

# MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION

455 HAYWARD AVENUE, OAKDALE, MINNESOTA 55082  
Phone 651.330.8220 x22 fax 651.330.7747 www.mscwmo.org



## Regular Meeting of the Middle St. Croix Watershed Management Organization

HELD REMOTELY DUE TO COVID -19 PANDEMIC

Attend ONLINE VIA ZOOM by clicking this link: <https://us02web.zoom.us/j/83883436127>

OR

Attend by CONFERENCE CALL by dialing +1 312 626 6799 – Meeting ID 838 8343 6127

Thursday, October 8<sup>th</sup>, 2020

6:00PM

1. Call to Order – 6:00PM
  - a. Approval of Agenda
2. Approval of Minutes
  - a. Draft minutes – September 10<sup>th</sup>, 2020 **pg. 1-4**
4. Treasurer’s Report
  - a. Report of savings account, assets for October 8<sup>th</sup>, 2020
  - b. Approve payment of bills for October 8<sup>th</sup>, 2020
5. Public Comment
6. Old Business
7. New Business
  - a. RBC Investment Account **pg. 5**
  - b. Floodplain Vulnerability Assessment Participation **pg. 6-11**
  - c. Adopt-a-Drain Request **pg. 12-16**
  - d. 2021 Water Quality Monitoring Proposal **pg. 17-18**
8. Grant and Cost Share Applications
  - a. Martin Permeable Parking Cost Share Request **pg. 19-22**
9. Plan Reviews/Submittals
  - a. Plan Review and Submittal Summary **-NONE**
  - b. Erosion and Sediment Control Inspection Reports **pg. 23-24**
10. Staff Report **pg. 25-27**
11. 1W1P Updates
12. Other
13. Adjourn

Middle St. Croix Watershed Management Organization Member Communities

Afton, Bayport, Baytown, Lakeland, Lakeland Shores, Lake St. Croix Beach, Oak Park Heights, St. Mary’s Point, Stillwater, & West Lakeland

Regular Meeting of the Middle St. Croix Watershed Management Organization  
HELD REMOTELY DUE TO COVID -19 PANDEMIC

Thursday, September 10th, 2020

6:00PM

Present: Brian Zeller, Lakeland Shores; John Fellegly, Baytown Township; Dan Kylo, West Lakeland Township; Mike Runk, Oak Park Heights; Dawn Bulera, Lake St. Croix Beach; Beth Olfelt-Nelson, St. Mary's Point; Ryan Collins, Stillwater; John Dahl, Bayport; Annie Perkins, Afton; Cameron Blake, WCD, Administrator Matt Downing; Christopher Smith, public, Charity Grant, Public

### **Call to Order**

The meeting was called to order by Brian Zeller at 6:01 PM.

### **Approval of Agenda**

Manager Fellegly motioned to approve the agenda and Manager Runk seconded the motion. The motion passed on a roll call vote with all in favor.

### **Approval of Minutes**

Manager Fellegly motioned to approve the August 13th minutes and Manager Olfelt-Nelson seconded the motion. The motion passed on a roll call vote. Manager Perkins joined the board meeting at 9:06 PM.

### **Treasurer's Report**

The treasurer's report was presented by Manager Kylo. The remaining checking account balance on September 10<sup>th</sup> 2020 for the month of August was \$550,298.71. First State Bank CDs were valued at \$38,549.15. The ending balance in the RBC savings account for July 2020 is \$65,548.32.

Bills to be approved this month are: Washington Conservation District (Administration): \$3,798.00; Washington Conservation District (Technical Services): \$6,041.50; Total: \$9,839.50.

Manager Fellegly asked about the status of Baytown Township's 2<sup>nd</sup> half community contribution. Administrator Downing explained that he has sent four reminders to Bayport Township's clerk and administrator, the latest one two weeks ago. Manager Fellegly said they had a meeting on Monday and he would bring it up then. The second half community contribution reminders went out to all the communities and five have paid so far.

Manager Kylo assisted Administrator Downing in approving his full access to the MSCWMO bank account, and the saving's transfer to the RBC account which was approved at the January 9<sup>th</sup> board meeting was completed. Administrator Downing asked for direction on the board on whether to re-invest savings to the CD. Their account manager said they have enough money to do this. The interest rate is currently .01% but they could roll it back into the CD for 2 years at a slightly higher interest rate. The board discussed the variable management fees associated with the RBC and its changes in asset value. Administrator Downing noted that they will be paying management fees either way, and the only difference is they would not have access to the money for two years; with the account being designated for the 2025 Management Plan update. The board asked Administrator Downing to explore other options such as a shorter

time frame CD. Manager Olfelt-Nelson asked why the MSCWMO has an RBC account, noting that it seemed expensive, and wondered if it was worth the cost. Administrator Downing explained that last month the RBC account lost \$136, but it gained \$700 this month. Managers Zeller, Kylo and Felleggy discussed why the MSCWMO opened the RBC account; remembering that it may have had a higher interest rate at the time and there was desire for a separate account. Manager Kylo said he remembered the interest rate being worth the management cost and explained that the downturn of the economy affected the interest rates in such bank accounts. Administrator Downing will get more information from the bank regarding the MSCWMO's options.

Manager Felleggy moved to accept the treasurer's report, Manager Zeller seconded this motion, and the motion passed on a roll call vote with all in favor. Manager Kylo motioned to approve payment of the bills, Manager Dahl seconded this motion, and the motion passed on a roll call vote with all in favor.

### **Public Comment**

There were two members of the public present, Christopher Smith and Charity Grant, neither of which gave any public comment.

### **Watershed Based Funding Reallocation**

The MSCWMO was allocated \$78,760 from the Clean Water Fund in 2019 for the implementation best management practices as identified in its watershed management plan. The Board had previously authorized that half the funding be applied to the Perro Creek infiltration basins that we completed last year, and half for the construction of 2 infiltration basins around Lily Lake. Only one basin was able to be constructed; at the August 2019 meeting the board authorized the (interim) Administrator to identify a new project. Multiple options for other basins in the Lily Lake sub-watershed were explored and ultimately deemed unfeasible. Administrator Downing inquired with BWSR about the possibility to move the funding to supplement the Lake St. Croix Beach Bluff project. Although this is outside the original workplan area, BWSR has agreed that the situation warrants a change. Administrator Downing is seeking board approval to reallocate \$18,079.25 in WBF dollars from the Lily Lake project to supplement the Lake St. Croix Beach Bluff project. This reallocation will allow for more shoreline to be stabilized and a greater impact on the load reduction to Lake St. Croix. The City of Lake St. Croix Beach would be responsible for providing the required 10% match on this funding.

Manager Felleggy asked if Lily Lake and Perro Creek were still impaired and in need of more projects. Administrator Downing confirmed this and explained that because the money needed to be spent this year, and the amount of money was not enough for a whole new project, it would be best applied to the current project in Lake St. Croix Beach to allow for more work to be done.

Manager Felleggy motioned to approve the reallocation of \$18,079.25 in WBFs from the Lily Lake project to the Lake St. Croix Beach Bluff project. Manager Perkins seconded the motion and the motion passed on a roll call vote with all in favor.

### **Lake St. Croix Beach Bluff Stabilization Contract**

Manager Runk motioned to approve the Lake. St. Croix Beach Bluff Stabilization Contract between the City of Lake St. Croix Beach and the MSCWMO. Manager Collins seconded this motion, and the motion passed on a roll call vote with all in favor.

Manager Olfelt-Nelson asked if the city had a clerk and an administrator and Dawn Bulera confirmed that they had a deputy clerk. Manager McCarthy joined the call at 6:25 PM.

### **Nelson Cost Share Request**

Brad Nelson is requesting a MSCWMO Water Quality grant to install up to 400 square feet of native plantings to augment his existing front yard prairie installation and reduce runoff from his roof and driveway. The site is located at 428 Greeley Ave N in Stillwater. The site was previously considered a great retrofit location based on the Lake St Croix Direct – North SWA due to its direct drainage to the Mulberry Ravine and the St Croix River. A cost estimate was not prepared by the landowner, but WCD staff sees an installation cost range of \$300-\$600, depending on plant choices and final area of installation.

Manager Olfelt-Nelson motioned to approve a cost share award not to exceed \$500.00 for the Nelson Native Plantings. Manager Kylo seconded this motion, and the motion passed on a roll call vote with all in favor

### **Fix Cost Share Request**

Grace Fix is requesting a MSCWMO Water Quality grant to install a 2,200 square foot native planting on the east side of her property (1975 Quant Avenue in West Lakeland Township). This project will restore bluff slopes that were recently cleared of buckthorn and which drain directly to the St Croix River.

Manager Fellegly motioned to approve a cost share award not to exceed \$500.00 for the Fix Bluff Planting. Manager Dahl seconded this motion, and the motion passed on a roll call vote with all in favor.

### **Plan Reviews and Submittals: Central Automotive**

The applicant is continuing to adjust their stormwater treatment BMP design based on their location outside the DWSMA in order to meet the condition for the permit. Staff recommends approval for the project as they completed their condition. No action needed.

### **Stillwater Riverbank Stabilization**

The City of Stillwater proposes to stabilize a section of riverbank and construct a new trail for public recreation along the St. Croix River from south of Dock Café and north of Shoddy Mills. Staff recommends approval with four remaining items including hydrologic model revisions to demonstrate rate control standards are satisfied. Manager Fellegly moved to approve the project, Manager Zeller seconded this, and the motion passed on a roll call vote with all in favor.

### **Locke Residence**

A proposed single-family residential project is proposed at 1868 Redwing Ave in Lake St. Croix Beach. Staff recommends project approval with four conditions. Manager Fellegly moved to approve the project, Manager Runk seconded this, and the motion passed on a roll call vote with all in favor.

## **Erosion and Sediment Control Inspection Reports**

The final round of inspections will occur in late September/early October. Based on board feedback, Aaron DeRusha (WCD) is creating informational post cards with general erosion and sediment control information as well as fall vs. spring tips. He is also helping active projects to be prepared for winter.

## **Staff Report**

Administrator Downing updated the board on administrative activities. The Lily Lake project is moving along and he is working with people he knows from the MPCA and consulting world on the plan for the alum treatment portion of the project. The Lake St. Croix Beach Bluff Stabilization project will be started after nesting bluff restrictions are over; likely by the next board meeting. There is no update on PFAS work by the state. The second E. Coli sample from Perro Creek was taken yesterday. Water monitoring work is wrapping up for the field season. Administrator Downing assisted in spreading nitro radish seed to address soil compaction in the Stillwater Country Club project the board toured last fall.

Manager Zeller asked if there were any funding sources the MSCWMO could apply for to address challenges this year related to COVID-19 such as technology costs. Administrator Downing explained that the WCD has qualified for certain expenditures as they provide the equipment and staffing. He asked if the local communities need any help identifying those types of expenses.

## **1W1P Updates**

Manager Fellego said the 1W1P is still under review by BWSR but that he should know more by the next board meeting.

## **Other**

Manager Downing extended an offer to managers to meet with him and discuss any questions about individual communities permitting process, as there has been a lot of discussion about this topic at the board meetings. Manager Dahl asked if there could be a webinar created for this. Administrator Downing said there could be but he thinks there would be more value in a one on one meeting; although there are shared rules with the MSCWMO, the communities can have different standards and processes. Manager Olfelt-Nelson said her community had interest in this with the mayor having questions about different parts of the process.

Manager Zeller recalled a new DNR hydrologist for the area who they had not yet had a chance to invite to a meeting. Administrator Downing explained this new hydrologist is on leave until the end of the year, and he has not heard from the interim hydrologist in the meantime.

## **Adjourn**

Manager Runk motioned to adjourn and Manager Fellego seconded that motion. Manager Dahl asked if there would be an October board meeting as he may be unavailable. Administrator Downing said it was too early to tell. The meeting adjourned at 6:49 PM.

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## MEMORANDUM

**TO:** Middle St. Croix WMO Board of Managers  
**FROM:** Matt Downing, Administrator  
**DATE:** September 18<sup>th</sup>, 2020

### RE: 7a.) RBC Investment Account Recommendations

As part of the long term planning process and to maintain fiscal responsibility, the MSCWMO holds multiple savings assets to provide funding for future plan updates and equipment needs. At the September MSCWMO Board Meeting, I was given direction to investigate options and develop recommendations for the account held with RBC.

The three main questions that the board were concerned with and the response from our account manager were as follows:

- What are the fees associated with management of the account? - Zero fees are charged
- What is the rate on a 1 year term CD? - 0.10-0.15%
- Are there fees associated with withdrawal of the funds? - No

The apparent loss that was noted by the board was not a true loss but rather a change in asset value due to rates plummeting from COVID-19 impacts to the market. Based on the answers to the questions above and the clarification that no actual money was lost, it is my recommendation that the MSCWMO leave the money with RBC, and move funds back into a 1 year term CD. If the funds stay in the current account the interest rate will be 0.01%.

**Recommended Board Action- Approve staff to direct RBC to transfer all savings funds into a 1 year term CD, and reassess the market conditions upon maturity.**

<b>Project Name</b>	Climate Change Vulnerability Assessments	<b>Date</b>	9/8/2020
<b>To</b>	Board of Managers of BCWD, CLFLWD, CMSCWD & MSCWMO		
<b>Cc</b>	Karen Kill; Mike Kinney; Mike Isensee; and Matt Downing		
<b>From</b>	Camilla Correll, PE; Carl Almer; Meghan Funke, PE; Jen Kader (Freshwater)		
<b>Regarding</b>	Floodplain Vulnerability Assessment Scope of Services		

## Background

2020 has been another year with above-average precipitation which has resulted in numerous cases of localized flooding, high stream flows, and high lake and wetland water levels. Some flooding has resulted in road closures and property damage and has restricted access to people's homes all of which present a public safety issue. Needless to say, the BCWD, CLFLWD, CMSCWD, MSCWMO, their communities, Chisago County, and Washington County are grappling with the issue of what to do under both current and future climatic conditions. Because climate change is a regional issue and spans our local hydrologic and jurisdictional boundaries, we recommend that the local watershed districts and member communities develop a shared approach to becoming more resilient to climate change, and draw upon available scientific research and recommendations from agencies within the Upper Midwest.

CLFLWD and CMSCWD are both in the process of updating their Watershed Management Plans with Climate Resiliency components, and several of the member communities have recently included Climate Resiliency components in their comprehensive plans. However, there currently lacks consistent guidance on how to set Climate Resiliency goals, target the most at-risk resources, and implement projects or programs to protect those resources. EOR has identified the need to bring together the four Watershed Districts, their member communities, and Washington County and have a conversation about our regional needs and investigate the tools and approaches available to address climate resiliency issues. Our desired outcome from this process is to identify our local climate resiliency needs and develop an approach that is based on the most up-to-date science and that leverages our pooled resources to address local climate resiliency issues in the most efficient manner.

This memorandum presents an approach for conducting a joint Floodplain Vulnerability Assessment to align local climate resiliency efforts of water resource entities/communities and scaled to the need of local watershed districts, member communities and residents.

## What is a Vulnerability Assessment?

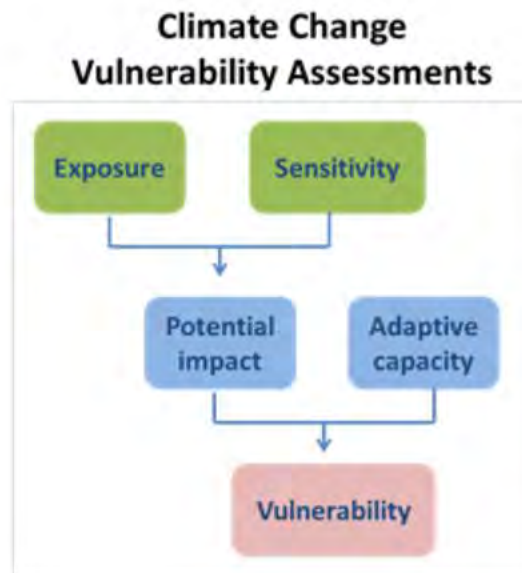
The following text has been excerpted from the Massachusetts Wildlife Climate Action Tool which is maintained by The Center for Agriculture, Food and the Environment in the College of Natural Sciences at the University of Massachusetts, Amherst.

*Climate Change Vulnerability* is defined by the Intergovernmental Panel on Climate Change (IPCC) as the susceptibility of a species, system or resource to the negative effects of climate change and other stressors, and includes three components: exposure, sensitivity, and adaptive capacity.

- *Exposure* is the amount and rate of change that a species or system experiences from the direct (e.g. temperature, precipitation changes) or indirect (e.g. habitat shifts due to change vegetation composition) impacts of climate change;
- *Sensitivity* refers to characteristics of a species or system that are dependent on specific environmental conditions, and the degree to which it will likely be affected by climate change (e.g. temperature or hydrological requirements); and
- *Adaptive capacity* is the ability of a species to cope and persist under changing conditions through local or regional acclimation, dispersal or migration, adaptation (e.g. behavioral shifts), and/or evolution.

*Climate Change Vulnerability Assessments* (CCVA) are emerging tools that can be used as an initial step in the adaptation planning process. These assessments focus on species, habitats, or systems of interest, and help to identify the greatest risks to them from climate change impacts.

The process of completing a CCVA includes the synthesis of existing information about the target species or system, confidence levels in the data, and identification of knowledge gaps. A CCVA combines this background information with climate projections to identify the specific elements of exposure, sensitivity, and adaptive capacity that contribute to the overall vulnerability of the species or system.



Ultimately, a Climate Change Vulnerability Assessment is one component of creating a more resilient environment. By exploring the hazards (needs), one can assess the vulnerabilities and risks, investigate options (adaptation strategies), prioritize and plan, and take action. Ideally, the BCWD, CLFLWD, CMSCWD and MSCWMO would like to get a better handle on vulnerabilities District-wide so that they can work with local partners (e.g. the Metropolitan Council, Washington County, and member communities) to identify roles and responsibilities, management needs and implementation strategies in 2021.



## What approach have others taken (and how have they used the information)?

There is no standard approach to conducting a CCVA and a variety of methods are being implemented at government, institutional and organizational levels. While many communities are basing the Climate Change Adaptation Plans on traditional (grey) infrastructure (e.g. storm sewer system, roads), there are differing impacts, not all related to flooding, that they are looking at (see examples below). The following are examples of CCVA's conducted locally:

- **Metropolitan Council Regional Climate Vulnerability Assessment** (February 2018) – This assessment identified and analyzed the potential vulnerabilities in regional systems resulting from increased frequency and severity of climate events. The assessment was developed to assist the Council and communities in preparing and adapting to climate change by revealing what systems (infrastructure, population, operations, etc.) are most vulnerable to existing and expected climatic changes, depending upon factors such as asset exposure, sensitivity, and adaptive capacity. The primary tools developed to assist the Council and communities are the Extreme Heat Map Tool and the Localized Flood Map Screening Tool. One of the limitations of the assessment (as noted in the Introduction) is the regional scale of the assessment, noting that the assessment may not accomplish what a more localized, scaled down assessment could achieve.
- **South Washington Watershed District** – SWWD identified three areas of climate resilience including groundwater, natural resources (e.g. AIS/Terrestrial Invasive Species, natural area preservation, ravine erosion control, natural waterbodies degradation) and stormwater infrastructure. For each of these areas the SWWD developed actions for the following categories: Planning Efforts; Policy Development Actions; Projects and Programs; and Education and Outreach. This CCVA included a risk analysis of the storm sewer infrastructure using available geospatial data to determine the likelihood and consequences of failure of each of approximately 24,000 pipes to compute an overall risk of failure score for each individual pipe. Based on that risk score, the SWWD prioritized inspection and/or maintenance of the storm sewer infrastructure.
- **Riley-Purgatory Bluff Creek Watershed District 100-year Floodplain Vulnerability Assessment** – This flood-risk specific vulnerability assessment looked at present floodplain mapping and future floodplain mapping to inform the District and its member communities of current and future flood-risk within the watershed. The creation of flood-risk figures provides the RPBCWD and municipalities a water management tool that considers how future changes to rainfall depth can impact infrastructure, but also can be used to determine where flood mitigation might be needed.

Regionally, other entities are considering the following climate change impacts in their Climate Change Vulnerability Assessments: impacts of drought; socio-economic vulnerability and the impacts on food and the natural environment; and the legal and insurance aspects of not delivering the expected level of service to communities.

Generally, the approach chosen for a CCVA should be based on the need/goals of the practitioners, confidence in existing data and information, the need to make direct comparisons across assessment results, and the cost of performing the assessment.

## **Proposed Approach**

Based on discussion with District Administrators and the desire to identify issues related to the hydrologic and hydraulic impacts of climate change for incorporation in the CMSCWD and CLFLWD's plan updates, it was decided to focus on a floodplain vulnerability assessment. An assessment of other social, economic or environmental impacts related to climate change may be explored in the future. This approach to conducting a Floodplain Vulnerability Assessment was designed to be as inclusive as possible so that the assessment itself provides buy-in and the level of information needed to make meaningful management decisions at all levels (e.g. city/township, watershed, county). This inclusivity will also bring to light new information, tools, research and partnerships which the project partners may choose to incorporate in this joint assessment.

## **Floodplain Vulnerability Assessment Workshop**

EOR, in partnership with Freshwater, will conduct a workshop in the Fall of 2020. This workshop will inform the need, scope and approach to conducting a joint Floodplain Vulnerability Assessment in 2021.

1. Coordination meeting with BCWD, CLFLWD, CMSCWD, and MSCWO Administrators/staff to identify workshop participants, craft invitation language and messaging for inviting participants to the workshop and plan the workshop. District Administrators would send an email to workshop participants to conduct a needs assessment. Specifically, we will want to find out what information is available and what flooding concerns/questions they are interested in addressing through modeling.

### **Deliverables:**

- List of potential workshop participants as identified by core watershed district staff, such as public works, emergency management, housing, economic development, parks, and planning staff.
- Invitation to the workshop including language assessing available data and the need for a floodplain vulnerability assessment.
- Workshop plan and agenda for workshop.

### **Assumptions:**

- Meeting will be held virtually.
- Invitation to workshop will be sent by participating watershed district administrators.

### **Estimated Cost/Hours: \$1,752/14 hrs**

2. Workshop – Evaluation of tools and approach(es) that best fit everyone's needs.

Design and facilitate a 4-hour workshop (to be held virtually) to engage participants in a discussion of the approach to conducting a Floodplain Vulnerability Assessment. The goals of this workshop are:

- i. Learn about what tools/information are available locally (consider inviting State Climatologist, University of Minnesota and/or Wisconsin researchers working on tools for improved probabilistic flood hazard and risk estimation).
- ii. Review the approaches others (e.g. municipalities, watershed districts, agencies) have taken to conducting Floodplain Vulnerability Assessments.
- iii. Clarify the kinds of risks workshop participants are concerned about. While it may be difficult to weigh different degrees of risk without having the outputs in front of them, it may help inform what the outputs of the vulnerability assessment should be.
- iv. Review the range of options for modeling future climate change scenarios based on time to complete the analysis, cost, quality of the data (peer reviewed/not peer reviewed), availability of the data, model output/deliverables, approaches others have taken, etc.
- v. Discuss the best approach to conducting a Floodplain Vulnerability Assessment that best fits participants' needs.

**Deliverables:**

- A list of common climate change modeling approaches (scenarios) that the WDs can run for each watershed district so there is consistency in the region to assess climate vulnerability (e.g. Table explaining the range of options for modeling future climate change scenarios including costs, timeline, pros/cons, deliverables, etc.).
- Host and facilitate workshop.
- Communications with project team, district administrators and workshop participants both before and after the workshops as needed.
- Workshop materials.
- Data transcription.
- Develop an approach to conducting a joint Floodplain Vulnerability Assessment to be reviewed with project partners.

**Assumptions:**

- Workshop will be held virtually.
- Invitation to workshop will be sent by participating watershed district administrators.
- Meeting participants will identify their preferred approach so decisions can be made for moving forward with the Floodplain Vulnerability Assessment.
- The identification of the level of risk watershed districts, cities and townships are comfortable with and the level of protection needed would take place once the Floodplain Vulnerability Assessment is complete.
- The identification of community or watershed-level options and strategies is not included in this scope of work. Once the modeling and mapping analysis component of the Floodplain Vulnerability Assessment has been completed, project participants will be reconvened to ask the question “what next steps make sense based on this information?”

**Estimated Cost/Hours: \$16,904/130 hrs**

### **Estimated Schedule**

EOR and Freshwater propose the following timeline/schedule for completing this scope of work:

1. Coordination Meeting – September/October 2020
2. Workshop – October/November 2020
3. Final approach to Floodplain Vulnerability Assessment – November/December 2020

Once the Floodplain Vulnerability Assessment approach has been decided upon, EOR will present each of the watershed districts with a scope of services to conduct the assessment.

### **Board Action:**

1. Approve this Scope of Services in the amount of \$18,656. This Scope of Services is being presented to the BCWD, CLFLWD, CMSCWD, and MSCWMO Board of Managers at their September Board Meetings. If all four Boards are interested in participating in this scope of work, the action item could be for each Board to individually approve one-fourth of the proposed budget.

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## MEMORANDUM

**TO:** Middle St. Croix WMO Board of Managers  
**FROM:** Matt Downing, Administrator  
**DATE:** September 24<sup>th</sup>, 2020

### **RE: 7c.) Adopt-a-Drain Program Participation Request**

Metro Watershed Partners has requested that the MSCWMO continue participation in the Adopt-a Drain Program for 2020. They are seeking a \$500 commitment to funding, similar to the request that was fulfilled in 2019.

Attached are the invoice and 2019 statistics for your review. 2020 data are not yet available, but preliminary indications are that an exponential increase in adoptions occurred, particularly in Stillwater. Through our partnership in the program, these adopters are informed of and directed to the MSCWMO for additional resources related to water quality improvements.

### **Recommended Board Action- Approve \$500 to fund the Adopt-a-Drain program for 2020**

# Adopt-a-Drain in Washington County, 2019

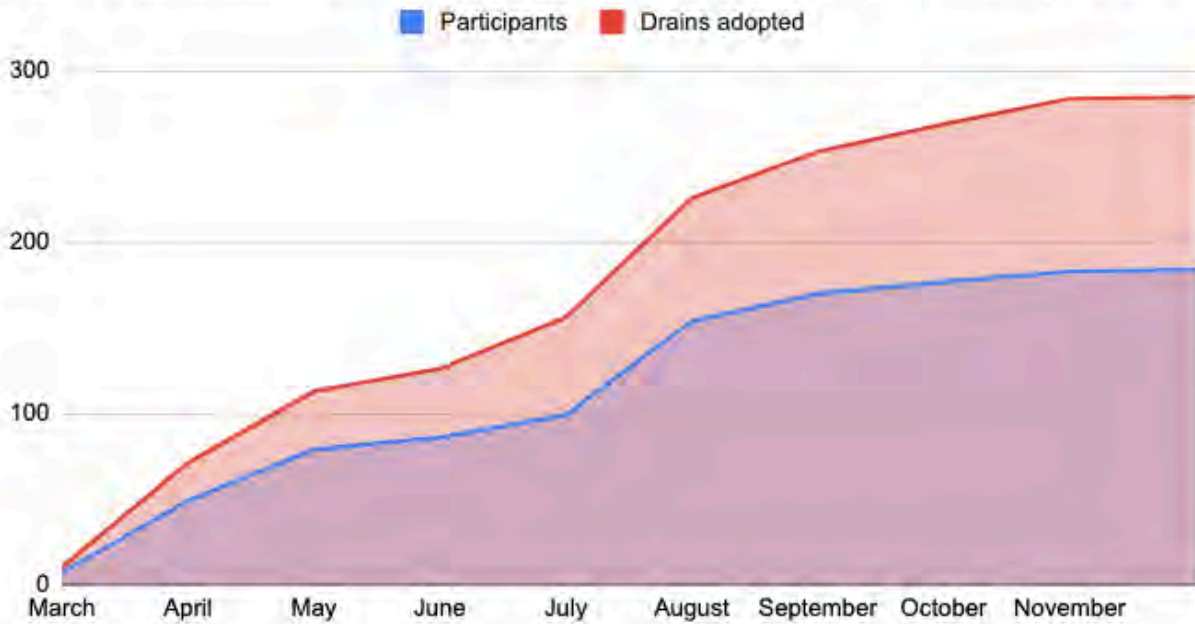
## Annual Report

**184**  
new participants  
in 2019

**285**  
drains adopted  
in 2019



New participants and drains adopted in Washington County, 2019



## Reporting Data

58 Washington County participants reported cleanings, which represents 31.5% of all Washington County participants.

Washington County participants collected 2,019.9 lbs of debris from their adopted storm drains in 2019.



Debris Type	Amount (lbs)
Brown leaves	642.4
Grass and green leaves	394.1
Sediment and dirt	867.8
Trash	28.8
Salt	86.8

Month	New participants	Drains adopted	Debris collected (lbs)	Time spent (hours)
March	7	10		
April	42	61	343	15.7
May	30	42	166.5	3.7
June	7	13	152.7	2.7
July	13	30	221.5	4.1
August	55	70	141.3	2.6
September	16	27	323.6	5.8
October	7	16	573.3	7.8
November	6	15	93.6	2.6
December	1	1	4.4	0.5
<b>TOTALS</b>	<b>184</b>	<b>285</b>	<b>2,019.9</b>	<b>45.5</b>

## Geographic Breakdown: City and Watershed

City	Drains adopted	Debris collected (lbs)	Time spent (hours)
Stillwater	73	121.3	6.3
Woodbury	70	198.5	4.5
Forest Lake	23	37.4	1.3
Cottage Grove	22	105.2	2.3
Oakdale	19	114.5	13.7
Oak Park Heights	19	226	4.8
Mahtomedi	14	80	2.8
Hugo	12	4.5	0.2
Lake Elmo	10	66	0.7
St. Paul Park	6	4	0.3
Newport	4	0	0.0
Pine Springs	4	29.5	0.3
Grant	3	0	0.0
Birchwood Village	3	981	8.0
Baytown Twp.	2	52	0.3
Bayport	1	0	0.0

Watershed	Drains adopted	Debris collected (lbs)	Time spent (hours)
South Washington	93	246.7	16.8
Middle St. Croix	54	253.3	6.0
Browns Creek	39	94.0	5.0
Rice Creek	36	1,065.5	11.0
Valley Branch	31	169.5	2.7
Comfort Lake Forest Lake	17	37.4	1.3
Ramsey-Washington Metro	15	153.5	2.7



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## METRO WATERSHED PARTNERS



MINNESOTA WATER  
LET'S KEEP IT CLEAN

### INVOICE

651-523-2812  
jlaron25@hamline.edu

Metro Watershed Partners  
Hamline University  
1536 Hewitt Ave. MS-A1760  
Saint Paul, MN 55104

Attention: Matt Downing  
Middle Saint Croix Watershed Management Organization  
455 Hayward Ave. N.  
Oakdale, MN 55128  
Date: 9/23/20

Project Title: Clean Water Minnesota & Adopt-a-Drain  
Terms: 30 Days

Description	Cost
2020 Membership: Clean Water MN & Adopt-a-Drain	\$500.00
<b>TOTAL</b>	<b>\$500.00</b>

Thanks for your membership in Clean Water MN. Your dollars support:

- Monthly blog posts with timely, consistent messages to encourage behaviors that improve water quality.
- New photographs that feature local residents taking action to protect lakes and rivers.
- Monthly meetings with information on partner activities, presentations by informative speakers, and updates on WSP activities.
- Maintenance of the Watershed Partners listserv.
- Development and implementation of a clean water exhibit at the Minnesota State Fair in the Eco-experience building.
- Site license to use Adopt-a-Drain.
- Recognition as a supporting partner of Adopt-a-Drain for residents in your service area.
- Access to an administrative interface on [Adopt-a-Drain.org](http://Adopt-a-Drain.org) that includes access to reporting and other information useful for MS4 reporting and communications.
- Access to purchase print promotional resources with partner logo.
- Access to purchase mailed packets and yard signs for participants.

Duration of service: January 1 - December 31st, 2020. Unspent funds will rollover to support program activities in 2021.

# MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION

455 Hayward Avenue N. Oakdale, MN 55128  
Phone 651.330.8220 x22 fax 651.330.7747 www.mscwmo.org



## MEMORANDUM

**TO:** Middle St. Croix WMO Board of Managers  
**FROM:** Rebecca Oldenburg Giebel, Washington Conservation District  
**DATE:** October 08, 2020

### RE: 7d.) Lily Lake Alum Treatment Monitoring

The MSCWMO received grant funding to conduct an alum treatment on Lily Lake. With the alum treatment being tentatively scheduled for 2021 the WCD proposes performing monitoring services in conjunction with baseline monitoring to help ensure the effectiveness of the alum treatment. This monitoring proposal includes hypolimnetic sampling of the bottom water of Lily Lake to assess the amount of phosphorus and iron present. These parameters are important in monitoring how much phosphorus is available to be suspended into the water column and provide a key nutrient for plant and algal growth. Alkalinity samples are recommended to be collected prior to and following the alum treatment in tandem with pH profiles. Profiles measure the pH of the water column from the water surface to the deepest point in Lily Lake. Near shore pH readings will also be taken biweekly to measure the pH near where the alum treatment will be. These parameters are important for calculating the buffering capacity of the lake. If the lake has low buffering capacity additional steps may need to be taken to ensure aquatic life isn't harmed during the alum application and that the alum treatment is as effective as possible. In order to maximize cost efficiency alum treatment monitoring activities will be synced with long term monitoring, outside of the pre and post treatment specialized monitoring and sampling.

Lily Lake Alum Treatment Monitoring Cost:	\$1,402.00
Baseline Monitoring Cost:	\$20,586.00
<b>Total Proposed Monitoring Cost:</b>	<b>\$21,988.00</b>

The MSCWMO has budgeted \$22,000.00 for monitoring services in 2021, the proposal is under the budgeted amount.

2021 MSCWMO Water Monitoring Estimate

<b>Lake WQ Monitoring</b>	<b>Type</b>	<b>Labor</b>	<b>Time/Mileage</b>	<b>Lab</b>	<b>Total</b>	<b>Notes</b>
Lily Lake	LWQF1	\$1,796	\$0	\$550	\$2,346	14x/year with WQ sampling + deep lake for DO
McKusick Lake	LWQD1	\$914	\$0	\$550	\$1,464	14x/year with WQ sampling
Lily Lake Alum Treatment Sampling	NA	\$1,008	\$0	\$394	\$1,402	14x Hypolimnetic sampling + pretreatment alkalinity sampling and pH profiles + Bi weekly near shore pH readings
<b>Total Lake WQ Monitoring</b>	N/A	\$3,718	\$0	\$1,494	\$5,212	
<b>Lake Gage Monitoring</b>						
<b>Lake Gage Monitoring</b>	<b>Type</b>	<b>Labor</b>	<b>Time/Mileage</b>	<b>Lab</b>	<b>Total</b>	<b>Notes</b>
Lily Lake	LEA1	\$163	\$0	\$0	\$163	Install and/or Survey and/or Remove. Read during WQ sampling by WCD
McKusick Lake	LEA1	\$163	\$0	\$0	\$163	Install and/or Survey and/or Remove. Read during WQ sampling by WCD
<b>Total Lake Gage Monitoring</b>		\$326	\$0	\$0	\$326	
<b>Lily Lake and Perro Pond Targeted WQ Monitoring</b>						
<b>Lily Lake and Perro Pond Targeted WQ Monitoring</b>	<b>Type</b>	<b>Labor</b>	<b>Time/Mileage</b>	<b>Lab</b>	<b>Total</b>	<b>Notes</b>
Greely Street Inlet to Lily Lake	V	\$5,070	\$651	\$200	\$5,921	Grab samples
Perro Diversion Structure & Overflow	III	\$6,305	\$1,170	\$714	\$8,189	Fully automated station
<b>TOTAL</b>	N/A	\$11,375	\$1,821	\$914	\$14,110	
<b>Report</b>						
<b>Report</b>	<b>Type</b>	<b>Labor</b>	<b>Time/Mileage</b>	<b>Lab</b>	<b>Total</b>	<b>Notes</b>
Water Monitoring Report	NA	\$2,340	\$0	\$0	\$2,340	
<b>2021 Total Monitoring Costs</b>		\$17,759	\$1,821	\$2,408	\$21,988	

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## MEMORANDUM

**TO:** Middle St. Croix WMO Board of Managers  
**FROM:** Bryan Pynn, WCD Staff  
**DATE:** October 2, 2020  
**RE: Martin Permeable Pavers - Cost Share Application**

Ann Martin is requesting a MSCWMO Water Quality grant to install up to 300 square feet of permeable pavers to reduce runoff from her roof and adjacent yard. The site is located at 1112 North Second Street in Stillwater. The site was previously considered a great retrofit location based on the Lake St Croix Direct – North SWA due to its direct drainage to the St Croix River. A cost estimate was prepared by the contractor (Environmental Landscape Management). Eligible expenses for this cost share request are the permeable pavers and associated excavation, subgrade fill, regrading, and adjacent site restoration required to install the pavers. Any walls (as seen in the quote) will be considered ineligible for cost share.

WCD staff modelled the project in WinSLAMM and show the TP load reduction for the project is 0.58 lbs/year. The total for the paver portion of the quote is approximately \$6,825.00. Staff is recommending a cost share request of \$1,500.00, which is 22% of the install cost.

Staff recommend approval.

### Example Motion

Motion Board Manager 1, second Board Manager 2 to approve a cost share award not to exceed \$1,500.00 for the Martin Permeable Pavers.



# Proposal Environmental Landscape Management, Inc.

575 Schommer Drive Suite D  
Hudson, WI 54016-1423  
Telephone: 715.386.7100 Metro: 651.436.1017  
[www.elmonline.com](http://www.elmonline.com)

Proposal submitted to: Ann Martin		Phone: 651-338-0162	Date: 9/29/20	Date of Plans:
Street: 1112 Second Street North		Project name: Eco-Dublin Permeable Parking Pad, Chilton Retaining Wall		Proposal Amount: \$16541.07
City, State and Zip Code: Stillwater, MN 55082		Project Location:		
Proposal prepared by: Alan MacQuarrie	File #:	Warranty specifications: 1 year warranty on craftsmanship		

### Chilton Retaining Wall

Tear out and dispose of existing soil and debris  
 Install 48 SF of Class 5 Base Material  
 Install 7.75 Tons of 4" - 5" Grey wallstone  
 Install 300 SF of Geo-grid soil stabilizing mesh  
 Install 10 tons of 3/4" limestone drainage rock behind wall  
 Backfill with existing soils \$9,468.48 + \$251.39 tax

### Permeable Parking Pad - Eco Dublin Option

Tear out and dispose of existing soil and debris  
 Install 216 SF of clear 3/4" limestone drainage rock  
 Install 216 SF (1" thick) of dresser trap chips 1/8"  
 Install 216 SF of Belgard Eco Dublin 'Brookstone Slate' permeable pavers  
 Install dresser trap chips in paver joints \$6,662.82 + \$158.38 tax

Total: \$16,131.30 + \$409.77 tax = \$16,541.07

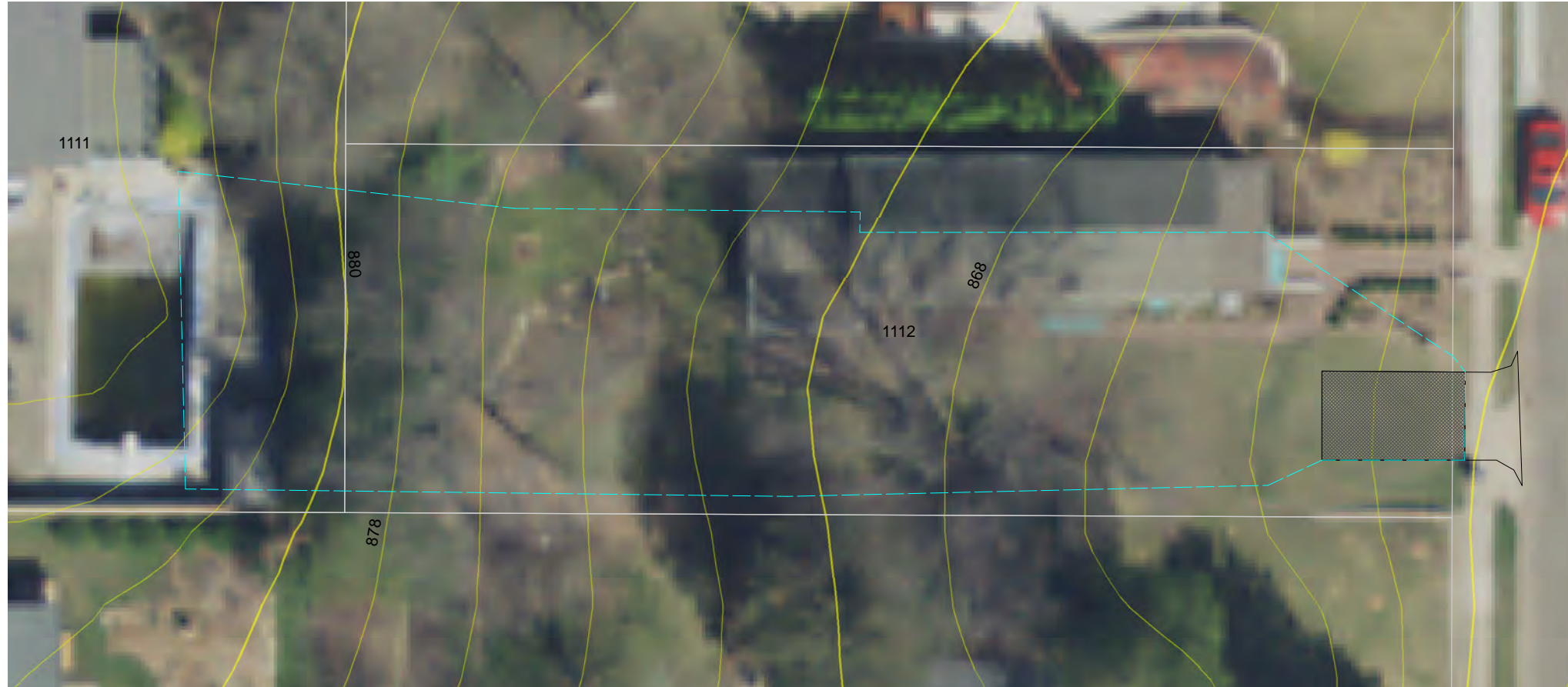
Terms: 50% due at signing,  
Balance due upon completion

All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon orders, and will become an extra charge over and above the estimate. All material and workmanship is under warranty as specified, unless neglected by purchasers. Contractor warranty excludes responsibility for "Acts of God" or any other conditions beyond his control which may adversely affect workmanship or materials.

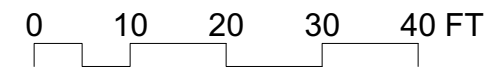
**ELM. INC. Authorized Signature:** \_\_\_\_\_ **Note:** This proposal may be withdrawn by ELM. INC. if not accepted within \_\_\_\_\_ days.

**Acceptance of Proposal** - The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made upon completion.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_



1 Martin Permeable Paver Concept  
 Scale: 1" = 20'-0"



Watershed Size: 5,500 sq ft  
 Permeable Paver Footprint: 300sq ft max  
 TP Reduction: 0.58 lbs/year

Cost Estimate: \$6,850.00  
 Cost SHare Request: \$1,500.00

**Washington Conservation District**  
 455 Hayward Ave N  
 Oakdale, MN 55128  
 (651) 330-8220  
 www.mnwcd.org



plan created by:

Project Address Martin Residence 1112 North Second Street Stillwater, MN 55082	Drawn	Reviewed	Revision
Project Manager Bryan Pynn Washington Conservation District			

**MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION**  
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 Oakdale, MN 55128  
 (651) 330-8220 xt 22  
 www.mscwmo.org

Project Title <b>Martine Permeable Pavers</b>
Sheet Title <b>Permeable Paver Concept</b>
CAD File Name Martin Concept.mxd

Date  
10/2/20

**Sht-1**

of  
4

**MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION**

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**Water Quality Cost-Share Program  
 Application Form**

**Contact Information**

Name <b>Ann Martin</b>			
Address <b>1112 North Second St</b>			
City <b>Stillwater</b>		State <b>Mn</b>	Zip Code <b>55082</b>
Project Location (if different than above)			
Lake or Stream (if applicable) <b>Lake St Croix</b>		Previous Grant Recipient? What Project? <b>Raingarden, 2017</b>	
Home Phone		Work or Cell Phone	
Email Address <b>aborsdorf@hotmail.com</b>		Other Contact Info	

**Project Information**

Project Description: (Use additional sheets as necessary) Please let us know what types of BMP you want to install, if you will use only native plants, and who you are planning to have do most of the work.

**Pervious Paver Driveway parking pad. 15" profile, including pavers.**

Water Quality Issues the Project will Address: Clean water, invasive species removal and/or reduce amount of water going downstream.

**Capture runoff from semi compacted, steep slope residential turf and homes.  
 Direct drainage to St Croix River.**

Area treated by project (attach two-ft topography) <b>5,000sf</b>	Maximum Size of Practice <b>300sf</b>	Landuse in Drainage Area <b>Residential, dense</b>
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**Cost-Share Request**

Total Project Cost (Attach itemized list - required for cost-share) <b>\$6,825.00</b>	MSCWMO Cost-Share Request <b>\$1,500.00</b>	Pollutant Load Reductions Volume: TP: <b>0.58 lbs/yr</b> TSS: N:
Collaborators (List partners and contributing funds, if applicable) <b>Note: Cost share is only for pervious paver portion of project. Retaining walls and adjacent grading not included in cost share request.</b>		

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate. I acknowledge that if approved, cost share funding expires on **November 30, 2020**, unless an extension is granted by the MSCWMO prior to the expiration.

Signature 	Date <b>9-29-2020</b>
---------------	--------------------------

**For Official Use Only**

Staff Recommendation	Board Approved <input type="checkbox"/> Yes <input type="checkbox"/> No	Approval Amount
Board Approved	Funding Source(s)	

# Erosion Control Fall Reminders

**Erosion Prevention- Attn Builders: unworked soils must be covered before snow and freeze up, even if the site remains active! Your work now will save a great deal of perimeter maintenance and hold soils in place through next spring.**

**All unworked soils and stockpiles must receive temporary cover within 14 days, and ditches must be blanketed within 24 hours if allowed to convey water. This applies all times of year, but is especially important now and in the spring.**

## Methods for Temporary Cover

**Limit Soil Disturbance-** leave vegetation and mark areas not to be disturbed (rain gardens, wetlands, etc) with orange snow fence. **Avoid opening steep slopes and redirect runoff away from slopes.**



**Hydromulch-** applied via spraying from backpack, turret gun, etc. Can be combined with final or temporary seed. Coverage required- 100%



**Straw/Fiber Blanket-** may be seeded underneath with temporary crop i.e. oats or winter wheat. Straw blankets are suitable for low grades, fiber or coconut blankets can be used in ditches or on steeper slopes. Coverage required- 100%



**Poly Sheeting-** easy cover for stockpiles or areas that will be worked infrequently. Secure poly with sandbags or biologs. Coverage required- 100%





**Temporary Seeding-** cheap! Oats or winter wheat can be hand-cast, no special equipment. Coverage required- 70%

**Straw Mulch-** must be anchored to the soil by disking, crimping, tracking, etc. Coverage required- 90%



YES



YES

NO

Site Wide Open

**Sediment Control-** Sediment and dirty water **MUST NOT** leave your site. Check and reinforce all perimeters before freeze up.



YES

Fence **tight, trenched in**, secondary piece of lathe used for reinforcement.



NO

Fence sagging, run over by equipment.

**Redundant Controls-** use two layers of silt fence, silt fence and biologs, or other doubled practices when working next to **lakes, streams, bluffs,** and **wetlands.**



YES

Double layer of silt fence with grass buffer next to Big Marine Lake.



**Don't let this happen on your site! Be mindful if working near the bluff!** Even appropriate measures can fail in extreme rain or snowmelt. Always try to direct water away from bluffs and slopes, and avoid concentration of flow.

**Questions? Call or email:**

Aaron DeRusha- MSCWMO Inspector  
612-816-7995 or [aderusha@mnwcd.org](mailto:aderusha@mnwcd.org)

Matt Downing- MSCWMO Administrator  
651-330-8220 x22 or [mdowning@mnwcd.org](mailto:mdowning@mnwcd.org)

Thank you for your work to help protect our water resources from excess sediment and nutrients!

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## Staff Report- September 2020

### Administration

- Prepared October meeting materials
- 2020 County Budget Workshop Materials Prep
- 2021 Service Agreements preparation

### Project Reviews

#### Lily Lake Phosphorus Reductions for Delisting – CWF Grant C20-6055

**Description:** Awarded \$513,500 for in-lake alum treatment and filtration basin to remove 120lbs of phosphorus from Lily Lake.

**Activities This Month:** Met with Emmons, Olivier Resources (EOR) for design kickoff meeting for the Lily Lake Park basin. They are hoping to have 90% plans done by Mid November. Staff will review for edits, and hope to go out for bid starting in 2021.

**Staff:** Bryan Pynn-WCD; Matt Downing-MSCWMO

#### Watershed Based Funding- Lily Lake Raingardens

**Description:** \$39,636 CWF Watershed Based Funding allocation to improve water quality. The funding is approved to provide the design and installation of two raingardens on Lily Lake in Stillwater.

**Activities This Month:** Funding approved for re-allocation to the LSCB Bluff project. Project starting week of October 5<sup>th</sup>.

**Staff:** Bryan Pynn - WCD

#### Lake St. Croix Small Communities Phosphorus Reduction Grant

**Description:** \$200,000 grant for stormwater quality improvement south of Bayport (2019-2021). Planning to work in partnership with City of Lake St. Croix Beach to stabilize the bluff on the north side of town.

**Activities This Month:** Final contracts being signed. Pre-construction meeting scheduled for October 5<sup>th</sup>. Construction to start immediately after. SEH (city engineer) and WCD staff will be sharing construction observation duties.

**Staff:** Bryan Pynn - WCD; Matt Downing - MSCWMO

#### 3M PFAS Settlement MPCA Staff Reimbursement Grant

**Description:** Up to \$20,000 reimbursement of staff time for both the Administrator and consultant (Stu Grub with EOR) to participate in the development of the groundwater model for the PFAS contamination in the southern portion of the watershed.

**Activities This Month:** Email updates have been sent as received.

**Staff:** Matt Downing, MSCWMO Stu Grub, EOR

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### Microbial Source Tracking of *E. coli* in Perro Creek

**Description:** The MSCWMO and the City of Bayport agreed to partner on an effort to identify the source of *E. coli* contamination of Perro Creek. 4 locations on the creek were sampled for the presence or absence of human DNA in the bacteria. This effort is above and beyond the concentration monitoring already being conducted by the MSCWMO.

**Activities This Month:** The final sample of the study was completed on September 9<sup>th</sup>. No human sourced DNA markers were detected in any of the sample locations.

**Staff:** Rebecca Oldenburg Giebel, WCD

### Water Monitoring Program

**Description:** The MSCWMO water monitoring program includes the monitoring of flow at three sites. These sites have that equipment serves to collect data on the total volume of water flowing into Lily Lake at the Greeley Street Inlet, through Perro Creek at the Diversion Structure, as well as, the Perro Creek Diversion Structure Overflow. Water quality is also collected at the Greeley Street Inlet and the Perro Creek Diversion Structure on a monthly basis, as well as during storm events.

Additionally, the MSCWMO monitors two lakes, Lily and McKusick for several parameters from April-October. Data is collected on both lakes on a biweekly basis and includes: water level, clarity, pH, temperature and dissolved oxygen profiles, an aesthetics and user profile, and field conditions. Additionally, water quality samples are collected from the surface of the lakes and analyzed for total phosphorus, total Kjeldahl nitrogen, and chlorophyll.

**Activities This Month:** Monitoring continues to occur at Perro Creek and Greeley Street catchments. Routine visits to swap batteries, download data, and perform routine maintenance were completed. Storm and base flow samples were collected at Greeley Street. Lake monitoring on Lily and McKusick has continued with ten samples having been collected on each lake.

**Staff:** Rebecca Oldenburg Giebel, WCD; Aaron DeRusha, WCD

### Erosion and Sediment Control Inspections

**Description:** The MSCWMO has contracted with the WCD to conduct erosion and sediment control inspections for construction projects that have been reviewed and recommended for permit approval by partner communities.

**Activities This Month:** None

**Staff:** Aaron DeRusha WCD

### BMP Maintenance

**Description:** The MSCWMO has a maintenance obligation for its Capital Improvement Projects and projects funded by Clean Water Fund grants. The MSCWMO partners with the Washington Conservation District to fulfill this maintenance requirement.

**September Activities:** Soil and vegetation condition at the Stillwater Country Club was discussed with some vegetative maintenance occurring. Tillage radish seed was planted

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with plans to plant more in spring of 2021 to address soil compaction along the berm areas. The Perro Creek native buffer will be evaluated next year to address the impacts of an accidental mowing by an external party. Golden creeper treatment occurred in the Mulberry Ravine.

**Staff:** Cameron Blake, WCD

### Meetings

- Lily Lake Basin Kickoff-September 21<sup>st</sup>
- LSC1W1P Steering Team Meeting-September 24<sup>th</sup>