes to grade and construct a baseball field, open play areas, ice skating area, a basketball court, pickleball court, playground, putting green, and connection trails into the existing trail system. The site's stormwater (Rule D) was designed into the Hayden Hills development approved by the Commission under project 2018-008. Staff reviewed this plan for Rule E only. Site plans conformed to Rule E and were administratively approved in Staff findings dated May 27, 2022. The escrow balance will be invoiced and this item removed from the report.

y. 2022-030 Garages Too, Corcoran. The project proposes building and site improvements for a self-storage facility just north of Highway 55 near Rolling Hills Road. The site is within the physical boundary of the Pioneer-Sarah Creek watershed, but is in Corcoran, which is within the legal boundary of the Elm Creek watershed. At their August meeting the Commission approved Staff findings dated August 2, 2022, contingent upon (1) an operation and maintenance agreement, recorded on this property and approved by the City, that implements conditions that bind current and future owners of the project, (2) wetland impacts/exemption request must meet the LGU (Corcoran) requirements; and (3) the escrow balance being reconciled. *All items have been resolved except for the final escrow accounting.*

z. 2022-031 Corcoran II Substation. The project site is located on 2.87 acres in the northeast intersection of Larkin Road and CR 116. It is a 38.91-acre parcel that Is proposed to be subdivided into one lot and two outlots. Block 1, Lot 1 will be the parcel where Wright Hennepin Cooperative Electric Association will place their substation. The remaining areas will be utilized for future development and for ROW along CR 116. At their July 2022 meeting the Commission approved Staff's July 5, 2022, recommendations with three conditions. 1) a stormwater operation and maintenance agreement acceptable to the City and the Commission must be recorded by the landowner on this property; 2) the 48-hour drawdown (4,704 CF) on the stormwater basin must be verified post-construction; and 3) escrow fee reconciliation. No new information has been received.

aa. 2022-033 Pet Suites, Maple Grove. The project site is located on a vacant lot just north of the CR 30 and Upland Lane N intersection. The proposed project will include the construction of a building and parking lot along with necessary utilities and stormwater management for a canine care facility. The project triggers Rules D and E. This project was approved at the Commission's September meeting with two conditions: 1) receipt of final application escrow fee balance and 2) an O&M plan approved by the City. This project has been withdrawn and will removed from the report upon receipt of the escrow balance.

ab. 2022-035 Rush Hollow, Maple Grove. The project is located on 161.5 acres and will result in 49.01 acres of impervious surface. The project triggers Rules D, E and I. The Commission approved Staff findings dated November 1, 2022, at the November meeting with the following conditions: 1) final application escrow fee balance. Additional payment or refund of the fees will be determined when all conditions for approval are met, 2) an operation and maintenance plan that is approved by the City.

ac. 2022-038 Tavera (North Phase), Corcoran. Lennar Homes is proposing to develop this site into a 244-unit housing development, with 110 single family detached lots and 134 attached townhouse units. It is the second phase of the overall larger 548-unit Tavera housing development. The total site area is 272 acres. Phase 2 will encompass approximately 175 acres, disturb 110 acres, and create 38.6 acres of new impervious area. The Commission approved the project at their August 2022 meeting contingent upon meeting the conditions cited in Staff's August 3, 2022, findings: (1) operation and maintenance plans and agreement being provided to the Commission for their review and approval. These plans must include the irrigation system. (2) irrigation system pump and augmentation information being provided and approved by Staff and (3) the escrow balance being reconciled. No new information has been received.

ad. 2022-040 Karineimi Meadows, Corcoran. This is a 125-acre parcel in the southeast quadrant of the CR 10 and 19 intersection proposed to be subdivided into 10 large single family residential lots. The project will consist of constructing Chaparral Lane south of CR 10 with its associated drainage and stormwater basins into the site. Lot grading improvements will be customized and occur at the time the homes are built Staff provided preliminary comments to the applicant on August 17. The applicant extended the 15.99 deadline to February 8, 2023. Revised information and a recommendation for approval was provided to the Commission

at their December 2022 meeting. The Commission approved this project contingent upon the following: 1) Ponds 3 and 4 filter volume drawdown rates must be designed for a 1.0"/hour drawdown rate, or if the existing rate of 1.8"/hour is used, the 48-hour drawdown must be field-verified after construction; 2) An approved and recorded operation and maintenance agreement for the stormwater ponds must be recorded on the property; 3) the escrow balance must be reconciled; and 4) the Commission recommends the City of Corcoran follow their recommended livestock management policy. Staff provided the City and applicant with the livestock management policy. These items are still outstanding.

ae. 2022-042 Walcott Glen, Corcoran. This is a 40-acre parcel located in the northwest quadrant of the intersection of Hackamore Road and CR 101 (Brockton Lane). The site will be developed into a residential area with 10.8 acres of new impervious area including homes, driveways, roads, and sidewalks, as well as a playground area. Staff's findings dated October 5, 2022, were reviewed and approved at the October meeting conditioned upon 1) The escrow balance being rectified to the satisfaction of the Commission Administrator. 2) Notice of wetland replacement plan approval being provided to the Commission. Prior to grading the wetland, a replacement plan must be approved by the LGU. 3) The applicant entering into a stormwater maintenance agreement with the City. The City's template stormwater maintenance agreement satisfies the requirements of the Commission, and 4) the City must approve the final emergency overflow design for wetland H4. Final design must be reviewed and approved by Commission staff. All contingency items have been met except the escrow balance. Revisions to the plan were received December 15, 2022. Staff approved the changes to the plan after determining them to be consistent with the Commission's requirements and intent from their October, 2022 approval. *All other outstanding items have been resolved except the final accounting for the escrow balance.*

af. 2022-043 Meander Park and Boardwalk, Medina. This project is a proposed commercial planned unit development located on the north side of Highway 55, 900 feet east of Arrowhead Drive on Lake Medina. Wetland surrounds the 18-acre site on the west and south, leaving approximately 7 acres of developable land. The project will disturb 6.3 acres of the site, resulting in a 4.0 acre increase in impervious surface. The project triggers Rules D, E, F, G and I. In their November 2, 2022, findings Staff recommended approval contingent upon 1) final escrow fee reconciliation; 2) an operation and maintenance plan that is approved by the City, 3) addition of Emergency Overflows (EOFs) to the grading plan for basins East Filtration and the North Retention Basin. The low floor elevations must be at least one foot above the (EOF) for the stormwater pond. Secondary outlet devices potentially modeled as EOFs are reported as 987.27 for the North Retention Basin and 993.0, the elevation of the roadway, for the East Filtration Basin, 4) juris dictional determination for LGU WCA replacement or exemption is necessary. LGU and WCA approval is required prior to any wetland impacts if required by LGU, and 5) addition of approved wetland monument signs to the plan set. These conditions were approved at the November 9, 2022, meeting.

ag. 2022-044 Trail Haven Road Bridge L9384 Replacement, Corcoran. This is on the North Fork of Rush Creek at Trail Haven Road approximately 1/2 mile south of CR 117. Corcoran is proposing to replace the existing 52' long 90" x 139" CMP arch culvert with 10' wide by 6' high concrete box culvert on Trail Haven Road. The Commission approved findings dated October 12, 2022, contingent upon, 1) The escrow balance must be rectified to the satisfaction of the Commission Administrator. 2) Provide the following for documentation, a) Current photographs of the existing channel to approximately 250 feet downstream of the proposed culvert invert, b) Detail of the proposed riprap design below the culvert, c) Provide MN DNR and WCA permits to Commission technical staff and d) General concurrence to assist private landowners downstream of this project if streambank erosion occurs as a result of this culvert replacement project.

Updated information received January 31, 2023, meets the conditions for approval on this project. Reconciliation of the escrow balance is the only remaining item.

ah. 2022-045 Corcoran Water Treatment Plant, Corcoran. This is a 3.25-acre parcel on the east side of CR 116, one-half mile north of CR 30. The project will consist of an access off CR 116, the Water Treatment Plant, a municipal well, and a wet detention stormwater pond with a bioretention bench for stormwater management, rate control and water quality. Initial review and comments were provided to the City and their consultant October 23. Revisions were received November 4. Updated findings and recommendation were reviewed and approved by the Commission at their December 2022 meeting. The only outstanding item is refund of the escrow fee balance.

ai. 2022-046 CSAH 12 Culvert and Guardrail Replacement and Ravine Stabilization, Dayton. The project area runs along the CSAH 12 ROW from 2500' northwest of Lawndale Lane and continues approximately 3.1 miles southwest to near Pioneer Parkway. The project will consist of mill and overlay work on an existing section of CR12. Construction plans show the removal of 9-11" of bituminous pavement and 12" of aggregate base and replacing it with recycled or new materials. Additionally, six sections of this corridor have failing slopes that threaten the road embankment. Culverts will be replaced where needed and six (6) gully areas will be stabilized between the road and the Mississippi River. Project review findings with two recommendations dated November 1, 2022, were approved at the November meeting: 1) final application escrow fee balance and 2) Jurisdictional determination for LGU WCA replacement or exemption is necessary. LGU and WCA approval is required prior to any wetland impacts if required by the LGU.

aj. 2022-047 Suite Living of Maple Grove. This project is the development of a parcel within the Market of Rush Creek development which was previously approved. The development includes a senior living facility including a new building and associated parking. Previous approvals covered wetland buffers and stormwater management. The current project will be reviewed for Rule E. The application was received December 6, 2022, and was administratively approved on January 4, 2023. A findings of fact memo for the project dated January 4, 2023, was included in the January meeting packet. The escrow fee balance will be reconciled and invoiced/refunded accordingly and this item removed from the report.

ak. 2022-048 Hassan Elementary 2023 Pavement Renovation, Rogers. This is a redevelopment project at Hassan Elementary School to increase parking and hardcover to help the flow of buses and cars during pick-up and drop-off. The project will disturb approximately 5.7 acres of the 24-acre site and increase impervious surface by 0.997 acres. The project triggers Commission Rules D and E. Staff reviewed the initial submittals and sent comments to the applicant. The applicant and their engineer are working on updates to satisfy City and Commission comments. Staff's review and findings dated February 1, 2023, were approved at the February meeting with three standard conditions.

al. 2022-049 Connexus Energy Subdivision, Dayton. This is an existing 1.8-acre lot located on the north side of 117th Avenue North between Fernbrook Lane and East French Lake Road. The applicant is proposing to construct an energy substation adding 0.73 acres of impervious area, disturbing the entire parcel plus ROW. The current land use is row crops in C soils. A complete project application was received December 12, 2022. In findings dated December 29, 2022, Staff is recommending approval with the following conditions: (1) payment of all review fees. Additional payment may be required if the review cost exceeds escrow payment(s) submitted by the applicant; (2) applicant must meet all City Requirements; (3) applicant must provide signed agreement from adjacent landowner and the City for any off-site grading and direction of flow to the west; and (4) an operation and maintenance agreement for the stormwater facilities that implement those conditions that bind current and future owners of the project shall be recorded on this property.

am. 2023-01 Chankahda Trail Reconstruction Phase 2, Plymouth. Hennepin County and the City of Plymouth are proposing to reconstruct approximately four miles *of Chankahda Trail* over the next few years. Phase 2 of *the reconstruction* extends from approximately 300 feet east of Peony Lane/Maple Grove Parkway to roughly 100 feet east of Vicksburg Lane. This project triggers Commission Rules D, E and F. Staff have completed their review *and findings dated April 3, 2023 are in the packet for the April Commission meeting.*

an. 2023-02 Lynde Greenhouse Fire Damage Repair, Maple Grove. The project proposes to rebuild a greenhouse building lost to a fire in 2022. The project is located south of 93rd Avenue North, along Pineview Lane. The property is approximately 10.3 acres and this project will disturb approximately 1.6 acres, triggering Commission Rules D and E. Staff have reviewed the initial application materials and sent the applicant comments for their stormwater management. As they address the stormwater management issues, Staff, along with the City of Maple Grove, have given approval to commence grading and erosion control activities at their own risk. *Staff's review and findings dated March 1, 2023, were approved at the March meeting.*

ao. 2023-003 Cemstone Supply Facility, Dayton. The project site is 5.6 acres located east of Holly Lane on Territorial Road. It is currently two commercial buildings with associated parking/access. This project proposes to demolish the northerly building (20,385 SF) and remove all pavement areas. It will preserve the southerly storage building (11,263 SF) and construct a new 38,000 SF office warehouse building with its associated parking and drive areas. Based on the plans received February 6, 2023, Staff determined the project does not meet Commission requirements as submitted. Comments were emailed to the applicant and their engineer on February 13, 2023. No new information has been received since that time. *The applicant extended the 15.99 deadline on this project to June 6.*

ap. 2023-004 Medina Industrial Site Development, Medina. The proposed industrial development, referred to as Medina Industrial, is located on an undeveloped property in Medina currently being used for agricultural purposes. The project will disturb 23.8 acres of the 26.7 acre site and result in 17.3 acres of net, new impervious surfaces. The project requires review under Commission Rules D, E and G. The application was received February 27, 2023, and is still under review by Staff. No recommendation is provided at this time.

aq. ***2023-005 MTL Troy Lane Addition, Dayton.*** *41.6-acre parcel located west of French Lake Road and north of CR 81 on Troy Lane. This parcel will be developed into two lots. The east lot will be a waste transfer station with an office/maintenance building. The west lot will be a maintenance building with a warehouse. Both properties will have associated parking areas and outdoor storage. This item was received too late to be included on the April agenda.*

ar. 2023-006 Sota Shine, Maple Grove. *A 1.51 acre site located southeast of the intersection of Bass Lake Road and Troy Lane. This project is part of the greater HY-VEE development, where regional stormwater is provided for the development of this site. The project only triggers the Commission's erosion control requirements. This item was received too late to be included on the April agenda.*

as. 2023-007 Lakeview Knoll's Site Pickleball Ccourts, Maple Grove. *A 4.0 acre-site located in the southeast corner of Lakeview Knolls Park. The project will expand the exisitng hard court facilities to increase the available pickleball courts at the park. The project also involves expanding an existing parking area and adding a park building. The project triggers Commission Rules D and E. This item was received too late to be included on the April agenda and is still under Staff review.*

at. ***2023-008 Rush Creek Blvd. Interchange, Maple Grove.*** *The City of Maple Grove is proposing to extend Trunk Highway 610 from east of TH 94 to CSAH 30. The project will consist of the construction of a new interchange at TH 94, south of the existing TH 610 interchange with TH 94 and includes improvments and realignment of Lawndale Lane. The project area is roughly 89 acres and will include approximatley 20 acres of new impervious surface, triggering Rules D and E. This item was received too late to be included in the April agenda and is still under Staff review.*

FINAL RECORDINGS OR OTHER DOCUMENTATION/FOLLOW-UP ARE DUE ON THE FOLLOWING PROJECTS*:*

ca. **2014-015 Rogers Drive Extension, Rogers.** This project involves improvements along Rogers Drive from Vevea Lane to Brockton Lane. Site plans received July 1, 2014, met the requirements of the Commission with the exception of the nutrient control. The Commission approved the site plan contingent upon the City deferring 4.6 lbs. of phosphorus for treatment in future ponding opportunities as the easterly corridor of Rogers Drive develops. 2.3 lbs. will be accounted for in the Kinghorn Spec. Building site plan, with 2.3 lbs. still outstanding. This item will remain on the report until the total deferral is accounted for.

cb. **2015-030 Kiddiegarten Child Care Center, Maple Grove.** Approved December 9, 2015. If the City does not take over the operation and maintenance of the underground system and the sump catch basins, an O&M agreement for the underground trench/pond system must be approved by the Commission and the City and recorded with the title. On February 5, 2019, Derek Asche contacted the owner requesting a copy of the recorded maintenance agreement. On October 21, 2022, Asche reported there is no update for this project.

cc. **2016-005W Ravinia Wetland Replacement Plan, Corcoran.** In December 2016, the Commission approved Staff's recommendations on this wetland replacement plan. Barr Engineering is providing monitoring to ensure the replacement meets the performance standards of the approved plans. Annual reports were submitted to the US Army Corps of Engineers (USACE) in February 2019, February 2020, and March 2021. As of March 2021, wetlands and buffers are looking good but will need continued vegetation management in 2021 to get rid of invasive species (mostly cattail). Hydrology is good in both the restoration and creation areas. Cattail and Reed canary grass reemerged during the 2021 growing season and will likely need another year of aggressive maintenance in 2022. The 2021 monitoring report will be submitted to the USACE in March 2022 with recommendations for maintenance.

cd. **2017-014 Laurel Creek, Rogers.** In June 2017, the Commission approved this project with four conditions. All contingency items have been provided with the exception of the O&M agreement which is being negotiated as to whether the City or the HOA will be responsible for the operation and maintenance of the stormwater management facility. On August 31, 2017, Andrew Simmons responded that the O&M agreement is still being negotiated.

ce. **2018-046 Graco Expansion, Rogers.** This project is the expansion of an existing building. The site is located in an area that has regional ponding provided for rate control purposes, but needs to account for water quality and abstraction requirements on-site prior to discharging offsite as part of the improvements. The Commission granted conditional approval at their October 2018 meeting. Conditions of approval were to (1) submit a SWPPP plan meeting requirements, (2) clarify maintenance responsibilities for the iron enhanced sand filter, and (3) a letter from the City of Rogers stating their intentions to provide the water quality deficit in an upcoming project. Staff confirmed several minor plan revisions remain in conformance with the original approval. This item will remain on the Staff report until such time as the water quality deficit has been made up.

cf. **2020-009 Stetler Barn, Medina.** This site disturbs approximately 3.5 acres and must meet Commission Rules D, E, and I. Because of the limited available space for pasture, paddocks and land application of manure, understanding how these components will be managed was also an important part of the review. A complete plan was received on April 22, 2020. At their May 13, 2020, meeting the Commission approved this project contingent upon: 1) the land-owner

continuing to work with the U of M Extension Office and Hennepin County Rural Conservationist to finalize composting, pasture and paddock management plans and 2) a long-term pond/basin operation and maintenance plan and agreement with the City of Medina being approved by the City and the Commission. The agreement must be recorded on the land title with a copy of the recorded agreement provided to the Commission.

cg. 2020-017 Meadow View Townhomes, Medina. This is a 22-acre site located south of Meander Road and north of Highway 55. Lennar Homes is proposing to build 125 townhomes with their necessary infrastructure on this site. A complete application was received May 29, 2020. The plans call for 7.64 acres of new impervious areas. The Commission's review was for conformance to Rules D, E, F, G, and I. At their October meeting, the Commission approved Staff's finding dated September 30, 2020, contingent upon (1) The mean (average) depth on the west wet detention pond must be 4.0' or deeper; (2) Buffer strip monumentation and vegetation maintenance plans must conform to the Commission's requirements; (3) An operation and maintenance agreement of the stormwater ponds and irrigation system must be approved by the City and the Commission. The agreement must be recorded on the property title with a copy of the recorded document provided to the Commission; and (4) Erosion and sediment controls must conform to Commission requirements. Since the approval, the City of Medina has requested the applicant provide abstraction by irrigation only, thus eliminating one filter basin. Staff reviewed the changes and found the updates to be compliant with the Commission's original approvals for stormwater management and administratively approved the plans contingent upon item (3) above and added the condition that design information on the irrigation pump and augmentation water source must be provided within six months of this approval. On November 2, 2021, Dusty Finke provided the Commission with a copy of the recorded O&M agreement.

ch. 2020-032 Enclave Rogers – Commerce Boulevard., Rogers. This project would create an apartment complex on a 3.3-acre site. The existing condition is undeveloped. The project will disturb the entire site and create *2.15* acres of impervious surface. The applicant is proposing an iron enhanced sand filter to meet Total Phosphorus removal requirements. The site is within two of the three outlots created as part of the adjacent former Lowe's development. The application was reviewed for Rules D and E. Staff granted administrative approval for grading contingent on applicant accepting risk for changes required for final approval and on approval from the City for grading activities. In their findings dated December 2, 2020, Staff recommended approval with those conditions, as well as submission of an O&M agreement for stormwater features and with minor updates to the hydrology report and the SWPPP. The Commission approved Staff recommendations at their December 9, 2020, meeting.

ci. 2020-033 Weston Woods, Medina. This project would create 150 residential units on a 135-acre undeveloped site. The project will disturb 49.2 acres and create 17.49 acres of impervious area. The Commission approved this project at their March 2021 meeting with four contingencies: a) Wetland replacement plans must be approved by the City of Medina (LGU), MN DNR and USACE prior to impacts, b) Provide quantification of the change in flood storage capacity for the one-percent annual chance flood event due to the proposed project, c) Provide documentation that changes in flood elevation and loss of floodplain storage have been avoided, minimized, and/or mitigated to the extent practicable. Demonstrate that changes in flood elevation will not cause high water or aggravate flooding on other land and, d) An O&M agreement for stormwater facilities, including irrigation pumping system components and augmentation wells system, must be approved by the City and the Commission and recorded within 90-days after final plat approval on the title to this property. A copy of the recorded agreements must be provided to the Commission.

cj. 2021-020 Crew Carwash, Maple Grove. This project would reconstruct an existing bank building and parking lot on a 1.80-acre parcel into a carwash. The site is located southwest of the intersection of Weaver Lake Road and Elm Creek Boulevard with access from Grove Drive. The disturbance is 1.52 acres, the existing impervious is 1.07 acres, and the proposed impervious is 1.17 acres. Runoff from this site flows into a regional pond on Arbor Lakes Parkway, which ultimately discharges to Rice Lake. The City has stated that the regional pond meets rate control and water quality treatment for the site. The applicant is proposing to use soil amendments to meet the Commission's volume rules. The Commission approved the project at its June meeting contingent on a maintenance agreement being filed with the City with terms agreeable to the Commission. The outstanding escrow balance has been received. On October 21, 2022, Derek Asche reported there is no update for this project.

ck. 2021-035 Mister Carwash, Rogers. The project includes redevelopment of an existing, vacant Staff restaurant building, parking lot, and drive-through into a new carwash facility at 21421 South Diamond Lake Road. The redevelopment is anticipated to decrease the impervious area by approximately 0.3 acres at the project site and add an underground filtration basin with underdrain. The project was reviewed for Rules D and E. The Commission approved this project at its December 2021 meeting with four contingencies: 1) receipt of deficit escrows, 2) a Stormwater Maintenance Agreement, including irrigation system, being entered with the City, 3) A wetland replacement plan approved by the LGU and the TEP, and 4) the buffer plan contingent upon approval of the wetland replacement plan, per Staff findings dated August 31, 2021. The O&M Agreement was received in the administrative office on January 27, 2023.

cl. 2021-036 D&D Service, Corcoran. This development is proposed at the southeast corner of the intersection of County Roads 10 and 19 on a 16.54-acre parcel. The proposed project will include a large warehouse and office buildings along with parking and associated facilities. The existing site is a single farmhouse and surrounding agricultural land. The project was reviewed for Rules D, E, G, and I. Findings updated October 5, 2021, wherein Staff recommended contingent approval with five conditions were approved at the October meeting. Conditions include: (1) payment of all review fees; (2) Corcoran TEP approval of the Wetland Mitigation Plan and the city maintains a drainage and utility easement for existing and proposed on site wetlands; (3) applicant shall consider and respond to staff comments on plan and provide final data prior to approval; (4) applicant shall respond to any City comments; and (5) applicant shall provide a Stormwater Maintenance Agreement acceptable to the city and the Commission within 90 days after the plat is recorded. On July 26, 2022, Kevin Mattson confirmed that the O&M agreement has been received and recorded.

HENNEPIN COUNTY
MINNESOTA

DATE: April 5, 2023

TO: Elm Creek Watershed Management Commission (ECWMC)

FROM: Kevin Ellis, and Kris Guentzel; Hennepin County Department of Environment and Energy

RE: April ECWMC Updates

Project / Program Updates

2023 Watershed Services Agreement

During the March ECWMC meeting, staff presented a memo outlining services the county provides in the Elm Creek Watershed, along with a direction for future work. Feedback provided by the Commission was incorporated into the agreement included in April meeting packet materials. The County is requesting approval of the Watershed Services Agreement during the April meeting.

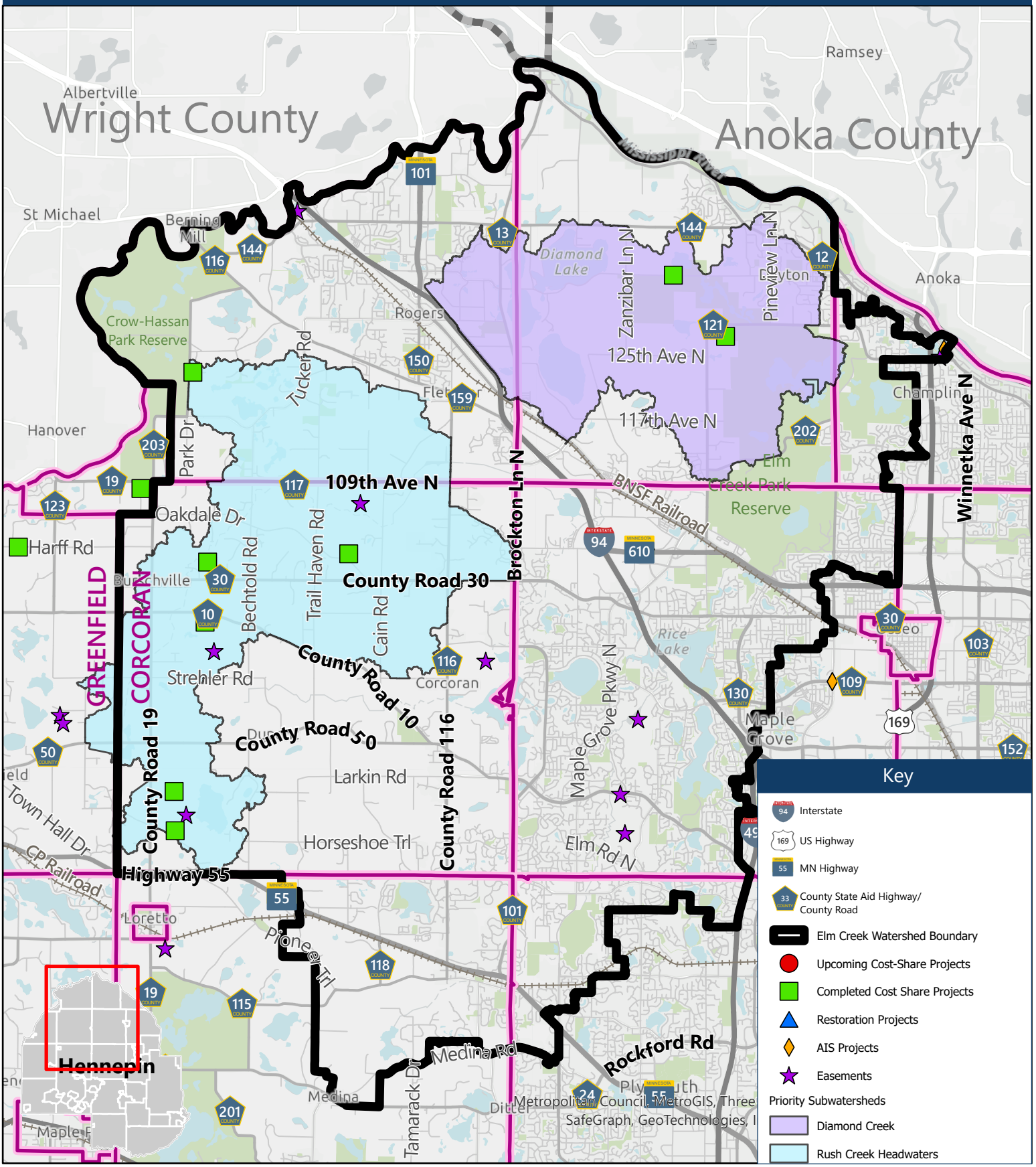
Diamond Hills Stable Updates

Diamond Hills Stables has been approved for EQIP funding, through NRCS, to cover some installation costs for fencing, waterers, and shelters for rotational grazing which are expected to reduce erosion and nutrient runoff. Its anticipated EQIP funding won't fully fund installation costs, so County staff are considering utilizing cost-share funds to help complete these projects, and to possibly add on others such as diversion drainage around key feedlots. Hennepin County would like the opinion of ECWMC of potentially utilizing CIP and WBIF funds in addition to County cost-share dollars to cover the remaining balance for implementation.

Hennepin County Environment and Energy
701 Fourth Ave S., Suite 700, Minneapolis, MN 55415
612-348-3777 | hennepin.us/environment

Hennepin County Projects in the Elm Creek Watershed

Hennepin County Environment and Energy | 2023



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

N

0 3.5 7 Miles

Publication date: 4/5/2023

Data sources (if applicable):

Other Hennepin County Programming

Open house: rural conservation and funding

Thursday, April 13 from 4 to 6 p.m.
Hamel Community Building, 3200 Mill Street in Hamel

Have questions about conservation or managing your farm and livestock?

This open house will be an opportunity to discuss your questions with Hennepin County conservation staff and learn about financial and technical services county staff provide.

For those interested in managing pastures for horses, Dr. Krishona Martinson, University of Minnesota equine extension specialist, will give a short presentation at 4 p.m.

At the open house, you can also:

- Sign up for the new, free, soil health testing program
- Get free tree seedlings
- Enjoy snacks and drinks

RSVP to let us know you'll be attending the event or sign up to be notified of similar events in the future.

For more information, contact Roz Davis at rozalyn.davis@hennepin.us.

Scan this QR code to RSVP

Hennepin County spring tree sale

Hennepin County is selling trees to property owners to restore and improve woodland areas and increase wildlife habitat.

About the trees available

Bareroot trees ranging in size from 18 to 24 inches will be sold in bundles of 25, unless otherwise noted. Due to their small size, the trees being sold are best used for restoration and conservation projects.

Place an order

Trees must be ordered by Thursday, April 20. When placing your order, you must selected a date – Thursday, April 27 or Saturday, April 29 – to pick up your trees at the Parkers Lake Golf Center in Plymouth.
See what's available and place an order.

Take survey, help shape a new ag preservation proposal

Hennepin County seeks input from farmers to develop a proposal that fits the needs of the community, its legacy, and its future

Conservation staff at Hennepin County are seeking input for a proposal to preserve agricultural land. There aren't currently good options for farmers or farmland owners wishing to avoid development in Hennepin County. Conservation staff are seeking feedback on the best ways to fill this gap. Farmers and landowners in Hennepin County enrolled in Green Acres, Agricultural Preserve, or those with an interest and involvement in agriculture are being asked to take a survey to inform the proposal.

Take the survey: hennepin.us/ag-preservation-survey. The survey takes approximately 10 minutes to complete. A printed survey with a return envelope is available upon request. Contact Kevin Ellis, kevin.ellis@hennepin.us, 612-382-3956.

Watershed assessment and trends update

Mississippi River – Twin Cities Watershed

Upper Mississippi River Basin

Key Characteristics

The Mississippi River – Twin Cities Watershed occupies an area of approximately 1,007 square miles in east central Minnesota and is drained by several streams and rivers that flow directly into the Mississippi River through the Twin Cities area. The rivers, lakes, and streams in this metropolitan area provide important ecosystem services and excellent recreational opportunities for more than 1.9 million residents as well as millions of annual visitors. The watershed contains Minnesota's largest two cities Minneapolis and St. Paul and is comprised of six counties as well as numerous watershed districts and management organizations.

Figure 1: Minnesota's 80 major river drainages. Mississippi River – Twin Cities Watershed is highlighted in blue.

Water monitoring is essential to determine whether lakes and streams meet water quality standards designed to ensure that waters are fishable and swimmable. The Minnesota Pollution Control Agency (MPCA), Minnesota Department of Natural Resources (MNDNR), and local partners conduct an intensive analysis of major lakes and streams in each of the state's 80 major watersheds every 10 years to detect changes in water quality. Water monitoring in this watershed is truly a collaboration between state agencies, watershed districts, watershed management organizations, and Met Council Environmental Services. The 10-year long effort produced the most complete picture of watershed condition in the state, including water quality and biological data on hundreds of lakes, rivers, and streams. The wealth of data collected and analyzed in the 2010 effort to assess the condition of water quality in the Mississippi River – Twin Cities Watershed provided a baseline for comparison with extensive chemical and biological sampling conducted in 2020 and 2021. In both cycles of monitoring, scientists examined levels of chemical pollutants, bacteria, and water clarity, as well as the biological condition of two aquatic communities (fish and aquatic macroinvertebrates) to determine if waters are healthy or in need of restoration. A comparison between the two sampling efforts provides a powerful mechanism for determining if water quality is improving or declining. Assessment using fish surveys in lakes was first utilized in 2013, therefore, this is the first cycle of monitoring within this watershed where scientists have examined the biological condition of fish communities in lakes. Partners use this information to develop or refine protection strategies for waters that are healthy and prioritize restoration plans for waters that are degraded or impaired.

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Changes in water quality

To detect any changes in water quality, this recurring exam looks at fish and macroinvertebrate communities as well as water chemistry. Scientists use a tool called the Index of Biological Integrity (IBI) to assess the health of biological communities in lakes, rivers, streams, and wetlands. High IBI scores indicate a healthy aquatic community, which can only be attained when water quality, habitat, and hydrology are minimally disturbed by human activities.

Over the past decade, scientists observed some positive changes in water quality in the Mississippi River – Twin Cities Watershed. Several lakes with previous nutrient impairments have been restored to swimmable quality and will be removed from the state's Impaired Waters List (IWL). Stream fish communities show an overall improvement between the sampling that occurred in 2010 and 2021, but few stream sections have improved enough to propose a removal from the IWL. Changes to fish communities in lakes cannot be compared, since there had not been any assessable fish community surveys for the previous assessment cycle. The baseline for lake fish communities will be set during this 2020 cycle. Compared to 2010 results, average IBI scores for macroinvertebrates (i.e. small animals that can be seen with the naked eye and have no backbone such as aquatic insects, crayfish, and snails) remained virtually unchanged in 2020 across the watershed. Continued problems identified in some streams include elevated bacteria levels, low dissolved oxygen levels, high chloride levels, and increased land use development.

The most recent monitoring efforts indicate that restoration efforts and land management best practices have helped improve water quality in several water bodies throughout the watershed, while other waters show evidence of declining water quality:

- Twenty-five lakes have been approved for nutrient delistings since 2012, with a handful of others close to a restored status.
- 5 new lakes are being listed for new nutrient impairments (Rebecca, Lost, Thies, Academy Pond, and Fish Lake (in Woodbury), and 16 others are vulnerable to impairment of aquatic recreation.
- For the 168 lakes with long-term monitoring data, nearly 40% are improving in water clarity suggesting water quality is also improving over time, and another 58% are showing no change.
- Increasing chloride concentrations are potentially threatening aquatic life cycles in 8 newly impaired lakes, a nearly 33% increase in chloride impairments from the previous round of chloride assessments in 2013.
- Stream water clarity is improving in 17 stream segments within the watershed.
- Across the watershed, stream IBI scores for fish improved by an average of nearly 8 points while there is no significant change for macroinvertebrate community condition compared to 2010 monitoring results.

Commented [CA(1]: Should add context to this point

Highlights of monitoring

- The commitment local government units have shown toward monitoring water quality is exemplified by dozens of complete 10-year chemistry datasets.
- The watershed at large has one of the highest participation rates of the MPCA's Volunteer Monitoring Program.
- Twenty-four lakes including Tanners, Phalen, Crystal, Wirth, Johanna, McCarrons, Harriet, Bde Maka Ska, and Medicine are monitored every fall as part of a long-term chloride study to track increasing concentrations around the metro area.
- White Bear Lake and Lake Minnetonka have two of the highest fish IBI scores within the Mississippi River – Twin Cities Watershed. This is likely, in part, due to the complexity of habitat for hosting a higher diversity of fish species.
- A total of 50 fish species were collected in 39 lakes during the watershed monitoring period. Of these, one species is considered threatened (Pugnose shiner), and one is a species of concern (Least darter). Both species are State Species of Greatest Conservation Need that rely on high quality vegetated habitat.
- A total of 40 fish species were collected in 30 stream segments during the watershed monitoring period. Of these species, 20% are considered sensitive and 35% are considered tolerant.

Fish species sampled by DNR and PCA biologists as part of lake and stream IBI surveys. From left to right, muskellunge and hybrid sunfish.

Success stories

- Twenty-five lakes have been removed from the impaired waters list since lakes were assessed following the 2010 monitoring. These delistings have been the result of both in lake and on land watershed management practices.
- Sand Creek – This stream flowing into Coon Creek has undergone an intense restoration and re-meandering project led by the Coon Creek Watershed District. Although this stream segment is still considered impaired for both fish and macroinvertebrates, the sampling was conducted shortly after the restoration work was completed and future monitoring will better reflect the work that has been done. Perched culverts continue to limit connectivity and migration on many streams in the watershed including Sand Creek but future work to remove these barriers is currently planned. Additional information can be found here.

An extensive habitat improvement project has been completed on Sand Creek helping to improve the creek's water quality along with fish and bug populations.

Watershed assessment results

The MPCA and local partners monitored water quality conditions in the Mississippi River – Twin Cities Watershed between 2010 and 2021 for the 2022 surface water assessment process. The data used to assess the condition of Minnesota waterbodies focus on whether or not they are meeting water quality standards for aquatic life, recreation, and consumption. This was accomplished by comparing individual measurements of parameters such as total suspended solids (TSS), dissolved oxygen, and IBI scores to established water quality standards. The primary outcome of these assessments is to ultimately determine which waters are healthy and in need of protection or are polluted and require restoration.

Streams and rivers

Fish and macroinvertebrate communities are a direct measure of aquatic life in rivers and streams. Between the 2010 and 2021 cycles of biological monitoring in the Mississippi River – Twin Cities Watershed, the MPCA adopted new rules to assess aquatic life in channelized streams and ditches. This new framework, Tiered Aquatic Life Use (TALU), allowed channelized streams in the watershed—not assessed in 2010—to be assessed against reasonable aquatic life goals if they were legally altered prior to the advent of the Clean Water Act and currently demonstrate habitat-limiting conditions for fish or macroinvertebrate communities. Streams with these characteristics are classified as modified aquatic life, which have lower biological condition expectations than general aquatic life use streams. This framework also allowed the designation of streams that exhibit exceptional aquatic communities or a much higher quality than would be expected for supporting general aquatic life use goals. None of the stream reaches in the Mississippi River – Twin Cities watershed meet the standards for exceptional aquatic life use potential.

Biological communities in streams as a whole have either improved or remained similar over the last 10 years while human population and development within the watershed has increased. Overall, about 20% of the stream reaches assessed in the Mississippi River – Twin Cities Watershed support both healthy fish and macroinvertebrate communities (Full Support). The remaining 80% of stream reaches exhibit impairments to either or both communities. Four new stream sections were found to have impaired macroinvertebrate communities in 2020, bringing the total number of macroinvertebrate impairments in the watershed to 26. There was one new stream section that was found to have an impaired fish community in 2021. This brings the total number of stream sections impaired for fish to 19. Aquatic life was determined to be fully supported on two new sections of stream in 2020, increasing the total for the watershed to 11.

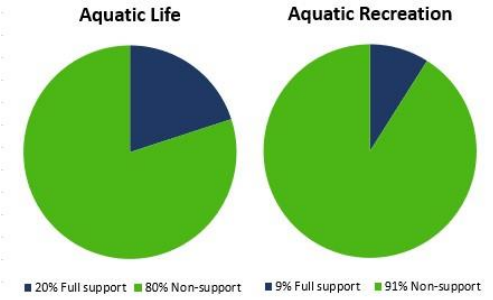

Figure 2: Watershed assessment results for aquatic life use and aquatic recreation support in streams.

The most recent assessments also resulted in 22 new stream segments added to the IWL for chemical pollutants. The most common pollutants in the Mississippi River – Twin Cities Watershed are chloride, E. coli bacteria, dissolved oxygen, and total suspended solids (The MPCA's first watershed assessment in 2012 yielded 46 stream segments impaired for the same conventional pollutants). Given the robust monitoring datasets coupled with large amounts of developed land in this predominantly urban landscape, the high percentage of impaired waters is not surprising. Chloride is often high in area streams in the springtime and is difficult to manage, given the balance between public road safety and protecting water quality; the MPCA and many local partners have developed a chloride management plan. Work outlined local watershed restoration and protection plans are actively underway throughout the watershed. A specific example includes improving trends in stream clarity for 17 stream segments within the watershed, including several sites on Rice Creek. This is likely influenced by several water quality improvement projects within the Rice Creek Watershed.

Lakes

More than 200 lakes had assessable datasets collected within the previous 10 years and many of those data covered the entire 10-year assessment window, a feat not often accomplished anywhere in the state. Twenty-five lakes have been delisted since the 2012 assessment cycle with most being part of nutrient reduction TMDLs and work by local partners. Ninety-five lakes are fully supporting recreational uses, whereas 67 are listed as impaired and 16 other lakes are nearly impaired, while 2 lakes are barely impaired.

High percentages of watershed disturbance and shoreline development are likely culprits of historical stressors to lake water quality, as well as fish communities. In areas where development has reached its maximum potential, water quality trends have mostly stabilized or started to improve following implementation of TMDL management plans.

New to this assessment cycle are aquatic life assessments based on fish communities in lakes. The combination of a biological assemblage plus the same chemical parameters that were analyzed in previous assessments provides a broader basis for examining water quality and its impacts to aquatic life. Several lakes with new aquatic life use impairments due to stressed fish populations also exhibit improved water quality and are approved to have their aquatic recreation impairments for excess nutrients removed. Fish communities may respond slowly to these improvements or may be adversely impacted by other stressors such as habitat loss, aquatic invasive species, and shoreline alterations.

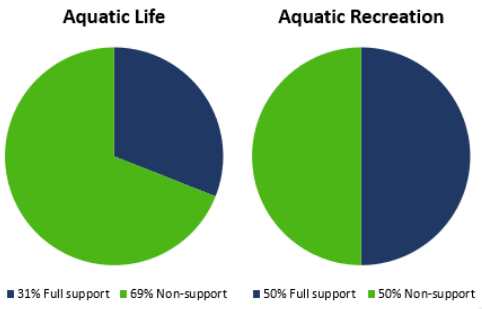

Figure 3: Watershed assessment results for aquatic life use and aquatic recreation support in lakes.

Aquatic life assessments based on fish IBI data were completed for 35 lakes in the Mississippi River-Twin Cities Watershed, while four lakes sampled were not assessable. Approximately 31% of assessed lakes were fully supporting for aquatic life uses, while around half were found to have impaired fish communities. Three lakes were considered vulnerable to future impairment (i.e., Piersons, Weaver, and Phalen). Stressors that are likely influencing these fish communities include excess nutrient inputs from urban land uses, degraded and/or overly developed shorelines, and contamination from chloride and other pollutants.

Trends

A key objective of the 2020 and 2021 monitoring effort was to evaluate whether water quality has changed since 2010 (Figure 8). If water quality has improved, it is important to understand to what extent strategy development, planning, and implementation, based on the initial work and combined with actions that were already underway, may be responsible for those improvements. It is equally important to understand if water quality does not appear to be changing or is declining. Either way, the knowledge will help inform future planning and monitoring activities.

Trends in four different aspects of water quality were analyzed to provide as robust a picture as possible of what is happening in the Mississippi River – Twin Cities Watershed:

1) Streamflow, sediment (total suspended solids), total phosphorus (TP), and nitrogen (nitrate)
2) Biological communities
3) Clarity of lakes
4) Climate

Streamflow and pollutant concentrations

While much of the content in this report focuses on the lakes and streams within the Mississippi River – Twin Cities Watershed, this watershed also has the Mississippi River itself entering on the northwest side and exiting on the southeast side. In the next few years, a "large river" report on the Mississippi River will be published. However, since this watershed contributes to and influences the Mississippi River, a brief discussion of flow and pollutant trends are included here.

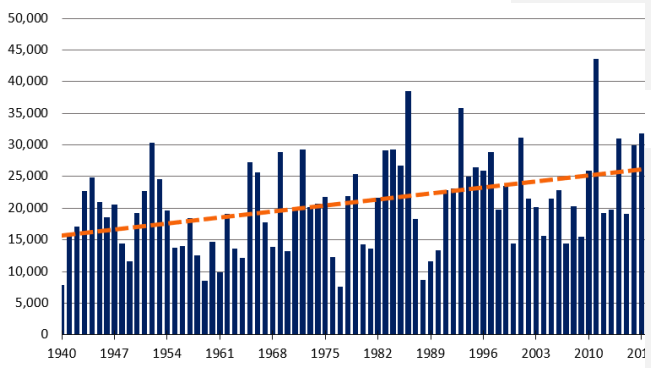

Figure 4: Average annual stream flow at the Mississippi River at Prescott, WI (USGS 05344500)

Figure 4 displays the increase of the average annual stream flow over 75 years at the Mississippi River at Prescott, WI (USGS 05344500). This long-term gage is located just outside of the Mississippi River-Twin Cities HUC-8 watershed boundary and after the Minnesota and St. Croix Rivers enter. Stream flow is a measure of the volume of water. As shown, there is great variability between years, but overall, the amount of water has increased over time. This is a result of many factors including increased precipitation and additional drainage from nonpoint sources. The increasing trend is also seen at the long-term USGS gage sites on the northern edge of the Mississippi River-Twin Cities watershed.

Metropolitan Council's Environmental Services (MCES) has led efforts to understand the water quality dynamics and trends with data originating back to 1976. A recent report (*Regional Assessment of River Water Quality in the Twin Cities Metropolitan Area 1976-2015: Minnesota, Mississippi, St. Croix Rivers*) discusses the status of the river locations in the 7-county metro area by MCES and can be found here: https://metrocouncil.org/river-assessment.

Figure 5 summarizes the trends well. Sediment, phosphorus and bacteria have all decreased mainly due to efforts of businesses, homeowners, wastewater treatment facilities, farmers, and cities. Unfortunately, nitrogen and chloride are both on the rise. Nitrogen increases are related to fertilizer application (urban and rural), livestock, and wastewater discharges. Chloride is primarily used as a deicer, synthetic fertilizer, and in water softeners. More recent data and analysis indicate nitrogen trends continue to increase at most sites. The Minnesota River at Fort Snelling is the exception for nitrogen which has shown a decreasing trend. This may be related to lag time as the Minnesota River near Jordan has an increasing trend. Newer data for phosphorus continues to show declining trends at most sites with the Rum River at Anoka showing no statistical trend for phosphorus (MPCA, 2020).

From a statewide perspective, nitrate, phosphorus, and suspended sediment flow weighted mean concentrations (FWMC) for stations monitoring by the Watershed Pollutant Loading Monitoring Network (WPLMN) show moderate values for all three parameters in the Mississippi River-Twin Cities watershed. Figure 6 displays total phosphorus (TP) and highlights the transition zone between the higher water quality in northern Minnesota with the degraded quality in southern Minnesota which is also seen in the other parameters. More information can be found at: https://www.pca.state.mn.us/air-water-land-climate/watershed-pollutant-load-monitoring

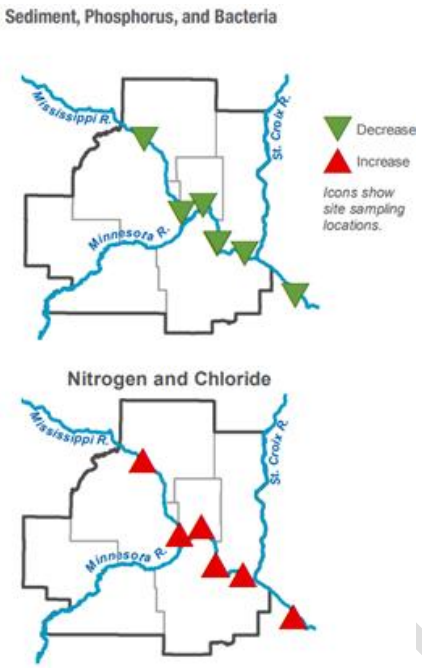

Figure 5: Pollutant trends, METC, 2018.

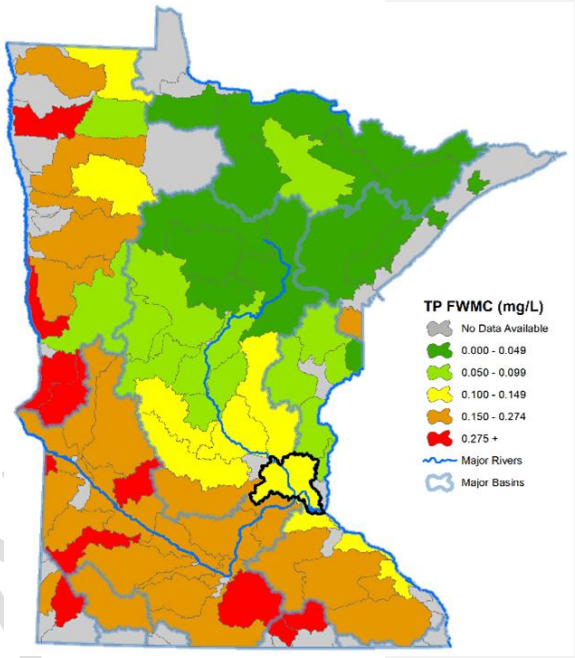

Figure 6: Phosphorus FWMC, 2007-2019

Biological Communities

Fish and macroinvertebrate IBI scores were used to evaluate if biological condition of the watershed's rivers and streams has changed between time periods. Independent statistical tests, comparing data collected between 2010 and 2020/2021 were conducted on each community with 22 sites included in the macroinvertebrate analysis and 20 sites in the fish analysis. The average macroinvertebrate IBI score for the Mississippi River – Twin Cities Watershed increased by 2.4 points between 2010 and 2020, which does not represent a statistically significant change in biological condition. Fish IBI scores across the watershed increased by 7.6 points which represents a statistically significant increase in biological condition for the watershed. A similar change analysis was not completed for lakes because comparable fish community data had not been collected during the first time period. However, several sensitive fish species with historical records in certain lakes have not been found in the most recent sampling events. Some of these fish species include least darters and rock bass.

Context for the change analysis results is provided by a characterization of the conditions under which biological monitoring occurred in 2010 and 2020/2021. In 2010, the Mississippi River – Twin Cities Watershed experienced normal to high water levels during the May through September time period. In 2021, the watershed experienced low water levels and drought conditions during a large portion of the same sampling period (Figure 8). Low water levels during the 2021 sampling season could have worked to concentrate fish populations in the reaches that were sampled. Drought conditions in 2021 effectively ended fish monitoring at the end of July compared to a full sampling period which usually ends in September.

Clarity of lakes

Water transparency is typically a good indicator of overall lake water quality. As water clarity increases, there is a greater likelihood that water quality standards are being met. There are 168 lakes with some level of transparency data in this watershed, thanks in large part to volunteer monitoring programs at work. Of those lakes, 70 have enough data to estimate a long-term change in clarity. An improving trend was noted in 60 lakes, while only 10 show a decline (only 1 of those 10 currently has a nutrient impairment listing). Many of the high-use recreational lakes had improving water clarity trends (Bde Maka Ska, Wirth, Minnetonka, Phalen, White Bear). Watershed management or lake restoration projects, such as in lake alum treatments, or in some cases zebra mussel infestations all affect water clarity.

Climate

The Mississippi River – Twin Cities Watershed now receives on average 2.4 additional inches of rain above the historical annual average (1895-2018). Furthermore, climate scientists suggest that precipitation events are becoming more intense. In addition, the average annual temperature in the watershed has increased by about 1.3 degrees with winter temperatures increasing by 2.7 degrees over the same time period. Increased rainfall and temperature can worsen existing water quality problems. More precipitation and reduced snow cover can increase soil erosion, pollutant runoff, and streamflow. Increased streamflow in turn can lead to stream channel erosion and degraded habitat for fish and other aquatic life. Longer growing seasons with higher temperatures can lead to more algal blooms. These changes will complicate efforts to protect and restore the watershed. DNR climate summary for the Mississippi River – Twin Cities Watershed.

In 2010, the Mississippi River – Twin Cities watershed experienced above normal rainfall (+4.4 in) and was abnormally hot (+1.1 ^{o}F) during the May to September time period. The watershed had

near normal precipitation (-1.5 in) and temperature (+0.8 ºF) in 2020 over the May to September time period. Additionally, in 2021 when fish were monitored in rivers and streams, the watershed experienced a severe rainfall deficit (-5.1 in) with extremely warm temperatures (+3.9 ºF) during the summer months. Overall, comparing the relatively higher water levels present in 2010 to the near normal conditions in 2020 means there is a moderate likelihood that any observed changes in stream macroinvertebrate condition at either the watershed or individual site scale are partially due to differences in climatic conditions between the two periods. In contrast, there is a high likelihood, given the drastically different precipitation amounts and temperatures between 2010 and 2021 (Figure 8), that any observed changes in stream fish community condition are partially due to these observed climatic differences.

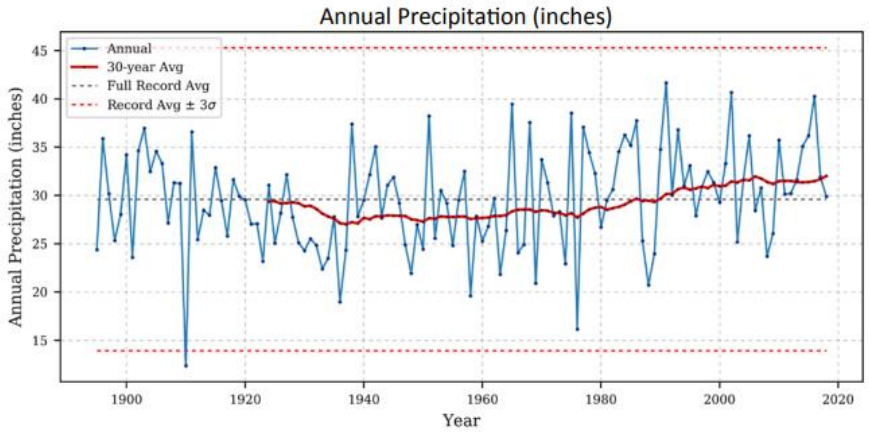

Figure 7: Average annual precipitation for the Mississippi River – Twin Cities Watershed (1895-2018).

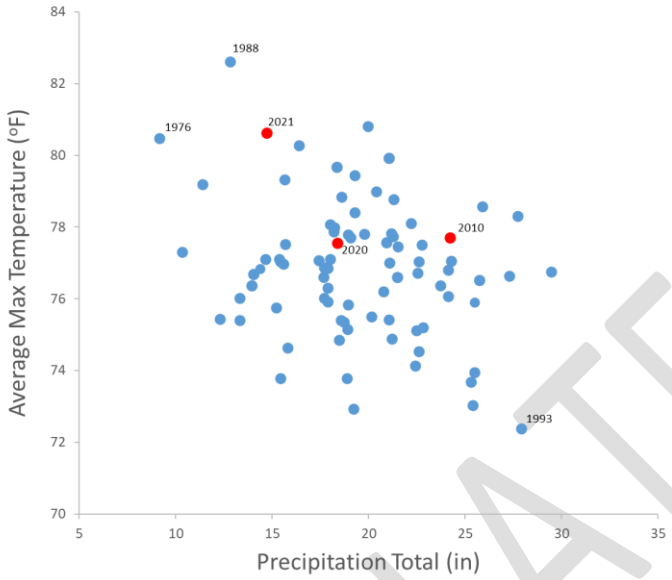

Figure 8: Characterization of air temperature and rainfall conditions for May-September period across the historical record (1938 – 2021) of climate data for the Mississippi River – Twin Cities watershed. IWM years highlighted in red.

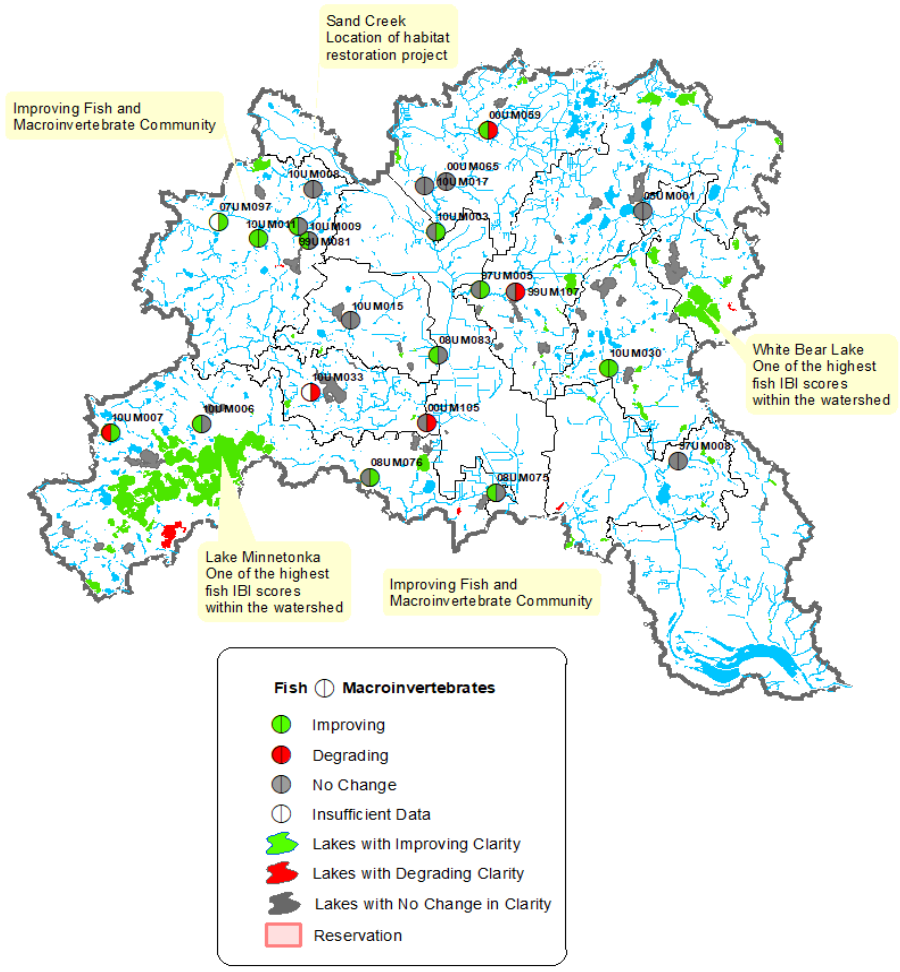

Figure 9: Changes in water quality in the Mississippi River – Twin Cities Watershed.

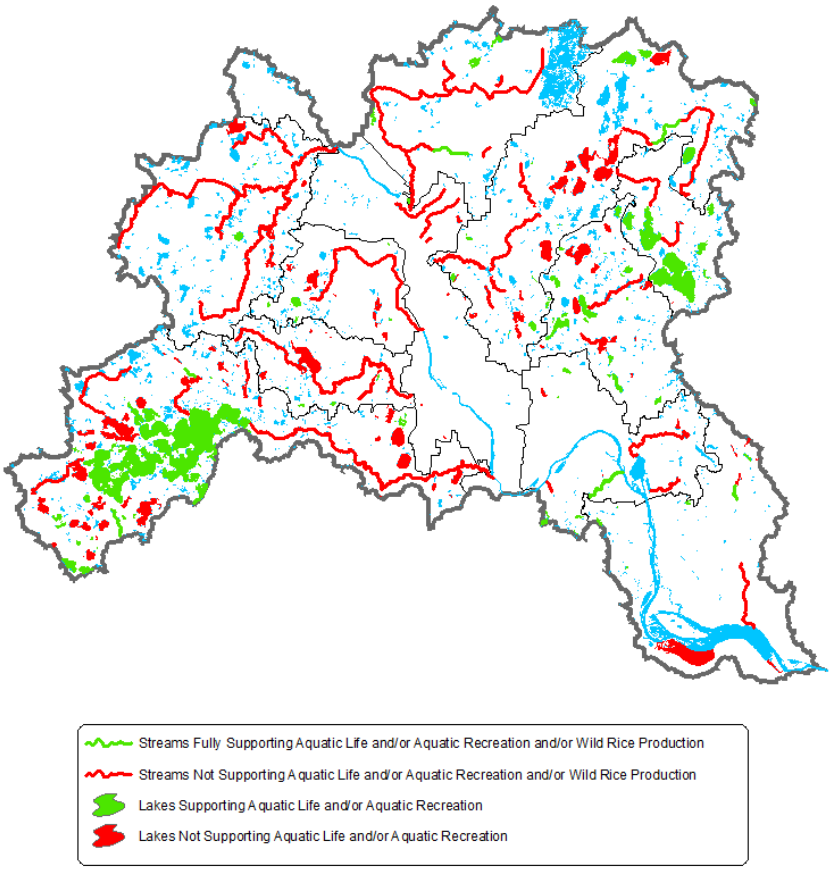

Figure 10: Aquatic life use and recreational use support/non-support in streams and lakes in the Mississippi River – Twin Cities Watershed.

For more information

This study of the Mississippi River – Twin Cities Watershed was conducted as part of Minnesota's Watershed Approach to restoring and protecting water quality. Efforts to monitor, assess, study, and restore impaired waters, and to protect healthy waters are funded by Minnesota's Clean Water, Land, and Legacy Amendment. Stressor identification for new impairments and updates to the Watershed Restoration and Protection Strategy follow the completion of monitoring and assessment. This approach allows for efficient and effective use of public resources in addressing water quality challenges across the state. The data and assessments produced by this study can inform local efforts to restore and protect waters in the Mississippi River – Twin Cities Watershed. For more information, go to the MPCA Mississippi River – Twin Cities webpage, or search for "Mississippi River – Twin Cities" on the MPCA website. For more specific assessment data, go to the Tableau workbook: https://public.tableau.com/app/profile/mpca.data.services/viz/WaterQualityAssessmentResultsDataViewer/HomePage.

Contact

Andrew Ching
Minnesota Pollution Control Agency
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651-757-2630

elm creek
Watershed Management Commission

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane ● Plymouth, MN 55447
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elmcreekwatershed.org

March 21, 2023

Legislative-Citizen Commission on Minnesota Resources
100 Rev. Dr. Martin Luther King Jr. Boulevard
State Office Building, Room 65
St. Paul, MN 55155

RE: City of Champlin Brown Property Acquisition
Letter of Support

Dear LCCMR 2024 Request for Proposals Review Staff,

The Elm Creek Watershed Management Commission is very supportive of the City of Champlin's request for LCCMR grant funds to purchase, protect, and restore key parcels along Elm Creek/Mill Pond in the Elm Creek watershed.

The grant funds would assist the City in purchasing two of only three remaining natural parcels in Champlin that connect the Elm Creek Greenway Corridor to the Mill Pond. This will allow the City to keep the land natural and to protect both shoreline and oak savannah/natural prairie in the area and provide a buffer between Elm Creek and other developed areas. The parcels are contiguous to other publicly owned lands along the corridor.

The Commission and the City have made significant investments in restoring and protecting Elm Creek and the Mill Pond, to improve water quality and restore both the aquatic and upland biotic communities. Within the drainage area to the Creek and waters such as the Mill Pond, the Commission encourages cities and developers to limit new impervious area and to convert existing impervious and developed lands where possible to pervious cover and native vegetation.

This project will help preserve and improve the Elm Creek Corridor, protecting water quality and offering an opportunity to increase beneficial habitat. We encourage the Legislative Commission to fund this proposal and are happy to provide any further information. Please contact Administrator Judie Anderson if you have follow-up questions.

Sincerely,

Doug Baines, Chair
DB:jaa

elm creek
Watershed Management Commission

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www.elmcreekwatershed.org

March 13, 2023

Members of the Minnesota State Legislature
St. Paul, Minnesota

The Elm Creek Watershed Management Commission asks that Minnesotans be given the opportunity to reauthorize the dedication of state lottery proceeds to the Environment and Natural Resources Trust Fund through a constitutional amendment, allowing voters to pass on a tradition of conservation to the next generation.

In 1988, Minnesota voters overwhelmingly passed constitutional amendments to establish a state lottery and to create the Environment and Natural Resources Trust Fund (ENRTF), a permanent trust with principal funding provided by a portion of net lottery proceeds. Proving popular with Minnesotans, the ENRTF has been reapproved by two additional constitutional amendments. In 1990, 75.31% of voters upgraded the use of lottery proceeds from a statutory dedication to a constitutional dedication expiring in 2001. And in 1998, 73.95% of voters extended this dedication until 2025. Today, support for the ENRTF remains strong, with 73% of survey respondents favoring the rededication of lottery proceeds to the Trust Fund.

For over three decades, the ENRTF has offered a stable, long-term funding source for unique, innovative projects conducted by local and Tribal governments, non-profit and community organizations, colleges and universities, and federal and state agencies. Using funding recommendations from the Legislative-Citizen Commission on Minnesota Resources (LCCMR), the Legislature has appropriated over $900 million from the Trust Fund for the protection, conservation, preservation, and enhancement of the state's air, water, land, fish, wildlife, and other natural resources. This crucial investment has protected ecosystems, aided local communities, promoted outdoor recreation, improved health outcomes, pursued environmental equity, bolstered agricultural resiliency, and supported strong businesses and good-paying jobs across the state.

We believe Minnesotans deserve the opportunity to vote to renew the constitutional dedication of lottery proceeds to the ENRTF until 2050; while also restoring the Fund's original 50% apportionment of net proceeds and improving the LCCMR. The ENRTF will play a critical role in addressing emerging challenges to our natural resources. It's vital that we extend this funding for the years to come. We have a rare chance to continue a tradition of stewardship in Minnesota and to improve and extend the effective use of our state lottery proceeds.

We respectfully urge the Legislature to support placing the constitutional rededication of lottery proceeds to the Environment Natural Resources Trust Fund on the ballot in 2024, allowing Minnesotans to ensure the stable protection of our environment for the next generation.

Sincerely,

Doug Baines
Chair
Z:\Elm Creek\Communications\L_Lottery reauthorization_ec.docx

The Three Rivers Park District Board of Commissioners cordially invites you to the

State of the Parks

Wednesday, April 19, 2023
9 a.m., with presentation beginning at 9:30 a.m.
Hyland Hills Chalet
8800 Chalet Road, Bloomington

RSVPs appreciated. To RSVP or if you have questions, please contact:
Jason McGrew-King | 763-559-6779
Jason.McGrew-King@ThreeRiversParks.org

Please join us for the State of the Parks!

ThreeRivers
PARK DISTRICT

3000 Xenium Lane North
Plymouth, MN 55441-1299

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2022

Lake Water *Quality*

Summary

Lakes add to the quality of life and economic stability of the region

INTRODUCTION

The Twin Cities Metropolitan Area (TCMA) is fortunate to have a large number of lakes. These lakes are important recreational, aesthetic, and ecological resources that add considerably to the quality of life and economic stability of the region. Protecting the water quality of our lakes is a significant citizen concern.

Many state and local agencies have a role in managing and monitoring lake water quality. The Metropolitan Council operates the most extensive lake monitoring program in the region, and has been monitoring metro area lakes since 1980. During the 1980s, the Council typically monitored about 10 to 30 lakes per year.

In 1993, the Council initiated the Citizen-Assisted Monitoring Program (CAMP) to help expand coverage of lake monitoring in the metro area and to provide information to support local water management efforts. This highly successful program collects data on the lakes each year through the efforts of trained, dedicated volunteers and their local sponsors. 2022 was the 30th year of the Council's volunteer program, with 107 citizen volunteers participating in the CAMP. The volunteers were sponsored by local partners, including 12 cities, 14 watershed management organizations and watershed districts, 1 county, and 1 conservation district.

Through the dedicated efforts of the volunteers and local partners, a total of 170 lake-sites on 159 lakes were monitored in 2022 through the CAMP. Metropolitan Council staff monitored an additional 8 lake-sites on 6 lakes. In total, Council staff and CAMP volunteers and sponsors monitored 178 lake sites on 165 lakes in 2022, including 4 lakes and 5 lake sites that were newly added to the Council's lake monitoring program. Since 1980, the Council's lake monitoring program has monitored 453 lake-sites on 410 lakes.

WHY WE MONITOR

The Metropolitan Council is charged with creating a comprehensive regional development guide that minimizes the adverse impacts of growth, including adverse impacts on the environment. The monitoring data collected by the Council, its partners, and citizen volunteers are used to identify pollution problems, support regional planning efforts, and meet federal and state regulations. This Lake Water Quality Summary provides an annual synoptic assessment of the water quality of many of the metro area's lakes. Also, the Council monitors several rivers and streams in the metropolitan area and prepares reports on data collected by those programs.

METROPOLITAN COUNCIL

390 Robert Street North
Saint Paul, MN 55101
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metrocouncil.org

Most of the lake monitoring efforts focus on the assessment of eutrophication, which is the process of nutrient enrichment. Eutrophication increases the biological productivity of a lake by enhancing the growth of algae and other plants. Human activities in the watersheds of lakes (for example, nonpoint sources) increase the delivery of nutrients to lakes beyond what occurs naturally. This acceleration of nutrient enrichment by humans is called cultural eutrophication. During cultural eutrophication, the population of algae increases and water clarity decreases. A variety of other problems may develop, including increases in nuisance algal blooms, odor problems, decreased desirability for recreation, decreased dissolved oxygen, fish kills, changes in the structure of fish and invertebrate communities toward low-oxygen tolerant species, and reductions in biodiversity. Furthermore, eutrophic lakes can develop blooms of toxic blue-green algae (cyanobacteria), which can be a serious health concern for humans and animals (domesticated and wild). Cultural eutrophication is one of the leading water quality concerns facing the region.

METHODS

Lakes monitored by Council staff and volunteers are typically sampled at two-week intervals from mid-April through mid-October. Most lakes are sampled at one station located over the deepest spot in the lake. Field measurements taken during each monitoring event typically include temperature and water clarity (measured with a Secchi disk). In addition, surface water samples are collected for lab analyses, which include total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll-a (Chl-a). The routine chemical analyses are performed at the Metropolitan Council Environmental Services laboratory following U.S. EPA-approved methods.

Each lake is assigned a lake grade using an A-through-F grading system as originally developed by Council staff in 1989. The objective of the lake grade system is to provide a tool for assessing lakes on a regional basis. The grading system allows comparisons of lake water quality across the metro area, yet is understandable to the public and nontechnical audiences. The grading system uses percentile ranges of the summertime (May-September) average values for three water quality indicators: total phosphorus, chlorophyll-a, and Secchi depth. Total phosphorus is a key nutrient measure; chlorophyll-a is a measure of algal abundance; and Secchi depth is a measure of water clarity. The lake's water quality grade is calculated as the average grade for the three individual parameter grades. Only lakes with a sufficient quantity of data are assigned a lake grade.

RESULTS

In 2022, 47% of the lake sites received a grade of "A" or "B", meaning that they had relatively good water quality. Another 28% of lake sites received a water quality grade of "C". The remaining 25% of lake sites received a water quality grade of "D" or "F", meaning that they had relatively poor water quality. Similar to that of past years, there was no distinct pattern within the TCMA as to where lakes with specific water quality are located.

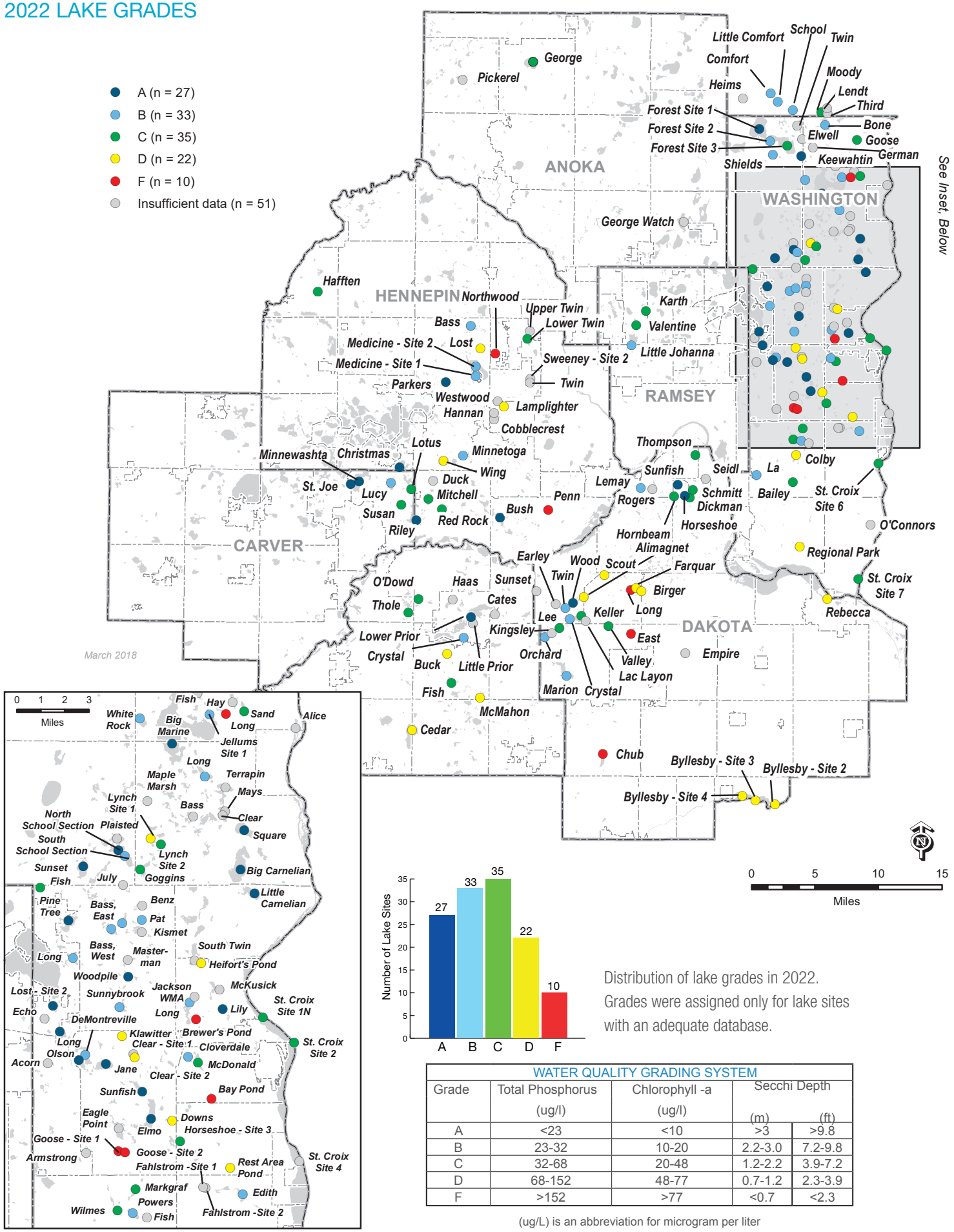
As noted in the 2021 Lake Water Quality Summary Report, the 2021 lake grade distribution showed a shift towards higher grades (A's and B's) as compared to previous years. The reason for the shift remains unclear, but for an analysis and discussion of the shift refer to the Metropolitan Council's 2021 Study of the Water Quality of 167 Metropolitan Area Lakes. For 2022, the lake grade distribution showed a return to a similar pattern typically observed in years prior to 2021, with C grades being the dominant grade, the number of A grades less than B grades, and the number of D grades greater than the F grades. The Annual Lake Water Quality Summary Report, in addition to other lake, stream, and river reports can be accessed online at:

https://eims.metc.state.mn.us/Documents

All of the Council's lake, stream, and river monitoring data can be accessed online using the Council's Environmental Information Management System at:

https://eims.metc.state.mn.us

2022 LAKE GRADES



Distribution of lake grades in 2022. Grades were assigned only for lake sites with an adequate database.

WATER QUALITY GRADING SYSTEM				
Grade	Total Phosphorus (ug/l)	Chlorophyll -a (ug/l)	Secchi Depth (m)	(ft)
A	<23	<10	>3	>9.8
B	23-32	10-20	2.2-3.0	7.2-9.8
C	32-68	20-48	1.2-2.2	3.9-7.2
D	68-152	48-77	0.7-1.2	2.3-3.9
F	>152	>77	<0.7	<2.3

(ug/L) is an abbreviation for microgram per liter