

MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION

2015 ANNUAL REPORT



Lily Lake, Stillwater

Prepared by:

MIDDLE ST. CROIX WMO BOARD OF MANAGERS
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INTRODUCTION

The Middle St. Croix WMO encompasses approximately 19.8 square miles and is located in the east-central part of Washington County. A distinction exists between the Middle St. Croix watershed and the other watersheds of Washington County in that the Middle St. Croix watershed has many small, parallel watersheds that all flow to the St. Croix, whereas the other watersheds in the County generally have one major drainage with a headwaters and outlet. Land use in the watershed is evenly distributed between agricultural uses, rural residential, high-density residential and commercial land uses.

The Middle St. Croix Watershed Management Organization (MSCWMO) is a Joint Powers Watershed Management Organization composed of ten St. Croix Valley communities that was established under State Statute 103B to cooperatively manage water resources within the watershed. The ten member communities of the MSCWMO are: Afton, Bayport, Baytown Township, Lakeland, Lakeland Shores, Lake St. Croix Beach, Oak Park Heights, St. Mary's Point, Stillwater, and West Lakeland Township

In general, the purposes of a Watershed Management Organization (WMO) are to conserve natural resources through land use planning, flood control, and other conservation projects in order to ensure continued public health and welfare. The specific purposes of a watershed management organization are:

- Cooperatively manage water resources in the watershed.
- Inventory and assess the resources of the watershed.
- Monitor the water quality of lakes and streams in the watershed.
- Provide education on water related issues in the watershed.
- Review development plans for stormwater management, erosion and sediment control, and provide wetland and shoreland protection.
- Plan and implement capital improvement projects that enhance the water resources of the watershed.

The mission of the Middle St. Croix Watershed Management Organization is to jointly and cooperatively manage the water resources of the watershed. The ten member communities will do so to conserve and protect the water resources in an efficient and effective manner.

ORGANIZATION AND BUDGET

MSCWMO Board of Managers

Each member municipality or township within the MSCWMO appoints one member to the MSCWMO Board. The 2015 representatives from each participatory community are listed below.

Vacant Afton, MN	Tom McCarthy 16455 20 th St. S. Lake St. Croix Beach, MN 55043 651.436.7031
Brian Zeller (Chair) 55 Lakeland Shores Rd Lakeland Shores, MN 55043 612.325.3038	Nancy Anderson 2870 Itasca Ave. S. St. Mary's Point, MN 55043 651.436.7157
Chuck Dougherty 14168 Oak Park Blvd. N. Oak Park Heights, MN 55082 651.439.4439	John Fellegly 4220 Osgood Ave N. Baytown Twp., MN 55082 612.275.2200
Doug Menikheim 527 Broadway Ave. S. Stillwater MN 55082 612.382.4929	Joe Paiement 1190 St. Croix Trail South Lakeland, MN 55043 651-436-4430
Dan Kylo 1891 Oldridge Ave. N. West Lakeland Township, MN 55082 651.436.1134	Dan Goldston 294 North Third St. Bayport, MN 55003 651-275-4404

MSCWMO Contract Support Staff

The MSCWMO does not employ staff but does contract with several organizations for professional services. The organizations providing these services are listed below.

Administrator Mikael Isensee Washington Conservation District 455 Hayward Avenue, Oakdale MN 55128 651.330.8220 Ext. 22	Attorney Troy Gilchrist 470 Pillsbury Center 200 South Sixth Street Minneapolis, MN 55402 612.337.9215 tgilchrist@kennedy- graven.com	Recording Secretary Shari Larkin Washington Conservation District 455 Hayward Avenue, Oakdale MN 55128 651.330.8220 Ext. 27
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Table 1: 2015 Budget

Administration Budget	Community Contributions	Reserve
Administration – General	\$ 27,000	-
Accounting	\$ 1,500	-
Legal Fees – General	\$ 1,000	-
Audit	\$ 1,700	-
Insurance & Bonds	\$ 3,000	-
Office supplies/equipment/postage	\$ 750	-
Minutes/Clerical	\$ 1,000	-
Copying/printing	\$ 750	-
Subtotal	\$ 36,700	
Project		
Project contingency	\$ 2,000	-
Engineering – Project	\$ 5,000	-
Development Plan Reviews	\$ 4,809	-
Erosion Monitoring Program	\$ 2,080	-
BMP Program Tech. Assistance	\$ 16,500	-
BMP Program Cost Share Grants	\$ 9,500	-
Community TA	\$ 3,000	-
Water Resource Educator	\$ 5,500	-
Website	\$ 500	-
Water Monitoring	\$ 16,411	-
Water Monitoring Equip Savings	\$ 1,000	-
2015 WMP Update	\$ 6,000	-
	Subtotal \$ 72,300	
Total – 2015 Budget \$ 109,000		

Table 2: 2016 Draft Budget

Administration Budget	Community Contributions
Administration - General	\$ 29,200
Accounting	\$ 1,500
Legal Fees – General	\$ 1,000
Audit	\$ 1,900
Insurance	\$ 3,000
Office supplies/equipment/postage	\$ 750
Minutes/Clerical	\$ 1,100
Copying/printing	\$ 750
Subtotal	\$ 39,200
Project Budget	
Project Contingency	\$ 2,000
Engineering - Project	\$ 5,400
Development Plan Reviews	\$ 4,800
Erosion Monitoring Program	\$ 2,250
BMP Program Tech. Assistance	\$ 25,859
BMP Program Cost Share	\$ 19,500
Community TA	\$ 3,000
Water Resource Educator	\$ 6,000
Website	\$ 750
Inspection and Tracking Database	\$ 600
Water Monitoring	\$ 16,411
Water Monitoring Equip. Savings	\$ 1,000
2025 WMP Update	\$6,000
Subtotal	\$ 93,570
TOTAL	\$ 132,770

AUDIT REPORT

Michael Peterson, Certified Public Accountant & Consultant, completed an audit of the financial management of the WMO for the year 2015. The result of this audit disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards, and that the MSCWMO does comply with the material terms and conditions of applicable legal provisions. In the opinion of the auditor, the financial statements of the MSCWMO for the year ending December 31, 2015 were in conformity with accounting principles generally accepted in the United States of America.

2015 PROGRAMS AND PROJECTS

The MSCWMO Watershed Management Plan (WMP) was completed and approved in October 2015. As a part of the review and approval process, the Joint Powers Agreement to Protect and Manage the Middle St. Croix Watershed (JPA) was updated in late 2005 and signed by member communities in early 2006.

2015 Implementation of Performance Standards

The mission of the MSCWMO is to jointly and cooperatively manage water resources within the WMO and to provide effective and efficient services to the residents of the watershed. To work towards meeting this goal, the MSCWMO chose to integrate its performance standards into existing city and township review processes rather than create its own separate permit program. This integration has two levels. One, the communities within the WMO are to submit project applications to the WMO for staff level review whenever a proposed project requires a city building permit and adds 500 square feet of new impervious surface, or if a project requires a variance from local impervious surface zoning requirements for the property. And, two for projects that meet the criteria listed in section 7.0 of the 2015 WMP, full project review and comment by the MSCWMO board is required.

Community Implementation of MSCWMO Performance Standards

The MSCWMO Watershed Management Plan requires that each community within the watershed provide a report summarizing the projects (variances, building and grading permits) within their respective community and the application of the MSCWMO performance standards in regards to these projects. Table 3 summarizes project reviews which were completed in the MSCWMO in 2015. All ten of the member communities have completed their Local Water Management Plans, which provides guidance on how to complete the MSCWMO review process. The MSCWMO review process is applied consistently in each of its ten member communities.

Table 3: 2015 Community Implementation of Performance Standard

Community	2015 Implementation of Performance Standards
City of Afton	<ul style="list-style-type: none"> No projects referred to the MSCWMO in 2015 for staff level review
City of Bayport	<ul style="list-style-type: none"> 11 Point Road Bayport Fire Station Inspiration Phase III 515 Lakeside Drive South
Baytown Township	<ul style="list-style-type: none"> Miller Farms Phase IV Miller Farms Phase V
City of Lakeland	<ul style="list-style-type: none"> 464 Quinlan Ave North
City of Lakeland Shores	<ul style="list-style-type: none"> No projects referred to the MSCWMO in 2015 for staff level review
City of Oak Park Heights	<ul style="list-style-type: none"> St. Croix Waste Water Treatment Plant Outfall Replacement 1440 West Frontage Road Realignment Oak Park Heights Area D Street Reconstruction 60th Street North between Oren Ave and Osgood Ave Oak Ridge Memory Care, 6060 Oxboro Avenue North
City of Stillwater	<ul style="list-style-type: none"> Richline, 13310 Boutwell Road CSAH 12 Reconstruction
City of Lake St. Croix Beach	<ul style="list-style-type: none"> 16455 20th Street South
City of St. Mary's Point	<ul style="list-style-type: none"> 2929 Itasca Ave South
West Lakeland Township	<ul style="list-style-type: none"> No projects referred to the MSCWMO in 2015 for staff level review

Information and Education Program

Shared water Resource Educator

The MSCWMO continues to participate in the shared East Metro Water Resource Education Program (EMWREP). During 2015, EMWREP continued to use a variety of strategies to educate the general public about stormwater pollution and other issues affecting the quality of surface and groundwater resources, and to inform them about partner programs and activities. EMWREP contributed 73 press releases and news columns to 18 area newspapers, in addition to producing educational content for city newsletters, social media, and on-line news sites. EMWREP staff attended more than 20 community events and participated in the planning and program development for several regional water education initiatives as well.

Though the impact of these larger public education and awareness raising efforts is often hard to measure directly, we know they greatly improve the success of our targeted outreach activities and

are usually the initial gateway through which people learn about EMWREP partner organizations and engage at a higher level by attending a workshop, participating in a watershed planning process, or installing a clean water project on their property.

In 2015, EMWREP also conducted the following special education projects:

- Continued outreach with Homeowners' Associations
- Provided education about groundwater and water conservation
- Worked to build relationships with lake associations
- Engaged citizens in watershed activities and plan updates
- Supported water education for area youth
- Helped WaterShed Partners develop a new metro-wide water education initiative

Blue Thumb Program: EMWREP uses Blue Thumb – Planting for Clean Water (www.BlueThumb.org) tools and resources to conduct public education and enhance outreach efforts, as well as promote watershed cost-share programs, conduct targeted outreach for neighborhood raingarden projects, and teach educational workshops for homeowners. The program was developed by the Rice Creek Watershed District in 2006 and is now led by Metro Blooms.

- In 2015, EMWREP conducted raingarden design workshops in Bayport and Marine on St. Croix, and held raingarden maintenance workshops in Lake Elmo and Stillwater. We also coordinated neighborhood parties in Stillwater and Oakdale.
- In January 2015, we conducted a survey of 433 BMP participants and workshop attendees from 2010-2015. 82 people responded.

Stormwater U: In 2015, EMWREP coordinated with Minnesota Extension, the University of Minnesota Erosion and Stormwater Management Certification Programs, and the Minnesota Erosion Control Association (MECA) to provide professional training and workshops for local government staff and consultants, as well as builders, developers and contractors, including:

- 1) Turfgrass Maintenance
- 2) Stormwater Practices Inspections and Maintenance; and
- 3) Erosion Control

EMWREP also distributed a set of ten 10-minute PowerPoint presentations for municipal partners to use during monthly staff meetings. The presentations cover training topics included under Minimum Control Measure 6 of the MS4 permit.

NEMO: The Northland NEMO program (Non-point Education for Municipal Officials) provides local elected officials and decision makers with resources and information to make informed decisions about land use and water quality in their communities. Northland NEMO is hosted by the University of Minnesota Extension and EMWREP is a partner organization.

During 2015, EMWREP collaborated with NEMO and local partners to host two workshops for local decision makers:

- St. Croix River Workshop on the Water: Aug. 6

The MSCWMO plans to continue working through the EMWREP in 2016.

A full report of EMWREP activities completed in 2015 can be viewed at the following link:

<http://www.mscwmo.org/watershed-education>

Website

The MSCWMO continued to update its website in 2015. The website contains up to date meeting dates, agendas, minutes, annual reports, water monitoring information, contact information and more. In addition, the website also contains a section for grant reporting which highlights projects completed as part of the BWSR Clean Water Legacy Program. The website also contains a tab “for developers” which provides all necessary information on the MSCWMO’s project review process. The MSCWMO website can be viewed at the following link:

<http://www.mscwmo.org>

2015 Data Collection Program

Water Quality Monitoring Program

In 2015 the Middle St. Croix Watershed Management Organization (MSCWMO) continued condition monitoring and water quality and elevation biweekly on McKusick Lake and Lily Lake. Information from the Brown’s Creek Diversion Drainage which flows to McKusick Lake is monitored by the Brown’s Creek Watershed District, but resulting information is also provided to the MSCWMO for use in management planning. The MSCWMO also conducted flow and nutrient grab sample monitoring on seven outfalls discharging to Lily Lake, including the Brick Pond outfall. This will enable the MSCWMO to better determine specific sources of pollutants and more effectively implement management strategies and practices to address those sources.

Full water monitoring reports can be viewed on our website. The 2015 monitoring report will be available in July of 2016.

<http://www.mscwmo.org/water-monitoring>

2015 Projects

Construction Monitoring Program

The MSCWMO construction-monitoring program was developed to ensure that the policies and performance standards of the MSCWMO were implemented on the ground for qualifying projects. Staff continues to monitor projects, which were reviewed by the MSCWMO board. The MSCWMO coordinates its inspection program with its member communities and their building/permit inspectors.

BMP Inspections and Maintenance

The MSCWMO BMP Inspection and Tracking Database was developed to ensure that the installed practices are meeting functional and aesthetic expectations. In 2015 all MSCWMO projects were inspected and targeted maintenance was performed on over 100 best management practices.

Groundwater

The MSCWMO continued to recognize the Washington County Groundwater Plan during 2015 and continued to participate in a County wide technical advisory committee meetings to prioritize implementation and identify responsible parties for specific activities. In addition, the MSCWMO

continued to participate in the North and East Metro Groundwater Management Plan Stakeholder Input Process.

Local Government Controls

The MSCWMO continued to work with its member communities to strengthen water quality and natural resource management. Through a Clean Water Fund Accelerated Implementation grant the MSCWMO is assisting its member communities to update their local controls. By the end of 2015 the MSCWMO plans to have council resolutions to adopt Minimum Impact Design Standards into local ordinance and code. All communities will continue to participate in the MSCWMO's project review program.

St. Croix Beach Shoreline Stabilization

The MSCWMO worked collaboratively with the City of Lake St. Croix Beach and the St. Croix River Association to stabilize an eroding shoreline on Lake St. Croix. Specifically the project applied bio-engineering practices in combination with hard armor shoreline stabilization methods to stabilize 400 feet of Lake St. Croix in the City of Lake St. Croix Beach. Stabilizing this shoreline, which was substantially damaged during high water levels of June 2014, reduced soil loss by 268 tons and reduce phosphorous 228 lbs. as estimated by the Board of Water and Soil Resources Pollutant Load Estimator. Incorporating bio-engineering approaches which include native vegetation serve multiple functions: decreasing erosion during flood events, reducing shoreline damage during spring ice flow, maintaining native habitat along the river flyway, and reducing the establishment of terrestrial invasive species.

Subwatershed Implementation Program

Lake St. Croix

In 2013, the MSCWMO received a grant from the Board of Water and Soil Resources Clean Water Fund to install stormwater treatment features and stabilize an eroding bluff that drains to the St. Croix River. The MSCWMO coordinated with the city of Lakeland to identify design solutions along Quixote Avenue to reduced volume and phosphorous discharging to the St. Croix River. The project was completed in 2015.

In 2015, the MSCWMO received a grant from the Board of Water and Resources Clean Water Fund to install stormwater treatment features as prioritized in the 2014 Lake St. Croix Direct Discharge Subwatershed Analysis. The MSCWMO coordinated with the City of Oak Park Heights to install the first phase of the project, seven curb cut bioretention cells, in 2015. Construction documents and project installation for the remaining projects are planned for the summer of 2016.

Lily Lake, Stillwater

In 2012, the MSCWMO received a grant from the BWSR's Clean Water Fund to implement a portion of the projects outlined in the 2010 Lily Lake Subwatershed Assessment study. In 2014 four projects were installed. In 2015 the grant was completed.

In 2013 the MSCWMO received funding from the BWSR's Clean Water Legacy Program to fund the third phase of project implementation within the Lily Lake Subwatershed. Project outreach and plan development began in the winter of 2014 and continued throughout 2015. Final project design and installation is planned for 2016.

Lake McKusick, Stillwater:

In 2012, the MSCWMO received a grant from the BWSR's Clean Water Legacy Program to implement a portion of the projects outlined in the 2010 Lake McKusick Subwatershed Assessment study. Implementation was focused on catchment McKusick-25. Four projects were designed and installed and grant reporting completed in 2015.

Perro Creek:

In 2013, the MSCWMO with supporting funding from Metropolitan Conservation District conducted a subwatershed analysis for the Perro Creek Subwatershed. As part of the analysis, potential BMPs were mapped throughout the drainage areas and cost estimates were developed for each of the projects. In 2015 the MSCWMO sent a mailing to residents along the creek to remind them to remove leaf litter from the creek. Implementation of BMPs identified in the subwatershed analysis is planned for 2018.

<http://www.mscwmo.org/subwatershed-assessments>

Best Management Practices Program

The MSCWMO continued to promote its Best Management Practices Program during 2015. A total of \$26,000.00 was designated in the 2015 budget for both cost-share and technical assistance for residents and communities within the MSCWMO. Three projects were awarded funding in 2015.

The following is a list of approved projects and a brief description of the project:

Buck Native Garden (TSS: 200): Native planting in the Lake St. Croix watershed. This 2,500 square foot native plant restoration area established native plants along a previously turf ditch.

Adams Raingarden (TP: 0.21; TN: 0.54; TSS: 24.7): This raingarden project in Stillwater included multiple raingardens (250 square feet total) to intercept and infiltrate stormwater prior to discharge to Lake St. Croix.

Martin Raingarden (TP: 0.05): A 160 square foot raingarden that captures and treats roof runoff in Stillwater. The project captures and infiltrates stormwater runoff that was discharging directly to the St. Croix River via storm sewer piping.

2016 WORKPLAN

Best Management Practices Program

The MSCWMO will continue to promote its Best Management Practices Program in 2016. A total of \$45,359 of the 2016 budget has been dedicated to both cost-share and technical assistance. The MSCWMO will continue to work to engage landowners in the Lily Lake, McKusick Lake and Stillwater direct discharge subwatersheds. The MSCWMO will continue to look for opportunities to collaborate with multiple landowners and communities to leverage additional funding and complete larger projects as part of its Best Management Practices Program. For 2016, the board is reviewing and considering revisions to its cost share programs.

Water Monitoring

The MSCWMO will continue water quality condition monitoring program for Lily and McKusick Lakes. The MSCWMO has hired the Washington Conservation District to complete monitoring activities on McKusick Lake and Lily Lake. The MSCWMO will implement a second year of outfall monitoring on Lily Lake and will conduct the first year of problem investigation monitoring on Brick Pond and Perro Creek and Perro Pond in 2016. This approach will enable the MSCWMO to better target sources of phosphorous loads and more effectively implement management strategies and practices to address those sources.

Public Education and Outreach Programs

The MSCWMO will continue to participate in the East Metro Water Resource Education Program. The activities and programs offered through this partnership will help MSCWMO meet its goals for education and outreach.

Comprehensive and Local Water Management Plan Assistance

The MSCWMO will continue to offer assistance to its member communities in the implementation of their existing and updated local water management plans.

Erosion and Sediment Control and Stormwater Management Ordinance Updates

The MSCWMO will continue to assist its member communities to update local controls to incorporate MSCWMO performance standards. All updates are anticipated to be complete by the end of 2016.

Development Plan Reviews and Erosion Monitoring Program; MSCWMO Policies and Performance Standards

The MSCWMO will continue to review qualifying projects for consistency with the 2015 Watershed Management plan, and will continue to coordinate its review process with its member communities. Staff will also continue to monitor current and past projects to ensure stormwater management features are functioning as planned. The MSCWMO will promote trainings and events that will improve performance on future projects.

Urban Subwatershed Assessments and Implementation

The MSCWMO will work with the City of Stillwater to implement the recommendations of the 2010 Lily Lake Subwatershed Assessments. In 2013 the MSCWMO received funding from the

BWSR's Clean Water Legacy Program to fund the third phase of project implementation within the Lily Lake Subwatershed. Final project design and installation is planned for 2016.

An assessment of the Perro Creek/Perro Pond subwatershed was completed in 2013. This assessment prioritized stormwater runoff pollutant reduction practices mostly for the community of Bayport. In 2016 the MSCWMO will be conducting targeted monitoring to more effectively target the implementation recommendations of the report. The MSCWMO will also work collaboratively with the City of Bayport to identify water quality retrofit opportunities during the development of a long-term drainage improvement plan.

In 2014 the MSCWMO completed Lake St. Croix Direct Discharge Subwatershed Analysis. The analysis prioritized projects in the catchments of Oak Park Heights, Stillwater and Bayport that drain directly to Lake St. Croix without treatment. In 2016 the MSCWMO will continue to work collaboratively with its member communities to identify, design and install water quality retrofit projects identified in the Subwatershed Analysis.

City of Lake St. Croix Beach Stabilization and Buffer Project

In 2015 the City of Lake St. Croix Beach received funding to repair flood damage done to 400' of shoreline along Lake St. Croix. Working in partnership with the MSCWMO the City received grant funding from the St. Croix River Association to fund a green infrastructure solution to stabilize the shoreline. City Engineering designed and installed soil filled rip-rap along the shoreline in the fall of 2015. In 2016 the MSCWMO will assist the city to establish native perennial vegetation and monitor the effectiveness of the Stabilization and Buffer Project.

Website Update and Maintenance

The MSCWMO continues to update and maintain its website.

APPENDIX A
2015 ANNUAL AUDIT
See Attached