elm creek
Watershed Management Commission

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

March 5, 2025

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, March 12, 2025, at 11:30 a.m.** at Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN. We will meet in the **Aspen Room** on the main level.

The Technical Advisory Committee (TAC) will meet prior to the regular meeting, at 10:30 a.m.

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	Rebecca Carlson	City Clerks
	TAC Members	Karen Galles	Amy Riegel	Kevin Ellis	Brian Vlach
	DNR	BWSR	Met Council	MPCA	
	Reviewing Agencies			Official Newspaper	

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AGENDA
Technical Advisory Committee
March 12, 2025 | 10:30 a.m.

1. Call to Order.
    a. Approve agenda.*
    b. Approve minutes of last meeting.*
2. Fourth Generation Plan.
    a. CAC Schedule.*
    b. Capital Improvement Program.*
        1) Standards and Guidelines.*
        2) Cost Share Policy.*
        3) Cost Share Policy for Non-Structural Practices.*
    c. Resilience Plan -discussion.*
        1) Resiliency/Adaptation – presentation.*
    d. Rules – Housekeeping Revisions – verbal.
3. Joint Chloride Management Plan – Scope of Work.*
4. North Fork Rush Creek 4-Corners Results.*
5. Fish and Rice Lakes Carp Management Strategic Plan – verbal.
6. Other Business.
7. Next TAC meeting – April 9, 2025.
8. Adjournment.

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*in meeting packet
**available at meeting

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Technical Advisory Committee Meeting
Minutes | February 12, 2025

I. A meeting of the **Technical Advisory Committee (TAC)** of the Elm Creek Watershed Management Commission was called to order at 10:30 a.m., Wednesday, January 8, 2025, in the Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN, by Chair Derek Asche.

Present: Lauren Letsche, Corcoran; Josh Accola, Stantec, Dayton; Derek Asche, Maple Grove; Michelle Jennings, WSB, Medina; Ben Scharenbroich, Plymouth; Andrew Simmons, Rogers; Kevin Ellis, Hennepin County Environment and Energy (HCEE); Brian Vlach, Three Rivers Park District (TRPD); Diane Spector and Erik Megow, Stantec; and Judie Anderson, JASS.

Not represented: Champlin.

Also present: Amy Riegel, HCEE, and Jen Dullum Board of Water and Soil Resources, BWSR;

II. Motion by Scharenbroich, second by Simmons to approve the **February 12, 2025, meeting agenda.** *Motion carried unanimously.*

Motion by Scharenbroich, second by Simmons to approve the **minutes of the January 8, 2025, meeting.** *Motion carried unanimously.*

III. PROPOSED 2025 WORK PLAN.*

Staff's first February 5, 2025, memo* repeated the Work Plan that was presented in January along with revisions to the proposed monitoring program provided by Vlach. No other revisions were requested. Motion by Scharenbroich, second by Simmons to recommend approval of the 2025 Work Plan as presented. *Motion carried unanimously.*

IV. FOURTH GENERATION PLAN.

A. Compensatory Storage. Staff provided a presentation* discussing the compensatory storage requirements of the Floodplain Rule. They walked through an example of the difficulties encountered, when providing compensatory storage for a linear project (Chankahda Trail Reconstruction - Phase 2, Project Review 2023-001). Staff also discussed an alternative, 'kerplunk' method, that allows the applicant to show *that the proposed alteration or filling, together with the alteration or filling of all other land on the affected reach of the waterbody to the same degree of encroachment as proposed by the applicant, will not cause high water or aggravate flooding on the other land and will not unduly restrict flood flows*. No changes to the current Rules were proposed.

B. Linear Projects. In their February 4, 2025, memo,* Staff detailed the discussion from the January meeting regarding linear street reconstruction stormwater requirements. Discussion had centered on the requirements for and amount of due diligence expected from cities for future resident road reconstruction projects.

No major changes were proposed to the Commission's existing rule. Staff proposed the following language be added for clarification: *For linear projects, a narrative describing the alternatives that were considered but deemed not to be cost-effective, in conformance with the MS4 NPDES Permit, if requested by the Commission.*

Motion by Scharenbroich, second by Simmons to recommend that this language be added to the Exhibits section of the Stormwater Management Rule. *Motion carried unanimously.*

C. Monitoring Program. Staff's second February 5, 2025, memo* outlines the proposed monitoring program* for the Fourth Generation Plan. It essentially repeats what has been in place in previous watershed plans. The Minnesota Rules require each Metro WMO to establish monitoring programs that are sufficient "*to determine whether the water quality and quantity goals of the organization are being achieved."* The Rules do not specify what the monitoring program should be or what it should encompass but do require that this program specify where monitoring will take place, how frequently, what will be monitored, and how the data will be used.

The Commission contracts with the Three Rivers Park District to perform lake and stream monitoring and to compile and analyze the data.

Commission and Three Rivers staffs reviewed the detailed plan set forth in the Third Generation Plan and proposed some minor modifications for the Fourth Generation Plan. No significant changes to the program are recommended.

1. Annual monitoring of the four "sentinel lakes," (Fish, Rice, Weaver, Diamond).

2. Periodic monitoring of other lakes on a rotating basis.

3. Routine stream flow and water quality monitoring at three stream sites, Elm (EC77), Rush (RT), and Diamond (DC) Creeks.

4. Periodic flow and water quality monitoring at additional upstream sites on Elm; South Fork Rush (RC101); and Rush (RC116) Creeks on a rotating basis.

5. Routine flow and water quality monitoring on Elm Creek in partnership with the USGS.

6. Continuing the partnership with Hennepin County to obtain water quality and macroinvertebrate surveys by volunteers as those programs are available.

7. Periodic fish and macroinvertebrate collections on biotically-impaired streams to assess progress toward meeting those TMDLs, and periodic longitudinal dissolved oxygen surveys on those streams with a dissolved oxygen impairment.

8. Continuing the partnership with Met Council to conduct lake surface water quality monitoring of other lakes by volunteers every two to three years through CAMP.

9. Each year Three Rivers Park District prepares a report on current water quality and trends, and reports water quality monitoring data to the State's EQuIS database.

The proposed monitoring program was approved by consensus.

D. Public Input Plan. Staff's third February 5, 2025, memo* discusses ways to inform the public and obtain input regarding the Fourth Gen Plan. The list includes online options such as the

Commission's and city websites and social media, and local news outlets.

There are options for various surveys, which can be informative. However, most of these types of surveys are self-selecting to people who care more deeply enough one way or another to take the time to respond. The results can be skewed and are not scientific. Other input options listed in the memo include:

1. Enhance the Plan webpage with more details on specific accomplishments and proposals.

2. Add a form on the Plan webpage to receive input.

3. Add a simple survey on the web page to vote on priorities.

4. Provide content for city websites and social media.

5. Send a press release to CCX and Post Newspapers describing the Plan and links to the survey.

6. Send a press release to CCX and Post Newspapers announcing availability of the draft plan, some highlights, and how to comment.

7. Publish a more detailed online survey targeting CACs, lake associations, elected officials, etc.

8. Provide posters and printed information and an option to submit written responses at tabling events.

Staff will repeat their email request to the member cities regarding their choice of a group/time to present the draft plan and take public input.

E. Resilience Plan. A draft Resilience Plan will be considered at the March meeting.

VI. OTHER BUSINESS.

A. Riegel introduced herself in her new role as Senior Water Resources Specialist at Hennepin County Environment and Energy.

B. The **next meeting** of the Technical Advisory Committee is scheduled for 10:30 a.m. on Wednesday, March 12, 2025.

There being no further business, the meeting was adjourned at 11:28 a.m.

Respectfully submitted,

Judie A. Anderson
Recording Secretary

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Stantec

Memo

To: Elm Creek WMO Commissioners
Elm Creek TAC

From: Erik Megow, PE
Diane Spector

Date: March 5, 2025

Subject: Fourth Generation Watershed Management Plan
Citizen Advisory Committee (CAC) Schedule

Recommended TAC/ Commission Action	For information and discussion.

As part of the Elm Creek Fourth Generation Plan public outreach, you elected not to establish a separate Commission Citizens Advisory Committee (CAC), but for each city to designate one of its existing citizen commissions (i.e., parks and rec, environmental, etc.) to serve. The role of the CAC is to provide input and review - a presentation on the general goals and actions in the Fourth Gen Plan at one of their regular meetings and an opportunity to review and provide comment on the overall draft plan either at a subsequent meeting or on their own. We budgeted for Commission staff at one meeting per city, however, some city staff may prefer to present the information using materials we will provide.

The CAC meetings will be a 20-minute presentation with 10-15 minutes for questions. We will provide a background handout to go with the agenda packets and provide staff with the presentation ahead of time for review. In general, the presentation will include:

1) An overview of what the Commission does and what it has accomplished
2) How that work intersects with city planning and operations
3) The priorities for the coming 10 years:
    a. Stay the course on operations
    b. Enhance education and public outreach, especially around chloride
    c. Prepare for coming city Comprehensive Plans
    d. Understand and plan how to add stormwater management resiliency

City	CAC	Date	Alt Date	Time
Dayton	Parks & Recreation Commission	April 1	May 6	6:30 pm
Champlin	Environmental Resources Commission	April 7		7 pm
Medina	Planning Commission	April 8	May 13	7 pm
Plymouth	Environmental Quality Commission	April 9		7 pm
Corcoran	City Council	April 10	May 8	7 pm
Maple Grove	Lake Quality Commission	April 16		6:30 pm
Rogers	Planning Commission (staff will present)	May 5		7 pm

Stantec

Memo

To: Elm Creek WMO Commissioners
Elm Creek TAC

From: Erik Megow, PE
Diane Spector

Date: March 5, 2025

Subject: Fourth Generation Watershed Management Plan
Proposed CIP

Recommended TAC/ Commission Action	For information and discussion.

The Fourth Generation Plan will include a new CIP for the period 2025-2034. We previously requested cities to submit projects to the CIP, including any that were included in the Third Generation Plan to be carried over. Table 1 attached summarizes project submittals by city and subwatershed. It also includes some generic projects for planning purposes that are placeholders that will be fleshed out in future years.

The Commission has some policies that define what can and cannot be submitted for CIP or cost share funding. These include:

- Standards and Guidelines that provide some guidance on how the information on the form will be used by the TAC as it makes it recommendations to the Commission.
- General CIP Cost Share Policy
- Policy on Non-structural Practices (such as street sweepers and equipment to reduce the use of chloride)

In general:

- Smaller projects (<$200,000) should be submitted to the City Cost Share program rather the CIP.
- The $250,000 Commission share cap was previously lifted, and the maximum is now 25%. For larger projects the Commission may elect to certify a levy over multiple years.
- You have a guideline of a maximum levy of $750,000 in any one year. That guideline may be exceeded based on the particular mix of projects proposed in a year.
- Your Plan allows the Commission to reschedule projects from year to year with no need for a plan amendment, or to make minor adjustments in project costs. Projects that change significantly, or new projects must be revised or added via a Minor Plan Amendment.

Table 1. Projects submitted to Fourth Gen Plan CIP.

Project	Subwatershed	City	Total	EC Share	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Diamond Lake Internal Load	Diamond Lake	Dayton	660,000	660,000	660,000									
Regen Air Sweeper	Various	Corcoran	400,000	100,000	100,000									
Regen Air Sweeper	Various	Maple Gr	400,000	100,000		100,000								
Rush Cr, Rush Hollow to Fernbrook	Rush Creek	Maple Gr	800,000	200,000		200,000								
S Fork Rush Creek S of 101st	S Fork Rush	Maple Gr	3,000,000	750,000				750,000						
Brockton Ln WQ Improvements	Elm Creek	Plymouth	200,000	50,000							50,000			
Upper Watershed Volume Mgmt	Various	Varies	400,000	400,000			100,000		400,000		400,000		400,000	
Lake Internal Load Project	Various	Varies	300,000	300,000			300,000			300,000				
Priority Stream Project	Various	Varies	500,000	125,000					125,000			125,000		125,000
City Cost Share	Various	Varies	200,000	100,000		100,000		100,000		100,000		100,000		100,000
Partnership Cost Share	Various	Varies	50,000	50,000		50,000		50,000		50,000		50,000		50,000
			6,910,000	2,835,000	760,000	450,000	400,000	900,000	525,000	450,000	450,000	275,000	400,000	275,000

No projects submitted to date by Rogers, Champlin or Medina

Elm Creek Watershed Management Commission

Capital Improvement Program Standards and Guidelines

A capital improvement program is a blueprint for planning a watershed management organization's (WMO's) capital expenditures that extends five years beyond the organization's normal budget. Generally, projects within the program are tangible assets or projects that cost at least $10,000 and have a useful life of at least five years. Usually they are 'bricks and mortar-type projects," with costs that are nonrecurring. But some management-type projects, such as aquatic vegetation management plans in support of a TMDL implementation plan, may be considered by the WMO.

In order to reasonably and responsibly identify and prioritize capital improvements, the Elm Creek Watershed Management Commission (Commission) has established the following standards and guidelines for its capital improvement program.

1. The Commission will accept capital improvement proposals from member communities at any time. (See Exhibit A - project submittal form.)

2. At least annually, the Commission's Technical Advisory Committee (TAC) will review and score proposals and make recommendations to the full Commission for inclusion into the Commission's Watershed Management Plan's Capital Improvement Program.

3. The TAC will consider the projects based on the following criteria:

    a. Does the requested project contribute to the achievement of existing Commission goals, policies and plans?
        1) Protect, preserve, and manage surface water and groundwater resources.
        2) Minimize property damages and economic losses through water resource management.
        3) Manage public expenditures needed to study and control and/or correct flooding and water quality problems.
        4) Educate and inform the public on pertinent water resource management issues and increase public participation in water management activities.
        5) Identify and plan for means to effectively protect and improve surface and groundwater quality.
        6) Establish more uniform local policies and official controls for surface and groundwater management.
        7) Reduce erosion of soil into surface water systems.
        8) Promote groundwater recharge.
        9) Protect and enhance fish and wildlife habitat and water recreational facilities.
        10) Reduce and control/prevent stream degradation through land protection measures, runoff restrictions, and pollutant restrictions.

    b. What are the general benefits of the project?

    c. What is the total cost of the project?
        1) To what extent are other funding sources leveraged?
        2) What is the effect on the Commission's Capital budget?

    d. Are there legal requirements that must be met?

    e. Does the requested project support the Commission's *2006 Channel Study* and/or a state-approved Total Maximum Daily Load (TMDL) Implementation Plan?

    f. Is the project acceptable to the public?

4. The TAC will set forth a process for prioritizing projects. This process includes ranking the projects according to the following scoring scheme:

a. Does the proposed project result from a regulatory mandate? (0 or 10 points)

b. Does the project meet multiple TMDL mandates? (0, 10 for one, 20 for two or more)

c. Does the project have an education component? (0, 10, or 20 points)

d. Do all the cities responsible for paying the cost of the project agree to go forward with the project? (0 or 10)

e. Is the project in the city's or cities' CIP(s)? (0 or 20)

f. Does the project have multiple benefits? (up to 34 total)
   1) Improve water quality. (0 – 10)
   2) Prevent or correct erosion. (0 – 10)
   3) Prevent flooding. (0-5)
   4) Promote groundwater recharge. (0-3)
   5) Protect and enhance fish and wildlife habitat. (0-3)
   6) Improve or create water recreation facilities. (0-3)

Total possible points = 114.

Elm Creek Watershed Management Commission
Cost Share Policy

To facilitate implementation of improvement projects within the watershed, the Elm Creek Watershed Management Commission's Joint Powers Agreement (JPA) and its Watershed Management Plan provide for a Capital Improvement Program (CIP). The JPA also describes how the costs of capital projects shall be allocated.

The Management Plan proposes to share the cost of high-priority watershed capital improvements and demonstration projects through the CIP. High-priority watershed capital improvements are those activities that go above and beyond general city management activities and are intended to provide a significant improvement to the water resources in the watershed. To be considered for inclusion in the CIP, projects must be identified in a Commission-adopted management plan, approved TMDL, or member local stormwater plan or CIP.

In order to identify projects for inclusion on its Capital Improvement Program, the Elm Creek Watershed Management Commission will accept city proposals for cost-share projects until March 15 of every year. Following that date, the Commission's Technical Advisory Committee will review and score the submittals and make a recommendation regarding additions and revisions to the Commission's existing CIP at their regular May meeting.

The Commission has developed a set of criteria by which proposed projects will be scored, with those projects scoring a certain minimum number of points on the submittal form screening questions advancing to a prioritization stage. (Refer to the Commission's Capital Improvement Program Standards and Guidelines.)

Prior to consideration for funding, a feasibility study or engineering report must be written for the proposed project. The city acting as the lead agency for a proposed project will be responsible for the development of and the costs associated with the feasibility study/engineering report.

The Commission has elected to fund capital projects through an ad valorem tax levy. Under the authority provided by MN Stat 103B.251, Subd. 5, the Commission has the authority to certify for payment by the county all or part of the cost of an approved capital improvement. The Commission will pay up to 25 percent of the cost of qualifying projects. This amount will be shared by all taxpayers in the watershed, with the balance of the project cost being shared by the local government(s) participating in or benefiting from the improvement.

1) The Commission's share will be funded through the ad valorem tax levy – spread across all taxpayers within the watershed.

2) The Commission will use a maximum annual levy of $750,000 as a working guideline.

3) The cities' share will be a minimum of 75% of the cost of the project. The basis of this apportionment will likely be unique to each project. The 75% share will be apportioned to the cities in the following manner or in some other manner acceptable to them. For example,

    a) The area directly benefiting from the project will be apportioned 25% of the cost of the project. This will be apportioned to cities based on the proportion of lake or stream frontage.
    b) 50% of the cost of the project will be apportioned based on contributing/benefiting area.

4) The cities will each decide the funding mechanism that is best suited to them for payment of their share, for example through special assessments, storm drainage utility, general tax levy, or watershed management taxing district.

5) Funding from grant sources may also be used to help pay the costs of the capital projects.

The Elm Creek Watershed Management Commission may consider Commission- or City-generated requests to undertake subwatershed assessments (SWAs). Primarily, SWAs will be completed in rural areas suspected of being high-nutrient loading and will be specific enough to identify potential load-reducing projects. SWAs will be:

1) Supported by the City in which the SWA is located.

2) Undertaken at the discretion of the Commission.

3) Funded by a $15,000 maximum cap (grant or Commission funding) and a 20% match by the City requesting the SWA.

Revised March 9, 2022
Revised December 8, 2021
Revised October 12, 2016
Adopted April 11, 2012

ELM CREEK WATERSHED MANAGEMENT COMMISSION
POLICY ON COST SHARE FOR NON-STRUCTURAL PRACTICES

I. PURPOSE

The Elm Creek Watershed Management Commission (Commission) desires to:

1) Minimize public capital expenditures needed to correct water quality problems; and
2) Identify and plan for means to effectively protect and improve surface water quality; and
3) Protect and enhance fish and wildlife habitat and water recreational facilities; and
4) Secure other benefits associated with property management of surface and ground water.

With the advent of Total Maximum Daily Loads (TMDLs) as stipulated in the Clean Water Act and Municipal Separate Storm Sewer System (MS4) regulation by the Minnesota Pollution Control Agency, communities within the Elm Creek Watershed began to implement capital improvement projects to improve the water quality in lakes. The Commission has historically partnered with member communities, Hennepin County, the Three Rivers Park District, and others to provide funding for projects and to meet TMDL requirements or remove lakes from the State of Minnesota Impaired Waters list.

New technology or other scientific advances may make it possible for the most cost-effective practices to be enhancements of existing practices above and beyond current Commission rules or common practice rather than construction of new facilities. The Commission, in recognizing this fact, and with the desire to spend taxpayer dollars wisely and cost-effectively, acknowledges that consideration for non-structural practices for watershed funding is a best practice.

This policy on funding non-structural practices shall serve as the basis for consideration by the Commission of funding non-structural practices and partnership with member communities.

II. MINIMUM QUALIFYING CRITERIA FOR FUNDING NON-STRUCTURAL PRACTICES

1) The practice must demonstrate a benefit to a waterbody identified as impaired and with an approved TMDL.
2) Documentation must be provided quantifying the benefit to the waterbody(ies).

III. FUNDING FOR NON-STRUCTURAL PRACTICES

1) Funding shall be up to 25% the cost of the project.
2) Funding shall be comply with Commission Capital Improvement Program policies and standards.

EFFECTIVE DATE: _____

POLICY HISTORY: _____(Initial Approval)
_____(Revision 1)
_____(Revision 2)

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Stantec

Memo

To: Elm Creek WMO Commissioners
Elm Creek TAC

From: Erik Megow, PE
Diane Spector

Date: March 5, 2025

Subject: Fourth Generation Watershed Management Plan
Resiliency Discussion

Recommended TAC/ Commission Action	Discuss and provide direction.

A small subgroup of TAC members met virtually on February 27, 2025 to review and discuss potential resiliency planning strategies for the Fourth Generation Plan. Heather Nelson and Steve Touney (Champlin), Kent Torve and Lauren Letsche (Corcoran), Derek Asche (Maple Grove) and Ben Scharenbroich (Plymouth) represented a cross section of developed and developing, upper watershed and lower watershed cities.

The Commission had previously preliminarily established its resiliency goals as:

Goal X: Assist member cities in understanding and implementing options for enhancing watershed resiliency for future development.

Strategies

1. Model and periodically re-assess the potential impacts of land use/cover change and a non-static climate on water resources with the best available predictive data.
2. Quantify and qualitatively assess risk and evaluate and implement responses for mitigation.
3. Collaborate with other agencies and organizations on joint efforts to manage impacts both locally and regionally.
4. Develop strategies to appropriately manage future impacts.

The group reviewed a draft outline of goals and strategies (attached) and discussed the following questions:

1. What do the Cities need from the Commission as you plan and complete your Comprehensive plans, as they pertain to Climate Resiliency and Adaptation?
    a. Have the Cities begun discussing any of these items as you plan for your Comp Plans?
2. How can we use that information to help the actions we have planned to start in 2028 through 2035?
3. What comments/changes would you recommend for the Actions that we have outlined?

4. What should we be doing between 2025 and 2028 when we start on the Climate Vulnerability assessment modeling using the HUC-8 model, Atlas 15, and 2050 planned land use.

Discussion

The group noted that the Met Council has released general draft Policy Plans that suggests cities will be required to do resiliency planning as part of their Comp Plans, however, there has been no specific guidance as to what that would entail. In addition, when the Commission started the 4th gen process, the Met Council in its letter of information and expectations for the Plan stated that it should include "Climate and resilience planning" with no specificity as to what that meant. The group agreed that without such guidance, the Fourth Gen Plan should be high level and general, with more specificity added later.

Because "Climate and resilience planning" is very broad and encompasses a wide range of potential issues, the group agreed it would be best to narrowly define the Commission's role as focusing on stormwater runoff rates and volumes and how those might be impacted by non-static climate trends and changes in land use and land cover.

The Climate Vulnerability Assessment modeling proposed to start in 2028 would use the refined HUC-8 model with the upcoming Atlas 15 precipitation data and proposed 2050 land use information developed by cities in their next Comprehensive Plans to identify future flood-prone areas and areas where more storage and/or abstraction would be beneficial. The group discussed a strategy of Commission cost participation in projects that add upstream runoff storage, and adding some generic resilience/watershed storage and corridor restoration projects to the CIP and performing subwatershed assessments (SWAs) specifically looking at practices to reduce runoff volumes.

There was also a discussion of how the Commissions could assist the cities as they prepare for their Comp Plans, and how sometimes there is a disconnect between land use planning and parks and natural resources planning and the more "technical" planning such as the stormwater plan. All agreed that it would be beneficial to introduce this topic to the local CACs as staff makes presentations in April as part of the Fourth Generation Plan. There may be other future options as more guidance is available from the Met Council, and staff and the TAC will look for ways to highlight these issues and keep them more front and center with planning staff.

<u>Actions: Fourth Gen Plan and 2025-2035</u>

Phase 1: Resiliency Framework Planning: 2025-2028

- Stay abreast of resiliency planning issues and requirements for watershed and comprehensive plans as they are completed and rolled out as part of the Imagine 2050 Met Council planning process
- Continue to discuss with the TAC how the Commission can assist the cities in developing their Local Water Management Plans and Comprehensive Plans. Reconvene the subgroup if desired to continue this discussion as the planning process ramps up.

- Identify key stream locations in the upper watershed and obtain continuous flow monitoring data to better calibrate the HUC-8 model in advance of undertaking modeling for the climate vulnerability assessment expected to start around 2028.
- A required component of the Fourth Gen Plan is direction from the Commission as to what cities need to include in their Local Water Management Plans, such as identification of problem and flood-prone locations and key watershed storage areas. Note in the Plan that climate resilience guidance from the Met Council may require further and more specific analysis based on land-use decisions made in the Comp Plan.
- Add a resiliency analysis to projects submitted to the CIP to track and report progress on enhancing resilience, or to look for opportunities to enhance the CIP projects to include more resilient components.
- Add generic storage and infiltration projects to the CIP and volume/rate reduction SWAs to the implementation plan.

Phase 2: Climate Vulnerability and Assessment: 2028-2030

Exposure & Sensitivity: Identify the benefits and services/uses of selected key natural resources: Lakes, streams, wetlands, groundwater, natural aquifers and Drinking Water Supply Management Areas (DWSMAs).

Quantify Impacts & Risk: Identify how the changing landscape and climate affect the natural resources and critical infrastructure (streams, roads, homes, buildings).

Flood modeling – model hydrologic impacts:

- Incorporate critical or high-risk areas from City Comprehensive plans that are identified as likely to develop by 2050.
- Incorporate Atlas 15 and future 2050-2080 Precipitation Scenarios (GCMs, U of M, CliMAT)
    - The NOAA will later this decade establish new Atlas 15 standards that will incorporate estimates of future precipitation probabilities. These data may be available to assist in this assessment.
- Quantify future volume increases with current yearly runoff volumes from:
    - project reviews,
    - USGS data (Elm Creek), and
    - additional continuous monitoring in the upper watershed.
- Identify new and existing infrastructure (streams, bridges, roads, and buildings) impacted by future flooding scenarios.
- Identify potential projects to add resiliency, such as adding flood storage in key locations and enhancing infiltration where soils are most conducive.

Phase 3: Adaptation Strategy Development and Identification (2030-2032)

Adapting watersheds to climate change involves a variety of strategies to manage water resources sustainably and protect ecosystems. *Possible strategies that will be evaluated and prioritized*:

- **Monitoring and Adaptive Management**: Continuous monitoring of watershed conditions and adaptive management practices can help respond to changing climate conditions effectively
- **Restoring Wetlands**: Wetlands act as natural water filters and buffers against floods. Restoring and protecting these areas can enhance their ability to absorb and store water

Assisting cities with understanding the impacts to water and natural resources that might result from land use planning strategies, such as:

- **Implementing Sustainable Land Management Practices**: Practices such as contour farming, terracing, and maintaining ground cover can reduce runoff and improve water infiltration.
- **Enhancing Vegetation Cover**: Planting trees and maintaining vegetation in riparian zones can help stabilize soil, reduce erosion, and improve water quality.
- **Upgrading Infrastructure**: Modernizing stormwater systems and other infrastructure to handle increased variability in precipitation can reduce the risk of flooding and water contamination.
- **Improving Water Storage**: Building or upgrading reservoirs and other water storage infrastructure can help manage water supply during periods of drought and heavy rainfall.

Phase 4: Adaption Strategy Implementation (2030-2035)

- Projects: Identify Climate Resilient Projects with Cities, Hennepin County, and MnDOT, and TRPD
- Update Rules and Policies: We expect the implementation strategies to include updates to policy and technical guidance to guide development or redevelopment in those areas, including the potential for revisions to the Commissions' development Rules and Standards.
    - Keep up with latest data (Atlas 15), and best practices (MSE3, hydrologic inputs, better BMP data/designs
- Communicate strategies and benefits to Community groups, Business Owners, Farmers, and other stakeholders

Fourth Generation Plan: Resiliency/Adaptation Discussion – Part II

Climate Resiliency for Elm Creek

Watershed ***climate resiliency*** - the ability of a watershed to maintain its essential functions and services like water supply, ecosystem health, and flood management despite the impacts of climate change.

Elm Creek is dealing with a dueling climate resiliency issue of:

1. Ongoing development and land use changes, increase in impervious surfaces, on clayey (C/D soils)
2. Changing precipitation and other climate patterns, including larger swings of drought/flood

This leads to increased volumes and flows within our streams and larger networks. We are controlling 24-hour rates, and water quality loads at the project boundaries, but the volume increases are impacting our streams and storages.

Why is this important for our member cities?

- Planning for resilience and adaptation is not only desirable, but will also be required:
  - The member cities will be required integrate climate action and resilience into their next Comprehensive Plans
  - The Met Council's Draft planning guidance Imagine 2050 includes Policies aimed at climate resiliency:
    - **Policy 4** – "Climate Change Mitigation, Adaptation, and Resilience Policy."
    - **Policy 7** - "Implement land use and development practices that reduce greenhouse gas emissions, embed climate adaptation, and create resilient communities."

Resiliency & Adaptation

How do we plan to adapt our watershed and/or build in resiliency?

1. Climate Vulnerability and Assessment
   - GIS/H&H Modeling analysis to identify specific climate risks and vulnerabilities within the watershed
2. Develop/Identify Adaptation Projects and Strategies
   - Build on our existing successes and identify new opportunities
3. Collaborate/Engage Stakeholders
   - How do developing and downstream communities all benefit?
   - How would developers, community groups, and other stakeholders benefit?
4. Establish Performance Metrics
   - This is a BWSR requirement
5. Public Engagement and Education
6. Funding and Resources
   - Identify new funding sources as current funding sources continue to build

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Resiliency & Adaptation

How do we plan to adapt our watershed and/or build in resiliency?

1. Climate Vulnerability and Assessment (**2028-2030**)
   - **Exposure & Sensitivity**: Identify the benefits and services/uses of selected key natural resources: Lakes, streams, wetlands, groundwater, natural aquifers and DWSMAs
   - **Quantify Impacts & Risk**: Identify how the changing landscape and climate affect the natural resources and critical infrastructure (streams, roads, homes, buildings) Flood modeling – model hydrologic impacts:
     - Incorporate critical or high-risk areas identified from City Comprehensive plans, as likely to develop by 2050
     - Incorporate Atlas 15 and future 2050-2080 Precipitation Scenarios (GCMs, U of M, CliMAT)
     - Quantify future volume increases with current yearly runoff volumes (from project reviews and USGS data)
     - Identify new bridges, roads, and homes/building impacted by future flooding

How do we plan to adapt our watershed and/or build in resiliency?

1. Develop/Identify Adaptation Strategies (2030-2032)

Adapting watersheds to climate change involves a variety of strategies to manage water resources sustainably and protect ecosystems. *Possible strategies that will be evaluated and prioritize*:

- **Enhancing Vegetation Cover**: Planting trees and maintaining vegetation in riparian zones can help stabilize soil, reduce erosion, and improve water quality
- **Restoring Wetlands**: Wetlands act as natural water filters and buffers against floods. Restoring and protecting these areas can enhance their ability to absorb and store water
- **Improving Water Storage**: Building or upgrading reservoirs and other water storage infrastructure can help manage water supply during periods of drought and heavy rainfall
- **Implementing Sustainable Land Management Practices**: Practices such as contour farming, terracing, and maintaining ground cover can reduce runoff and improve water infiltration
- **Upgrading Infrastructure**: Modernizing stormwater systems and other infrastructure to handle increased variability in precipitation can reduce the risk of flooding and water contamination
- **Monitoring and Adaptive Management**: Continuous monitoring of watershed conditions and adaptive management practices can help respond to changing climate conditions effectively

We already have good examples of projects and implementation strategies!

- Holistic water management within the watershed:
  - Managing water resources from the headwaters to groundwater to outflow
- Stream restoration projects:
  - *South Fork Rush Creek Restoration*
- Regional Ponding
  - *Various areas in Maple Grove*
- Wetland Restoration and Banking
  - *Bottema wetland restoration in Corcoran*
- Preservation/Conservation Areas and Greenways
  - *Northwest Greenway in Plymouth*
- Assist agricultural producers to increase their organic carbon content and reduce erosion
  - *Various examples through Hennepin County's Outreach*

How do we plan to adapt our watershed and/or build in resiliency?

- Collaborate/Engage Stakeholders to begin Implementing Strategies (**2030-2035**)
  - Projects: Identify Climate Resilient Projects with Cities, Hennepin County, and MnDOT, and TRPD
  - Policies: Engage developers on how to better incentivize water re-use, restoration/conservation, excess buffers, and infiltration practices
  - Update Rules: Keep up with latest data (Atlas 15), and best practices (MSE3, hydrologic inputs, better BMP data/designs
  - Communicate strategies and benefits to Community groups, Business Owners, Farmers, and other stakeholders

How do we plan to adapt our watershed and/or build in resiliency?

1. Climate Vulnerability and Risk Assessment (**2028-2030**)
   - **Exposure:** Identify the climate change effects a community will experience
   - **Sensitivity:** Identify the key community structures, functions, and populations that are potentially susceptible to each climate change exposure
   - **Potential Impacts:** Analyze how the climate change exposure will affect the watershed and community's structures, functions, and populations.
   - **Adaptive Capacity:** Evaluate the watershed's current ability to address the projected impacts
   - **Risk and Onset:** Adjust the impact assessment to account for uncertainty, timing, and adaptive capacity.

How do we plan to adapt our watershed and/or build in resiliency?

1. Develop/Identify Adaptation Projects and Strategies (**2030-2032**)
   - **Prioritize Adaptive Needs**: based on the vulnerability assessment, prioritize the adaptive needs.
   - **Identify Strategies**: Identify strategies to address the highest priority adaptation needs.
   - **Evaluate and Prioritize**: Prioritize strategies based on the projected onset of the impact, projected cost, co-benefits, and other feasibility factors.

Stantec

Memo

To: Elm Creek WMO Commissioners
Elm Creek TAC

From: Erik Megow, PE
Diane Spector

Date: March 5, 2025

Subject: Joint Chloride Management Plan Scope of Work

Recommended TAC/ Commission Action	Approve contributing one-third the required grant match toward this project, estimated at $1,582 per watershed, from the Special Studies Assigned Funds Account.

As previously discussed, Elm Creek partnered with the Shingle Creek and West Mississippi WMOs to submit an Accelerated Implementation Grant (AIG) proposal to the Board of Water and Soil Resources (BWSR). The grant was approved, and Shingle Creek as the fiscal agent for the grant has now executed a contract with BWSR and received approval of a work plan. At its March 13, 2025, meeting the Shingle Creek Commission will consider approving the attached Work Order that details the work that will occur under this contract.

The grant of $47,455 requires a $4,745.50 match, which will be split among Shingle Creek, West Mississippi, and Elm Creek, or $1,582 per watershed. Staff recommends you approve contributing that amount, to be funded from your Assigned Funds Account for Special Studies. That account has an estimated balance of $93,000.

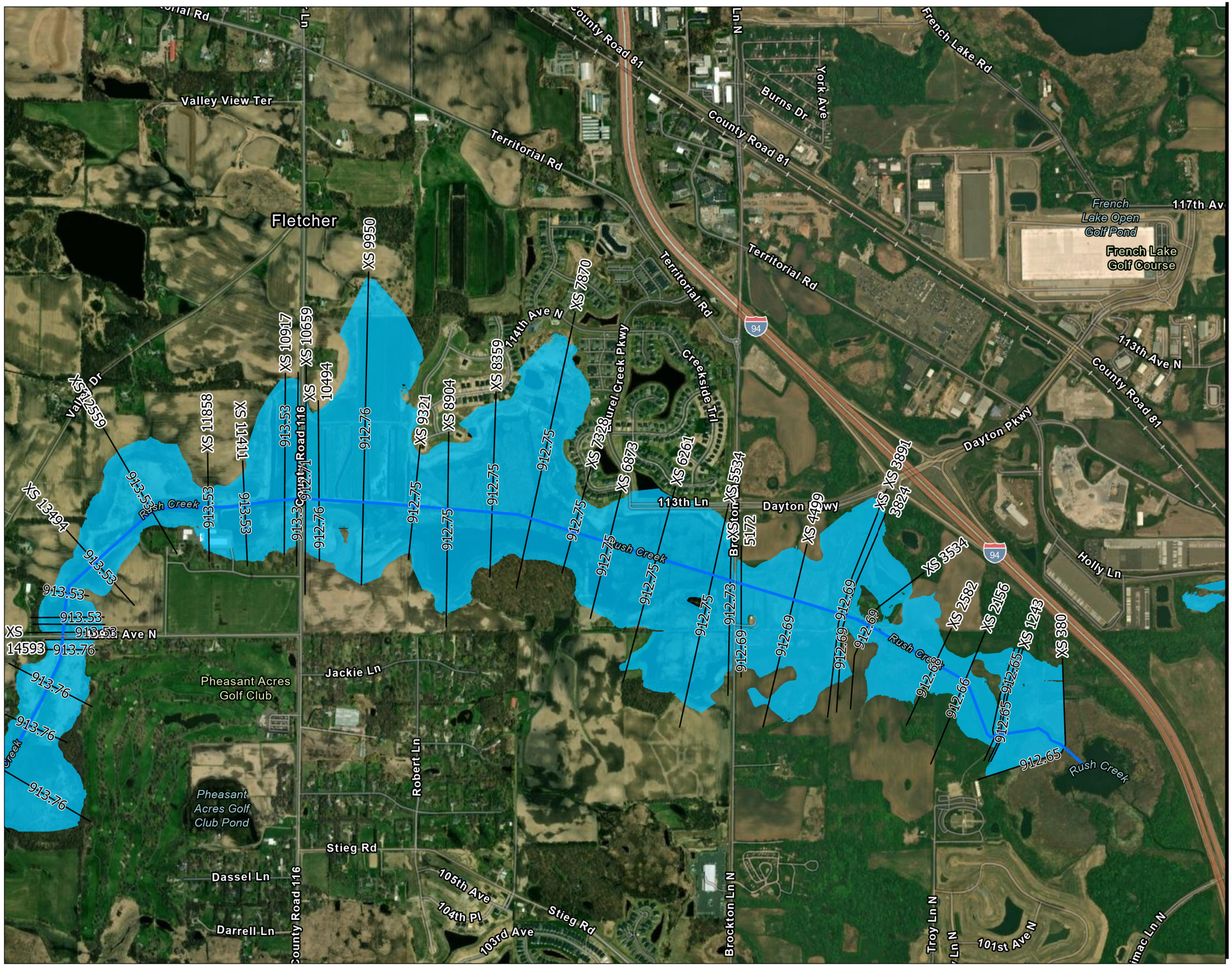


Figure No.
1

DRAFT

Title
100-year Inundation Map

Client/Project
Elm Creek Watershed Management Commission

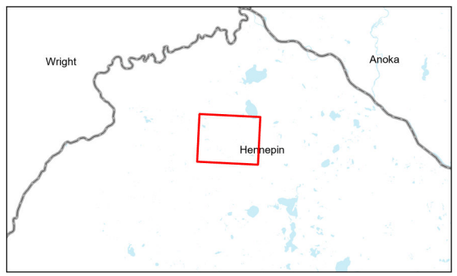
227706626

Project Location

N

0 1,000 Feet
(At original document size of 11x17)
1:14,739

Legend
- North Fork Rush Creek
- Cross Section
- 100-year Inundation Boundary



Notes
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
2. Data Sources: Stantec, USGS, NADS
3. Background: 2021 NAIP

Stantec