

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 Bayport Public Library, Bayport, MN Thursday, November 9, 2017 6:00PM

1. Call to Order – 6:00PM
2. Approval of Minutes
 - a) Draft minutes- October 12 , 2017 **Pages 1-2**
3. Treasurer's Report
 - a. Report of savings account, assets for November 9, 2017
 - b. Approve payment of bills for November 9, 2017
4. Public Comments
5. Old Business
6. New Business
 - a. Chlorides Water Quality Presentation **Pages 3-4**
 - b. 2018 Liability Insurance Waiver **Page 5**
 - c. 2017 Savings Account Transfer **Page 6**
 - d. WCD Cost Share Contract for Greeley Gully **Page 7**
7. Grant and Cost Share Applications
8. Plan Reviews/Submittals
9. Administrator's Report **Page 8-9**
10. Adjourn

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Regular Meeting of the Middle St. Croix Watershed Management Organization Bayport Public Library, Bayport, MN Thursday, October 12, 2017 6:00PM

Present: City of St. Mary's Point, Nancy Anderson; City of Lakeland, Joe Paiement; Lakeland Shores, John Fellegly; Baytown, Mike Runk; Afton, Tom McCarthy; West Lake Township, Dan Kylo; Administrator: Mike Isensee.

1. Call to Order – 6:00PM

The meeting was called to order by Mike Isensee at 6:00pm

2. Approval of Minutes

- a. Draft minutes- September 14 , 2017

Motion to approve minutes was made by Mike Runk, seconded by Tom McCarthy. Motion carried.

4. Treasurer's Report

- a. Report of savings account, assets for October 12, 2017

Administrator Isensee provided an overview of savings account. Motion to approve report of savings account was made by John Fellegly, Tom McCarthy seconded. Motion carried.

- b. Approve payment of bills for October 12, 2017

Administrator Isensee provided an overview of bills for October. Motion to approve payment of bills was made by Dan Kylo, seconded by Mike Runk. Motion carried.

5. Public Comments

6. Old Business

7. New Business

- a. St. Croix Master Water Stewards Grant Application

Administrator Isensee explained the St. Croix Master Water Stewards Program is accepting applications for up to \$5,000.00 for organizations partnering with Master Waters Stewards on water quality and environmental education, with the goal of dramatically increasing the stewardship ethic and activities in the St. Croix Watershed.

Staff is recommending applying for the grant to establish an Adopt-A-Raingarden program in partnership with Master Water Steward Nancy Anderson and East Metro Water Resource Education Program. If awarded, the funding will be utilized to cover the costs of the development, printing and purchase of materials and development of a volunteer training program.

Motion to approve application made by Mike Runk, Nancy Anderson seconded. Motion carried.

- b. Washington County Annual Budget Review Materials

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Administrator Isensee provided an overview of the annual budget.

c. 2018 WCD Fee for Services Agreement

Administrator Isensee provided an overview of the services of agreement. Motion to approve the 2018 Washington Conservation District Services agreement not to exceed \$167,049.00 was made by Joe Paiement, seconded by Dan Kylo. Motion carried.

8. Grants and Cost Shares

a. Buffering the St. Croix Reimbursement Request, St. Mary's Point

Administrator Isensee explained that Nancy Anderson, St. Croix Master Water Steward, working in partnership with the MSCWMO was awarded a \$2,535.00 EPA subgrant to design and install a native plant buffer on Lake St. Croix. The final project is now fully installed at 2870 Itasca Avenue in St. Mary's Point. MSCWMO Technical staff have verified the installation and receipts totaling \$1,751.04

Motion to approve request was made approve reimbursement of 1,751.04 for the successful installation of the native shoreline buffer on Lake St. Croix. by John Fellegly, seconded by Mike Runk. Motion carried.

b. Nelson School Townhouse Permeable Paver Application, Stillwater Motion by Tom MacCarthy, seconded by John Funk, to approve a water quality grant not to exceed \$250.00 for the installation per plans of a 450 square foot permeable paver sidewalk at 1018 First Street South. Motion carried.

c. Meyer Infiltration Basin, Raingarden, and Bluff Drainage Improvement, Lakeland Discussion: Recognition that this was a municipal drainage, community project. \$7,000 landowner cost share; Only \$875 out of MSWMO budget. The project is not complete and technical staff has verified it was constructed per plan. Total receipts for the project were verified at \$8,199.52. Staff recommend reimbursement of \$6,121 from the Lake St. Croix Grant and \$879.00 from the MSCWMO cost share program for a total reimbursement of \$7,000.00. John Funk moved to approve, Tom McCarthy seconded. Motion carried.

9. Plan Reviews/Submittals

a. CSAH 14/24 Reconstruction, Baytown Township

Motion to approve plan was made by Dan Kylo, seconded by Mike Runk. Motion carried.

b. Ecumen Senior Living Facility New Development, Stillwater

Motion to approve was made by John Fellegly, seconded by Dan Kylo. Motion carried.

10. Administrator's Report

a. Administrator Isensee submitted and reviewed the Administrators Report.

Adjourn

Dan Kylo moved to adjourn at 6:48 pm, Mike Runk seconded. Meeting adjourned.

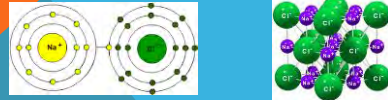
ROAD SALTS AND CHLORIDES

NOVEMBER 2017



CHEMICAL COMPOSITION

- The typical Chemical composition of road salts is a 1:1 ratio of Sodium, and Chloride or NaCl, because this is the most inexpensive and widely available mix.
- While table salt is refined to remove impurities, rock salt used on roads contains mineral impurities which is why the color is often gray or brown.
- Additives may also be mixed with the salt to ease the application and prevent caking
- These additives include sodium hexacyanoferrate(II), brine and sugar



HOW THEY WORK

- Road Salts work by lowering the freezing temperature of water in a process called freezing point depression.
- Works by dissolving into its component ions (Na and Cl) in liquid water, which makes it more difficult for the water molecules to bond and freeze.
- Requires some amount of liquid water for the process to occur, which is why road salts don't always work in extremely cold temperatures.

ENVIRONMENTAL RISKS

78% of salt applied in the Twin Cities stays in our water.



Chloride can be removed with reverse osmosis

"The average amount of reported salt in the Twin Cities Metro Area use per winter season (2001 to 2006) was 236,800 tons per year." – University of Minnesota

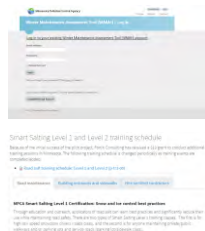
OPPORTUNITIES TO REDUCE SALT IS THE KEY

Request staff and contractor attain **Smart Salting Applicators Certification**.

Educate residents on the benefit of **smart salt use**.

Create **awareness** about environmental impacts of salt.

Recognize private winter maintenance organizations for **upgrading equipment** or implementing innovative practices.



"An ounce of prevention is worth a pound of cure" – Ben Franklin

WAYS TO REDUCE SALT

- **Pre-wetting** salts helps them to stay in place and more effectively melt ice.
- Applying salt **just before a storm** hits allows for less salt to be used, and better prevents the ice from adhering to the road.
- Reducing or avoiding road salt application **near sensitive features** such as lakes and streams, or areas prone to flushing.
- Knowing that **NaCl mixes do not work below 15 degrees Fahrenheit**, can help to avoid adding salts when they have no benefit and are more likely to be flushed from the area.
- **Calibrating equipment**

Could saltwater be the solution to Minnesota's road salt problem?

The Minnesota Department of Transportation used more brine solutions before snowy weather this winter than in years past, but traditional salt and sand are still heavily used.

By Michael Korman/Star Tribune 11/15/16 11:20 AM



City of Minneapolis plows drivers salted intersections and plowed trouble spots across the city on Feb. 7, 2015.

These familiar thick carpets of blue salt crystals could soon be a thing of winters past on Minnesota roads. Instead, expect to see more brine. Liquid wetting agents, like salt brine, are the current state-of-the-art winter maintenance world, while granular anti-icing agents – like sand and rock salt – get used more sparsely and for specific purposes, according to the Minnesota Department of Transportation, academic researchers and environmental consultants.

ALTERNATIVES ARE EXPENSIVE

| Product | Cost Relative to Road Salt | Freezing Point Depression (degrees C per unit weight) | Effective Lower Limit (degrees F) | Corrosive? | Aquatic Toxicity | Other Environmental Impacts |
|---|----------------------------|---|-----------------------------------|------------|------------------|-----------------------------|
| Road Salt or Rock Salt (NaCl) | \$1.00 | 1 | 20 | Yes | Moderate | Roadside tree damage |
| Potassium Chloride (KCl) | \$1.60 | 0.78 | 12 | Yes | Very | K fertilization |
| Magnesium Chloride (MgCl ₂) | \$2.40 | 0.28 | 5 | Yes | Very | Mg addition to soil |
| Calcium Chloride (CaCl ₂) | \$5.70 | 0.53 | -25 | Very | Moderate | Ca addition to soil |
| CMA - Calcium Magnesium Acetate (C ₄ H ₈ CaMgO ₆) | \$19.30 | 0.30 | 0 | No | Indirect | Decreased aquatic oxygen |
| Potassium Acetate (CH ₃ CO ₂ K) | \$26.30 | 0.60 | -35 | No | Indirect | Decreased aquatic oxygen |
| Urea (CH ₄ N ₂ O) | \$1.80 | 0.97 | 15 | No | Indirect | N fertilization |
| Sand | \$0.60 | 0 | - | No | Indirect | Sedimentation |

SOURCES:

- <https://www.pca.state.mn.us/water/defaul/Files/wq-tr15-008.pdf>
Twin Cities Metropolitan Area Chloride Management Plan; MPCA
- <https://www.pca.state.mn.us/water/salt-and-water-quality>
Salt and water quality; MPCA
- https://stormwater.pca.state.mn.us/index.php/016-Road_salt
Road salt; MPCA
- <https://www.pca.state.mn.us/water/defaul/Files/wq-tr15-008.pdf>
Twin Cities Metropolitan Area Chloride Total Maximum Daily Load Study; MPCA
- <https://www.pca.state.mn.us/water/salt-application-training>
Salt application training; MPCA
- <http://www.startribune.com/could-salt-be-the-solution-to-minnesota-s-road-salt-problem/418744658/>
Could saltwater be the solution to Minnesota's road salt problem? Mitch Emmel-Duke

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MEMORANDUM

TO: Middle St. Croix WMO Board of Managers
FROM: Mikael Isensee, Administrator
DATE: November 9, 2017
RE: **6b) League of Minnesota Cities 2018 Liability Insurance**

The MSCWMO is required to annually review and renew liability insurance and elect to waive or not waive the limits on tort liability. Based on past recommendations from the MSCWMO attorney, it is recommended that the board not waive tort liability limits.

EXAMPLE BOARD MOTION FOR MINUTES:

2018 Liability Coverage Waiver

Motion by Board Member 1, seconded by Board Member 2, to not waive the monetary limit on municipal tort liability.

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MEMORANDUM

TO: Middle St. Croix WMO Board of Managers
FROM: Mike Isensee, Administrator
DATE: November 9, 2017

RE: 6c) Savings Account Deposit

The MSCWMO Annual budget sets aside \$1,000 per year for water monitoring equipment savings and \$6,000 per year for Watershed Management Plan savings. Staff is requesting board approval to transfer \$7,000 from the watershed checking account into the watershed savings account for savings identified in the 2017 annual budget.

Savings Account Deposit

Motion by Board Member 1, seconded by Board Member 2, to transfer \$7,000 from the watershed checking account to the watershed savings account as directed in the 2017 MSCWMO Budget.

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MEMORANDUM

TO: Middle St. Croix WMO Board of Managers
FROM: Mike Isensee, Administrator
DATE: November 9, 2017

RE: 6d) WCD Greeley Gully Cost Share Contract

The \$99,158.00 Greeley Gully stabilization project that will reduce phosphorous loading to Brick Pond and Lily Lake by 40.6 pounds of phosphorous per year. During construction, 17 additional trees were identified that required removal and an additional 23 cubic yards of rip rap were needed to ensure the outfalls would remain stable. These change orders increased the cost of the project by \$4,665.00. The Washington Conservation District has funding available to cover additional costs incurred by change orders for the Greeley Gully stabilization project.

Greeley Gully Cost Share Contract

Motion by Board Member 1, seconded by Board Member 2, to enter into the Washington Conservation District Cost Share Agreement not to exceed \$4,500.00 for the completion of the Greeley Gully Stabilization project.

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Administrator's Report- November 2017

Administration

- Lakeland Local Surface Water Management Plan Review and Comments
- Adopt A Raingarden Coordination
- Washington County Annual Budget Presentation Materials

Project Reviews

- Ecumen Senior Housing revisions, Stillwater
- CSAH 5 review and comments, Stillwater
- CSAH 24 technical review and comments, Stillwater
- St. Croix Crossings Cadet Infiltration Basin communications, Stillwater
- 2909 Itasca pre-application meeting, St. Marys Point
- Miller Farms Phase VI pre-application on site meeting, Baytown
- 1699 Rivercrest Road pre-application and on site meeting, Lakeland

Conservation Project Technical Assistance and Cost Share

Managing Existing Projects

St. Croix Watershed Improvement Grant

Description: \$40,000 grant from St. Croix River Association with a goal to monitor phosphorous discharge to target the location for future phosphorous reduction best management practices (2015-2017).

Activities This Month: COMPLETED!!

Lake St. Croix Direct Discharge Grant

Description: \$142,000 grant for stormwater quality improvements in Oak Park Heights, Stillwater and Bayport (2014-2018).

Activities This Month: Communication with contractor. Grant extension request to the Board of Water and Soil Resources.

Lily Lake Phase III Grant

Description: \$109,000 for stormwater quality improvements for areas discharging to Lily Lake (2014-2017)

Activities This Month: Construction oversight. Hopefully done in November.

South Beach Flood Damage Repair Grant

Description: \$40,000 grant to incorporate native vegetation into a soil filled rip rap shoreline stabilization project on Lake St. Croix in St. Croix Beach (2014-2016)

Activities This Month: COMPLETED!

South Lake St. Croix Direct Discharge Subwatershed Analysis Grant

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Description: \$10,000 grant to investigate and prioritize water quality improvement projects in the South MSCWMO (2016).

Activities This Month: No action.

Lake St. Croix Direct Discharge Phase II

Description: \$151,000 grant for stormwater quality improvements in Oak Park Heights, Stillwater and Bayport (2015-2018).

Activities This Month: No action.

Lily Lake Final – 45

Description: \$65,000 grant to identify and partially design stormwater practices to reduce phosphorous discharges to Lily Lake by at least 45 lbs. per year.

Activities This Month: Communications with the City of Stillwater and EOR design consultants. Signed contract with Wenk to conduct soil core samples and evaluation.

Perro Creek Water Quality Improvements Phase I

Description: \$63,000 grant to design and install stormwater quality practices to reduce nutrients and bacteria discharging directly into Perro Creek and then to Lake St. Croix.

Activities This Month: Met on site with Bayport Staff, conducted survey of all potential BMP locations, started concept design and cost estimates.

Meetings

- Washington County Water Consortium
- One Watershed One Plan Partners Meeting
- Green Corps Weekly Check-in Meetings