



Carver County Water Management Organization Citizen Advisory Committee

1. **Elect chair and vice chair**
2. **Review committee operating rules**
3. **Approval of the October 29th, 2019 minutes and January 28th, 2020 agenda**
4. **Notes from the field**
5. **Business items**
 - a. 2020 schedule
 - b. AIS 2020 workplan
 - c. Crow River Organization of Water Funds
6. **Information items & project updates**
 - a. Water Plan update
 - b. Comprehensive Plan update
 - c. West Chaska Creek fact sheet
7. **Adjournment**

Jan. 28th, 2020

Carver County Government
Center
600 East 4th St. Chaska
County Board Room
6:00 p.m. to 8:00 p.m.

Committee Mission

Work with CCWMO staff to proactively make recommendations to the County Board on matters relating to water management including;

- projects and project prioritization
- Funding and water levy
- Water Plan, Groundwater Plan & Solid Waste Plan
- Water quality and TMDL program and projects
- Education program and projects
- Feasibility studies

MEETING OF THE
CARVER COUNTY WATER MANAGEMENT ORGANIZATION ADVISORY COMMITTEE
MEETING MINUTES
Tuesday Oct. 29th, 2019

COMMITTEE MEMBERS PRESENT

<i>Carroll Aasen</i>	<i>Citizen, East & West Chaska Creek</i>
<i>Jim Boettcher</i>	<i>Citizen representing Commissioner District 1</i>
<i>Mike Lynch</i>	<i>Citizen representing Commissioner District 4</i>
<i>Mary Strother</i>	<i>Citizen, Bevens Creek</i>
<i>Marcus Zbinden</i>	<i>SWCD Board Member Alternate</i>

COMMITTEE MEMBERS ABSENT

<i>Vacant</i>	<i>Citizen representing Commissioner District 3</i>
<i>Chad Robbins</i>	<i>Citizen, Carver Creek</i>
<i>Stan Wendland</i>	<i>SWCD Board Representative</i>
<i>Thomas Welch</i>	<i>Citizen representing Commissioner District 2</i>
<i>Doug Kammerer</i>	<i>Citizen, Crow River/Pioneer Creek</i>
<i>Lori Cox</i>	<i>Citizen representing Commissioner District 5</i>

STAFF PRESENT

<i>Paul Moline</i>	<i>Carver County Planning & Water Mgmt.</i>
<i>Tim Sundby</i>	<i>Carver County Planning & Water Mgmt.</i>
<i>Madeline Seveland</i>	<i>Carver County Planning & Water Mgmt.</i>
<i>Andy Edgcumbe</i>	<i>Carver County Planning & Water Mgmt.</i>
<i>Jess Norby</i>	<i>Carver County Planning & Water Mgmt.</i>

Meeting Minutes

The meeting was called to order at 6:08 by Chair Aasen.

Zbinden moved to approve the October 29th, 2019 meeting agenda. Strother seconded. Motion passed unanimously.

Lynch moved to approve the Sept. 24th, 2019 meeting minutes. Strother seconded. Motion passed. Zbinden abstained as he was not present at the September meeting.

2) Notes from the field

Norby presented a background on chloride as a water pollutant in the metro area. Chloride does not flush out of but instead accumulates in the environment. It is toxic to wildlife in excess, causes corrosion to infrastructure, and prevents lake turnover creating anoxic conditions on lake bottoms.

In Minnesota, 50 water bodies exceed the state recommended standards for chloride. Most are in the metro area.

Major sources of chloride in waters include road salt applied for winter safety, water softeners, and fertilizers. Dust suppressants for gravel roads also contribute as sources in rural areas.

Norby explained how chlorides build up on the roadside during winter months and the pathways taken to get to surface and groundwaters. In the metro area, 78% of the salt applied here, stays here. Some chloride is working its way down into shallow aquifers. 30% of shallow aquifers are showing chloride when sampled.

CCWMO staff started sampling for chloride this year. Staff want to understand the levels of chloride in our water bodies and be able to track any changes. All our waters currently fall below the standard. The Grace Chain of Lakes in Chaska is showing high concentrations, particularly in Big Woods Lake.

View presentation

<https://carver.maps.arcgis.com/apps/Cascade/index.html?appid=4939a48b84914985af79181bb3523dbf>

3) Business items

- **Lake Level ordinance**

Moline described how in 2014 a temporary no-wake ordinance was established on Lake Bavaria, Lake Reitz, and Lake Waconia due to high water levels. The same thing happened this past summer. Both were temporary ordinances that expired after 30 days or when lake levels dropped; levels were monitored by WMO staff.

The County Board expressed interest in creating a permanent ordinance that kicks in after a lake level reached a designated point. There is a good chance high water levels will continue on lakes with the increased precipitation patterns we have been having.

Moline showed the history of lake levels for Bavaria, Reitz and Waconia for the past 70 years. Lake Waconia, for example, doesn't go over the ordinary high-water level often, but the trend has been increasing. Lake Bavaria and Lake Reitz had lake levels spike in 2014 and again in 2019.

For the permanent ordinance staff are considering Lakes Waconia, Bavaria, Reitz and Pierson. Pierson Lake doesn't go over the ordinary high water level as set by the Department of Natural Resources. Thus, that may not be the best guideline for the lake. Other lake level (lake elevation) numbers to consider are those set by FEMA. Staff are evaluating which lake level guidelines are best for each lake to use with the ordinance.

The permanent ordinance would take effect when the lake level is really high and waves would cause shoreline erosion or property damage. Erosion affects the quality of the lake and shoreline stabilization. Staff will consider carefully which lake level elevation they will use to trigger the ordinance.

Staff will be proposing a permanent lake level ordinance similar to the temporary ones set in 2014 and 2019. Lake elevations would be monitored by staff when they start to get high. The authority would be

delegated to the County Administrator or their designee and enforced by the County Sheriffs department. No lakes in Chanhassen or Victoria would be included because they are governed by City of Chanhassen and City of Victoria ordinances. Other lakes in the county have lower use and there have been no past requests to have an ordinance.

Zbinden inquired about the lakes not being considered for the ordinance and if they had ever been above the high-water level. Moline responded that staff have not received any complaints about shoreline erosion and that staff would check into that during the ordinance development process.

Moline laid out the ordinance development process. The process is governed by the Department of Natural Resources. They review and approve the ordinance. Staff plan to have a draft ordinance written by the end of the year, hold a public hearing during the winter, and have the Department of Natural Resources review and approve the ordinance in late winter or spring. The ordinance would go into effect in spring of 2020.

The ordinance would state “no-wake,” but not a speed restriction. The state has a whole variety of ordinance examples. Staff are proposing to keep it simple; the lake gets above target elevation, “no wake” goes into effect until it goes back down and stays down for a certain period of time.

Zbinden inquired how lakeshore owners and the public would be notified of the public hearing. Moline responded staff would do direct mailings to the people that live on the lakes affected by the ordinance. Zbinden recommended direct mailings to all lakeshore owners about the public hearing and process.

Aasen shared that he discussed this with a lakeshore resident and that she wanted to enforce how much water was in the ballast on a wake board boat.

Boettcher suggested removing the “distance from shore” portion of the ordinance on Lake Waconia because he imagines it is likely hard to enforce, and from a boater’s perspective hard to gauge. Moline said the Sheriff will not likely pull someone over unless it is really close to shore. The ordinance is to help guide people to be in the middle of the lake when creating wakes.

Moline explained that there will be another chance to provide input after the ordinance is drafted and at the public hearing.

- **Irrigation Efficiency Program Review**

Seveland presented a program summary on the irrigation efficiency program that was piloted this past spring and summer in a small area of Chaska. Seveland reviewed the research and planning that went into creating the pilot program using community based social marketing methods.

The program was piloted in zone 4 of the water utility infrastructure in the city of Chaska. This zone was targeted because all of it is located on one booster station making it easier to monitor changes in water use.

The program consisted of a cost incentive for residents to install Rachio smart controllers on their irrigation systems. Residents could purchase controllers from CCWMO at a reduced cost. In exchange,

residents committed to having the controller installed within two weeks of purchase and in sending a photo to staff of the installation. These program components reduce the barrier of cost and lack of awareness of the technology, and increased the likelihood of residents installing the controller once picked up.

Residents in zone 4 were notified in the first week of May by direct mail about the program and given until May 31st, 2019, after which the program was opened to residents outside zone 4.

Program results

- All 75 controllers ordered were purchased by residents, only 3 from residents outside zone 4.
- The majority were picked up in May and June and installed in May and June.
- Surveys were sent to participants mid October. 61 participants responded. Survey results.
 - 90% of participants installed the controller themselves.
 - 90% of participants did not have complications when installing.
 - 5 participants had more than 8 zones in their system.
 - 100% of participants said they would recommend the program to others
 - Over 90% were “satisfied” or “very satisfied” with different aspects of the controller such as controller function, ease of installation, cost savings, water savings.
 - Participants liked that the controller was user friendly, easy to use and accessible from their smart phone.
 - A few participants did not like the number of zones only going up to 8, and that a third party, such as an irrigation contractor, couldn’t access the system unless it was on the owner’s phone.
 - 65% of participants have noticed water savings

City of Chaska provide water utility information to look at water conservation in zone 4. Staff do not yet have a large enough data set to make definitive conclusions about the overall water savings, however, the data we received from the first season is very promising. Staff will continue to monitor.

Seveland showed data of the past five years, including 2019, total water usage for zone 4. Water usage fluctuates greatly but when looking at the 5-year average, 2019 totals are below the 5-year average.

Seveland then showed a comparison of 2018 and 2019 residential water use for two households. At each residence you could see the Rachio controller conserved water both in how frequently it ran, and how much water it used when it did run.

Overall, participants responded very highly to the program with overwhelmingly positive reviews and a call for wider distribution. The water conservation impact will continue to be tracked but initial results look good. There is benefit in continuing the program. To do so, we partnered with the City of Chaska to apply for a water conservation grant with the Metropolitan Council. If received, the grant would provide funds to purchase 150 controllers for a 2020 program and 150 controllers for a 2021

program. The 2020 and 2021 programs would be rolled out to all residents within the City of Chaska meeting eligibility requirements.

Lynch inquired if the city would be willing to take it over. Seveland responded that the eventual goal is that the city would take it over once it's been proven to save money and have good participant experience.

Zbinden inquired about legislation and rules with irrigation systems. Seveland responded that the only state mandate currently is that all systems must have a rain sensor. She explained that based on her discussion and research the rain sensors worked about 50% of the time. Zbinden suggested that the current legislation be revisited and upgraded with requirements more like a smart controller.

Zbinden inquired if staff would consider increasing the cost per controller. Seveland said there were revisions needed before rolling out the 2020 and 2021 programs. Cost per controller would be one factor reviewed.

4) Information items

- The Water Management Plan was approved by the Board and sent to the Board of Water and Soil Resources. They are expected to approve it in December unless they see issues. It will come back to the County in January for final adoption.

Meeting adjourned at 8:05pm.



CCWMO Citizen Advisory Committee

January 28th, 2020 Meeting

Business Item
<i>Review of Operating Rules</i>
Water Management Plan Related Goal

Summary:

The Water Management Organization Advisory Committee annually reviews and approves their Operating Rules. These Operating Rules are based on the County Boards Operating Rules that identify and set up procedures relating to elections of Chair & Vice Chair, attendance, membership, compensation and more. Listed in Section II, it is stated that each January the Committee will “review, amend if necessary, and adopt the operating rules for the coming year.”

Discussion Points:

- Are there any changes or recommendations to the current Operating Rules?

Recommended WMO Citizen Advisory Committee Action:

- Staff is recommending that the committee adopt the Operating Rules as they exist or make recommendations citing any changes deemed necessary.

Attachments:

- Operating Rules

Carver County Water Management Organization Citizen Advisory Committee Operating Rules

I. Overview

A. Role & Purpose

The Carver County Water Management Citizen Advisory Committee's (CAC) role is to make recommendations to the County Board on matters relating to water management include;

- Project and project prioritization
- Funding and water levy
- Water Plan, Groundwater Plan and Solid Waste Plan
- Water quality and Total Maximum Daily Load (Impaired Waters) program and projects
- Education program and projects
- Feasibility studies

As an advisory committee, the CAC serves a statutory, policy, and operational purpose within Carver County.

B. Goal

- The goal of the Plan is to protect, preserve and manage the CCWMO's surface and groundwater systems in the midst of rapid growth and intensive agricultural activity.

II. Amendments to the Operating Rules

During the statutory meeting (the last Tuesday in January of each year), the CAC shall review, amend if necessary, and adopt the operating rules for the year.

Any time throughout the year, the Committee may amend (or suspend) the operating rules by an affirmative vote of the members. Changes shall be effective immediately upon passage.

Any member of the Committee or County staff may initiate action to amend the operating rules

III. Organization

A. Membership

An open appointment policy governs the process for recruiting applicants to the Committee. The actual appointments are made by the County Board. The Carver County Board will attempt to select those candidates who will best represent the county and the committee's needs.

Membership consists of:

- 5 representatives from Commissioner Districts: one from each district.
- 1 representative from the Soil & Water Conservation Board.
- 4 representatives from watersheds. One from each watershed.
- 1 representative from the Technical Advisory Committee

B. Terms of Office

The County Board has standardized the length of term and number of terms each advisory committee member may serve. The length of term is 3 years and the maximum number of consecutive terms each member may serve is 3.

C. Vacancy

When a vacancy exists due to resignation or other reasons, the County Board will follow the open appointment process. For the purpose of maintaining uniform length of terms the new appointee's partial term will be assumed to be a full term regardless of actual time remaining in the unexpired term.

D. Officers

The Citizen Advisory Committee, at its statutory meeting elects from its members a Chair and a Vice-Chair. The Chair presides at committee meetings, preserves order, and decides on questions of order and subject to vote of the committee. The Vice-Chair performs the duties of the chair when the chair is unable to perform those duties. Only committee members appointed by the County Board are eligible to serve as Chair or Vice Chair of the committee

If the Chair and Vice-Chair are absent from any meeting, the members present shall choose one of their members as temporary Chair.

The Chair of the Board may make a motion and has the same voting rights and responsibilities as other members.

E. Compensation

Individuals appointed by the County Board to the CAC receive a per diem and mileage reimbursement for attendance at regular and special meetings of such committees unless otherwise stated by the County Board. The per diem level is established from time to time by County Board and/or Minnesota Statute.

F. Quorum & Attendance Policy

A quorum is present if 50% + 1 of the existing members of the committee are present.

Committee members missing three (3) consecutive meetings in a year without the formal consent of the advisory committee shall be deemed to constitute a resignation of a member and a vacancy thus created shall be filled thereafter as provided by the open appointment process.



Water Management Organization Advisory Committee

January 28th, 2020 Meeting

Business Item

Aquatic Invasive Species (AIS) Program Update

Water Management Plan Related Goal

1. Protect, preserve, and manage natural surface and groundwater storage and retention systems;
2. Protect and enhance fish and wildlife habitat and water recreational facilities;

Summary:

CCWMO staff is wrapping up the planning stage for the 2020 Aquatic Invasive Species (AIS) program. This item will provide an update focusing on 2019 accomplishments and challenges, AIS Stakeholder discussions, and plans for 2020.

Discussion Points:

- Watercraft Inspection stats
- New and ongoing AIS projects
 - Benton Lake carp project
 - Aquatic vegetation removal grant
 - Goldfish
- AIS Stakeholder Forum V
- 2020 Proposed AIS Program

Recommended WMOAC Committee Action:

- Recommend proposed 2020 aquatic invasive species program to the Carver County Board.

Attachments:

- none



Water Management Organization Advisory Committee

January 28th, 2020 Meeting

Business Item

CROW Refund of Funds

Water Management Plan Related Goal

1. Effectively and efficiently manage public capital expenditures needed to correct flooding and water quality problems

Summary:

The CROW Organization was formed as a joint powers organization by the approval of a Joint Powers Agreement (JPA) between ten counties in 1999 with a stated general purpose of promoting the orderly water quality improvement and management of the Crow River Watershed through information sharing, education, coordination and related support. In 2019, the counties voted to dissolve the organization which resulted in the return of funds to member counties including \$32,000 to Carver County. Staff have discussed options for use of these funds, which include funding CIP projects, feasibility studies or use as Grant Match. Funds should be used in the Crow River watershed area.

Staff is recommending the following allocation of the funds:

1. \$12,293 City of Watertown stormwater treatment

The City of Watertown submitted a CIP Cost Share Application for 2020 WMO funds to construct a new manhole sump with a SAFL Baffle to treat stormwater flowing into the Crow River. Due to budget constraints, the project request was not included as part of 2020 WMO funds.

2. \$10,000 Watertown Dam Removal Feasibility Study

A feasibility study was included in 2020 WMO funding recommendation to better understand the construction costs, scope, and impacts from removing a low head dam in the City of Watertown. \$10,000 was estimated to be funded by SWCD Engineering Assistance. Due to other projects that are occurring during 2020, these funds are no longer available and the study is \$10,000 short.

3. \$9,707 BWSR Grant Match

BWSR will be offering Watershed Based Funding for the 2021 Fiscal Year that includes the South Fork Crow River. To be able to use these funds, CCWMO will need to have matching funds.

Discussion Points:

- Use of funds for the staff recommendation
- Other options considered

Recommended WMOAC Committee Action:

- Recommend proposed use of CROW Refund to the Carver County Board.

Attachments:

- City of Watertown SAFL application
- Dam Feasibility Background Slides from 2019 WMOAC presentation
- BWSR Metro Watershed 2021 Funding background

Metro Area Watershed-Based Funding Implementation Program

The purpose of Watershed-based Implementation Funding is to supplement existing funding to accelerate clean water activities (practices, projects, and programs) toward advancing Minnesota’s water resources goals through prioritized and targeted cost-effective actions with measurable water quality results. In the Seven-county Metropolitan Area (Metro), only activities identified in the implementation section of a watershed management plan developed under Minnesota Statutes §103B.231, §103B.101, Subd. 14 or §103B.801, county groundwater plans authorized under §103B.255, or Metro soil and water conservation district annual work plans authorized under §103C.331 are eligible for funding. These plans are collectively referred to as “local plans” in this document.

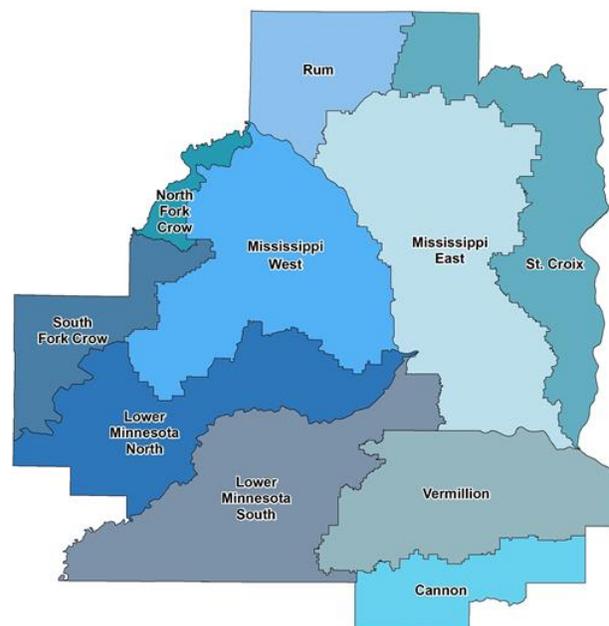
Distribution Process

For purposes of this document, the group of participants in each allocation area (see map) will be called a partnership (e.g. the Mississippi River West Watershed Implementation Partnership). Each partnership will include one representative (participant) from each watershed district, watershed management organization, soil and water conservation district, county with a county groundwater plan, and at least two municipalities within the allocation area.

The purpose of Watershed-based Implementation Funding is to supplement existing funding to ensure the most critical clean water activities are being accomplished - not to simply distribute funds among all participants. The partnership will coordinate to develop a Watershed-based Implementation Funding budget request (budget request) for submittal to BWSR that is **prioritized, targeted and measurable**.

To assist in the development of the budget request, BWSR staff will initiate and facilitate the meeting of the partnership in later winter/spring and may be available to facilitate subsequent meetings per partnership request. For the purposes of this document, these meetings are referred to as Convene Meetings. Each partnership must meet at a minimum

Twin Cities Metro Area Allocation Map for the Watershed-based Implementation Funding Program



Additional Information

Table 1 below provides the allocations from BWSR to the watershed areas for the 2020-2021 biennium.

Table 1: Allocation Amounts per Watershed Area, 2020-2021 Biennium

Watershed	Allocation
Rum	\$366,982
Lower St. Croix	\$793,461
Mississippi (East)	\$1,085,485
Mississippi (West)	\$874,153
Vermillion	\$650,684
Cannon	\$305,293
Lower Minnesota (North)	\$673,699
Lower Minnesota (South)	\$829,075
South Fork Crow	\$330,063
North Fork Crow	\$91,105

Watertown Dam Removal Study

- CCWMO Staff has been reviewing the possibility of removing the low-head dam located in Watertown
- Have had conversations with the City of this project.
- Dam is the last one within the South Fork Crow River from Hutchinson to the confluence in Delano.
- Stream bank failure, potential safety hazard, and dam failure.
- Reconnecting fish habitat, increase recreational opportunities, and increase the health of the river.
- RFQ sent out in January. Bids were too high to award.
- Recommend \$25,000 for feasibility study to select appropriate design.

Figure 4-k. Pre-project.

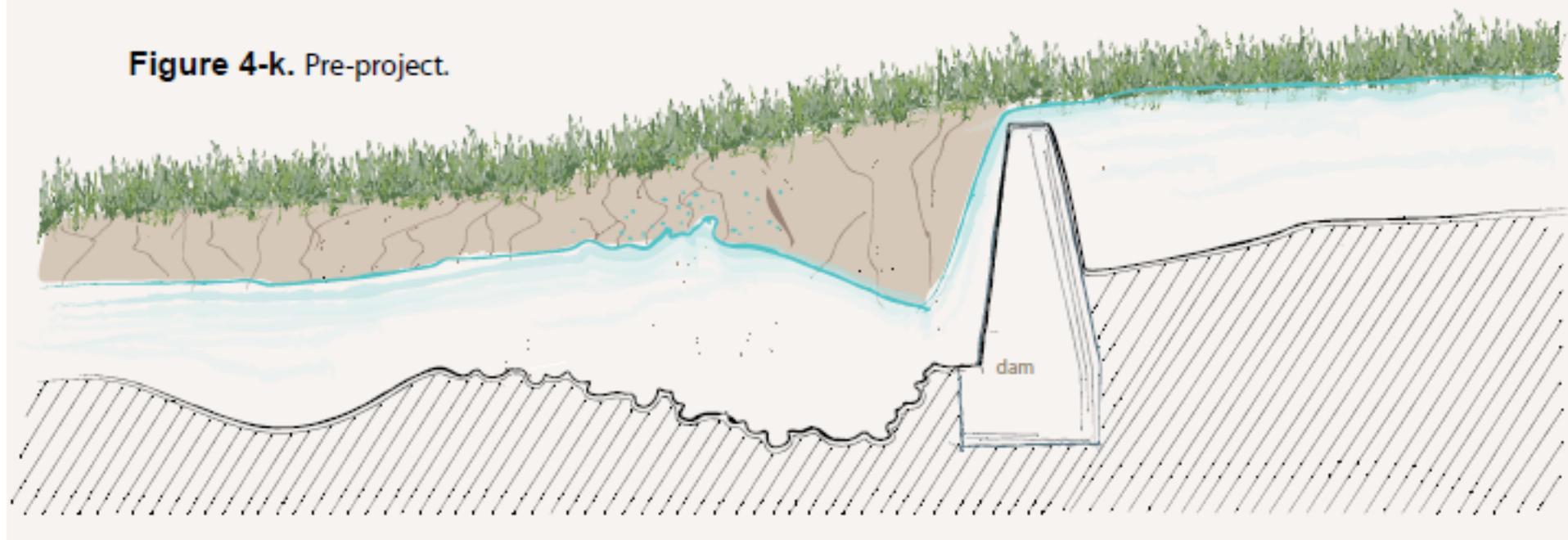
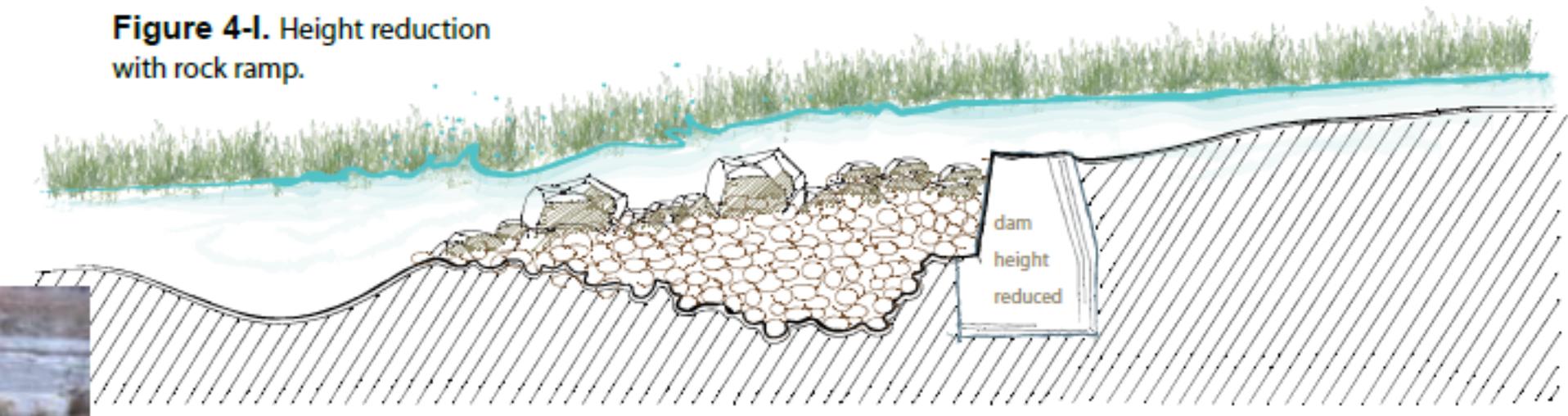


Figure 4-l. Height reduction with rock ramp.



Carver County Cost Share Application

Contact Information

Name Andrew Budde - Bolton & Menk, Inc.		
Address 309 Lewis Avenue S		
City Watertown	State MN	Zip Code 55388
Project Location (If different than above) 313 Madison Street, Watertown, MN		
Nearest Lake or Stream South Fork Crow River		
Home Phone 952-448-8838	Work or Cell Phone	
Email Address Andrew.Budde@bolton-menk.com	Other Contact Info	

Project Information (use additional sheets as necessary)

Project Description <p>Proposed installation of a Sump Manhole with SAFL Baffle to replace a Storm sewer manhole with no previous treatment that flows directly into the South Fork Crow River. The 9.81 Acre drainage area consists of mostly C - C/D Soils and roughly 42.7% Impervious Area. This work intends to be added to a 2020 Mill & Overlay project on Madison street with this particular location to be a patch of reconstruction due to the existing pavement condition. The City wants to take this opportunity to incorporate the Sump Structure and SAFL Baffle at a reasonable cost as the estimate attached to this application does not include pavement patching which is already accounted for in the City's estimate for the 2020 Mill & Overlay Project.</p>

Water Quality Issues the Project will address

Proposed improvements would provide a TP reduction of 0.1 lbs/yr, and TSS reduction of 38.8 lbs/yr.

Contributing Drainage Area	Maximum Size of Practice	Landuse in Drainage Area
9.81 Acres		Residential

Cost-Share Request

Total Project Cost (Attach itemized list – required for cost share)	Cost Share Request (Max of 75%)
\$16,390.00	\$12,292.50

Collaborators (List partners and contributing funds, if applicable)

City of Watertown

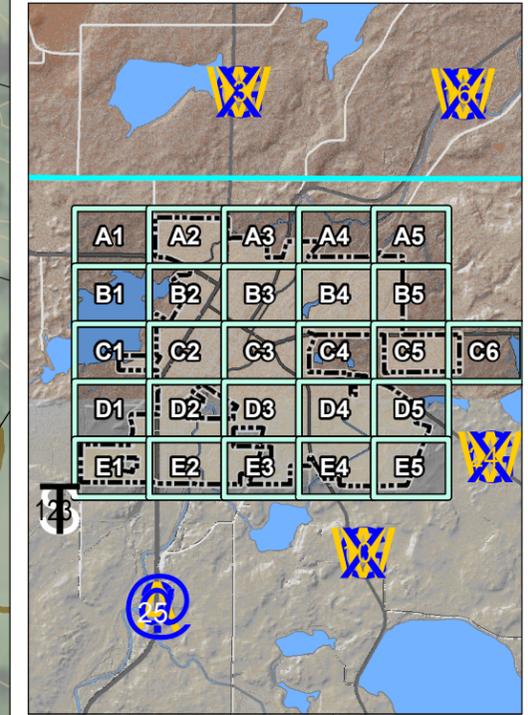
I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Signature	Date
	03/29/2019

Office Use Only:

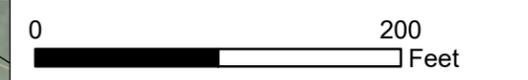
Approval: _____ Date: _____

LOCATION MAP

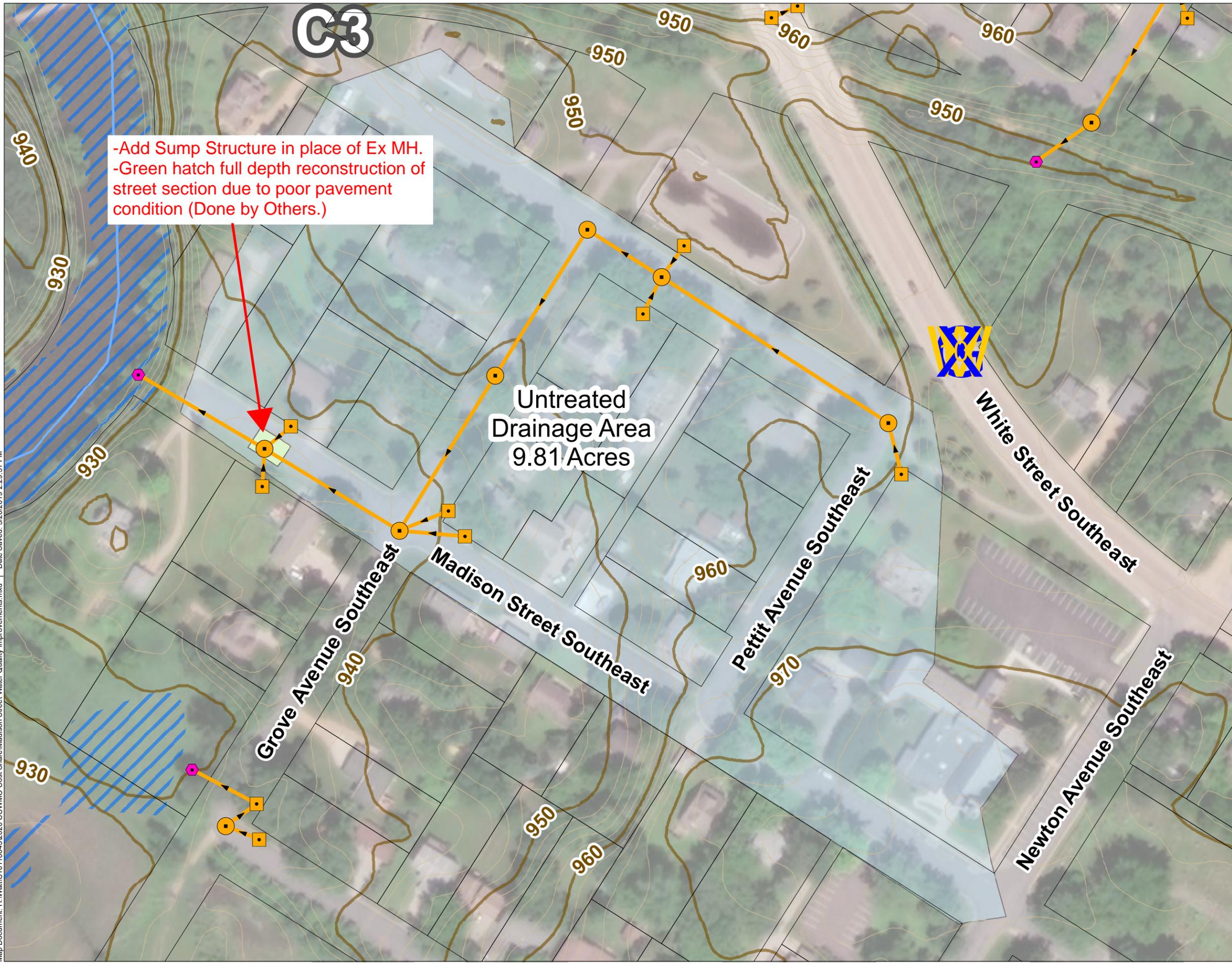


Legend

- Inlet
- Outlet
- Storm Manhole
- Catchbasin
- Storm Pipe
- Drain Tile
- Storm Pond
- NWI
- Contours
- Index
- Intermediate
- Grid
- Parcels
- Lakes
- Streams
- Railroad
- City Limits



Source: City of Watertown, Carver County, MnDNR, MnDOT, ESRI



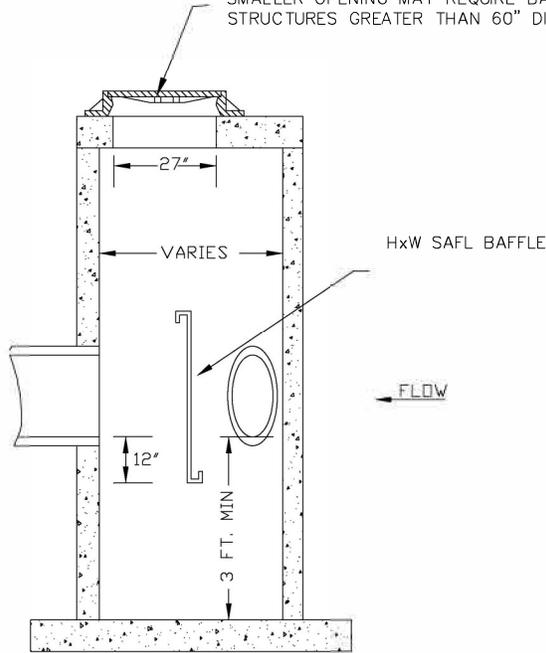
Map Document: H:\Water\18043\2020 CCWMO Cost Share\Madison Street Water Quality Improvements.mxd | Date Saved: 3/20/2019 2:29:51 PM

ENGINEER'S ESTIMATE

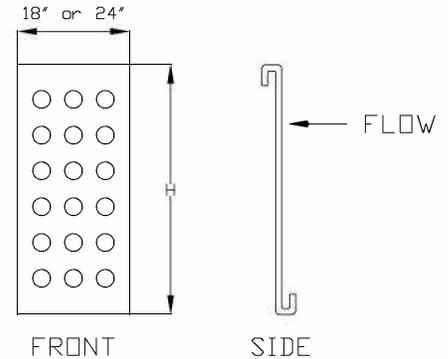
2020 MADISON STREET WATER QUALITY IMPROVEMENTS
CITY OF WATERTOWN
BMI PROJECT NO. CXX.XXXXXX

ITEM NO.	BID ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT
1	REMOVE DRAINAGE STRUCTURE	EA	1	<u>\$1,000</u>	<u>\$1,000</u>
2	CONNECT TO EXISTING SEWER PIPE (STORM)	EA	4	<u>\$500</u>	<u>\$2,000</u>
3	CONSTRUCT DRAINAGE STRUCTURE DESIGN 4020-60" W/ SAFL BAFFLE	EA	1	<u>\$8,000</u>	<u>\$8,000</u>
4	12" RC PIPE SEWER DESIGN 3006 CLASS V	LF	8	<u>\$40</u>	<u>\$320</u>
5	21" RC PIPE SEWER DESIGN 3006 CLASS III	LF	8	<u>\$75</u>	<u>\$600</u>
TOTAL:					<u>\$11,920</u>
TOTAL PROJECT CONSTRUCTION COST + 10% CONTINGENCY:					<u>\$13,112</u>
+ 25% ENGINEERING, ADMINISTRATION, & FINANCING:					<u>\$3,278</u>
TOTAL PROJECT COST:					<u>\$16,390</u>

MANHOLE/CATCH BASIN COVER AND FRAME – 27" MIN. CLEAR OPENING
 SMALLER OPENING MAY REQUIRE BAFFLE INSTALLATION PRIOR TO PLACING CASTING
 STRUCTURES GREATER THAN 60" DIA. MAY REQUIRE SECOND CASTING FOR CLEANING SUMP



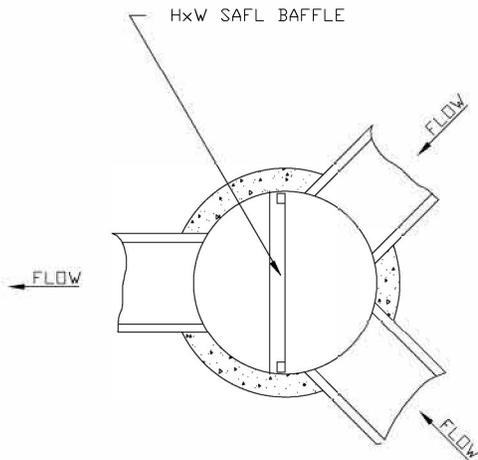
**SAFL BAFFLE INSTALLATION
 Detail**



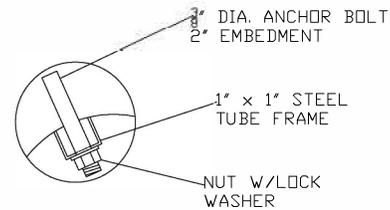
WIDTH ADJUSTMENT FOR PANEL SIZES

2- 18" PANELS	32"MIN	36"MAX	4"TOTAL
2- 24" PANELS	44"MIN	48"MAX	4"TOTAL
3- 18" PANELS	46"MIN	54"MAX	8"TOTAL
3- 24" PANELS	64"MIN	72"MAX	8"TOTAL

**SAFL BAFFLE PANEL
 Detail**



**SAFL BAFFLE INSTALLATION
 Plan**



**SAFL BAFFLE ATTACHMENT BOLT
 Detail**

NOTES:

- 1) UPSTREAM TECHNOLOGIES INC. IS THE EXCLUSIVE LICENSEE OF THE SAFL BAFFLE
- 2) CONTRACTOR MUST VERIFY LOCATION OF CASTING AND STEPS PRIOR TO INSTALLATION OF STRUCTURE.
- 3) CONTRACTOR STRUCTURES GREATER THAN 72" REQUIRE SECOND CASTING FOR MAINTENANCE
- 4) THIS GENERIC DETAIL DOES NOT ENCOMPASS THE SIZING, FIT, AND APPLICABILITY OF THE SAFL BAFFLE FOR THIS SPECIFIC PROJECT. IT IS THE ULTIMATE RESPONSIBILITY OF THE DESIGN ENGINEER TO ASSURE THAT THE DESIGN IS IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. THE SAFL BAFFLE IS A PATENTED TECHNOLOGY OF UPSTREAM TECHNOLOGIES, INC. AND THE UNIVERSITY OF MINNESOTA AND NEITHER UPSTREAM TECHNOLOGIES NOR THE UNIVERSITY OF MINNESOTA APPROVES PLANS, SIZING, OR SYSTEM DESIGNS.

MULTIPLE INLET PIPE CONFIGURATION

SAFL BAFFLE STANDARD DETAIL
 UPSTREAM TECHNOLOGIES
 600 County Road D West, Suite 14
 NEW BRIGHTON, MN
 651-237-5123

**PATENT
 PROTECTED**



Manhole to construct
w/ sump and SAFL
baffle to collect
sediment.

313 Madison St S
55388



Madison St SE

Phase 1 - Chaska Creek Remeander

Phase 1 of the re-meander project was completed on November 7th, 2019. This phase constructed meanders to the south of the existing ditch, with all flows still using the ditch. This project will ultimately reduce water speeds, lower stress on the banks, reconnect the stream to its floodplain, and reduce the amount of sediment transported downstream. Photos below show the section of stream and project site in 1974 (left) and completed Phase 1 in 2019 (right).



LOCATION

The project is in Chaska, southwest of the Engler Blvd. and Hwy 212 intersection.

Phase 1 PROJECT COSTS

BWSR Grant: \$140,355.15

WMO Match: \$27,937.89

YEAR CONSTRUCTED

2019

PROJECT PARTNERS

City of Chaska

Board of Water and Soil Resources

PROJECT OUTCOMES

- The project will lengthen the stream and reconnect a portion of the original floodplain.
- The project will reduce sediment in the creek by 4,400 lbs. each year.
- The reconnection to the floodplain will reduce water levels in the stream by 0.3 feet for high flows.
- The stress on stream banks and downstream ravines will be reduced due to slower water speeds.



ABOVE

Phase 1 Construction. Construction completed by Oct 30, 2019. Picture is looking downstream towards new Chaska Creek Blvd Bridge and Creek Road to the right.

LEFT

Chaska Creek. Final stabilization of Phase 1 on last two meander bends of the project.

FRONT

1974 and 2019 Pics of project site. The project area is changing from farmed land to the construction of Phase 1.



Carver County Water Management Organization Advisory Committee

Upcoming Meetings

Date	Meeting Type	Business Items
2/25/2020	Regular	No-wake ordinance 2019 Annual WMO report/ SWCD annual report Local record precip? Lake and stream reports? <i>Note: meeting date may change</i>
3/31/2020	Regular	2021 Subsurface Sewage Treatment System Incentive Program
4/28/2020	Regular	2021 Project recommendations
5/26/2020	Regular	2021 WMO levy recommendations

Other Events

Date	Program	Details
3/23/2020	Best practices for pollinators summit	Learn more and register https://www.eventbrite.com/e/best-practices-for-pollinators-summit-2020-tickets-86269206519
2/2/2020	Lake Lab at Victoria Fireman's fishing event	WMO Staff will host their lake lab on the ice during the Victoria Fireman's fishing contest on Lake Steiger in Victoria from 12:30pm to 2:30pm.
2/8/2020	EcoFaith networking event	WMO will staff a booth and provide water education for church communities around the metro including many Carver County.
2/8/2020	Lake Lab at Fireman's Lake Fishing contest	WMO Staff will host their lake lab on the ice during the Firemana's Lake fishing contest in Chaska from 11:00am to 2:00pm.