2010 Annual Report

Contents

Board of Managers

2010-2011

Manager	Position	Term Expires	City/County
Mr. Jack Lavold 6859 Ideal Avenue South Cottage Grove, MN 55016 651-459-8891	President	05/01/2011	Cottage Grove/Washington
Mr. Dennis Hanna, 9301 Grey Cloud Island Dr. St. Paul Park, MN 55071 651-459-2281	Vice-President	05/01/2013	Grey Cloud Island/Washington
Mr. Brian Johnson 4353 Dorchester Drive Woodbury, MN 55129 651-458-3739	Vice-President	05/01/2013	Woodbury/Washington
Mr. Don Pereira 8232 River Acres Road Cottage Grove, MN 55016 651-769-0429	Secretary	05/01/2012	Cottage Grove/Washington
Mr. Mike Madigan 2366 Hidden Lake Cove Woodbury, MN 55125 651-702-0488	Treasurer	05/01/2011	Woodbury/Washington

Introduction

The Cottage Grove Ravine Watershed Management Organization (WMO) was formed in 1984 to manage the resources of the watershed. This WMO was based on a joint powers agreement among the five cities in the watershed. A draft watershed management plan for the WMO was completed in April 1988; however, this plan was never approved or adopted by the WMO.

The WMO was later disbanded, and, in 1993, the Cottage Grove Ravine Watershed District was formed as the 42nd watershed district in Minnesota. The watershed district changed its name to the South Washington Watershed District (SWWD) in 1995. The SWWD was formed under, and operates in accordance with, Minnesota Statutes, Chapter 103B, "Metropolitan Surface Water Management Act", and Chapter 103D, "Watershed Districts."

The SWWD completed development of the watershed plan in 1996, approval of the plan was granted by the State Board of Water and Soil Resources in 1997, and later amended in 2002. Since that time the SWWD has focused its efforts on determining potential flood risk and developing a comprehensive flood relief system. The proposed system is designed in two phases; 1) reduce potential flood damages for existing developed areas of the watershed; 2) develop a comprehensive solution that provides stormwater management and flood control with capacity for the planned growth included in the 2000 comprehensive land use plans.

In April 2003, the SWWD petitioned the Minnesota Board of Water and Soil Resources to enlarge the boundary and include the East Mississippi Water Management Organization. The East Mississippi Water Management Organization included all or portions of Grey Cloud Island Township, Cottage Grove, Woodbury, St. Paul Park, and Newport. The enlargement was completed as a part of recommendations from the Washington County Water Governance Study (1999). The enlargement petition was approved on May 28, 2003 by the Board of Water and Soil Resources (BWSR). SWWD again petitioned BWSR in May 2010 to enlarge the SWWD boundary and include portions of the dissolved Lower St. Croix Watershed Management Organization (LSCWMO) which included all of Denmark Township and portions of Afton, Cottage Grove and Hastings. BWSR approved the enlargement in September 2010.

SWWD updated the Watershed Management Plan (WMP) through 2007, with BWSR approval in September of 2007, and SWWD Board adoption in November 2007. The updated plan lays out guidance on the management of water and natural resources through the year 2017. The WMP plan was amended in 2010 to include the new Coordinated Capital Improvement Program and three additional capital improvement projects. SWWD is currently working on another amendment to incorporate areas in its expanded boundary and the priorities and projects identified in the LSCWMO plan.

The WMP complies with Minnesota Rules Chapter 8410, "Metropolitan Area Local Water Management," (May 27, 1992), the Metropolitan Surface Water Management Act, and Minnesota Statute 103D.

This report has been prepared in accordance with Minnesota Rules Chapter 8410.0150, Annual Reporting Requirements. Content of this report pertain to the calendar year 2010.

2010 Financial Report

The 2010 audit report is in Appendix A. Revenue and program expenditure summaries 2009-2011 are presented below.

Revenue

Revenue Source	2009	2010	2011
Ad Valorem Levy	$ 722,222.00	$ 687,361.00	$ 687,279.00
Stormwater Utility			
25% Area	$ 1,059,750.00	$ 1,274,200.00	$ 1,292,700.00
75% Area	$ 1,229,250.00	$ 1,095,600.00	$ 1,094,850.00
E. Mississippi	$ 0.00	$ 257,200.00	$ 257,200.00
Lower St. Croix	$ 0.00	$ 0.00	$ 0.00
Total Revenue	**$ 3,011,222.00**	**$ 3,314,361.00**	**$ 3,332,029.00**

Program Expenditures

Program Area	2009 Budget	2009 Actual	2010 Budget	2010 Actual/Unaudited	2011 Budget
1.0 Floodplain Management	$ 85,000	$ 0.00	$ 85,000	$ 8,776.00	$37,500
2.0 Stormwater Management	$ 1,869,000	$ 673,880.22	$1,273,000	$ 426,021.00	$1,260,000
3.0 Water Quality	$ 224,058	$ 64,885.49	$268,352	$ 167,058.00	$314,621
4.0 Wetlands	$ 20,000	$ 0.00	$ 85,000	$ 0.00	$16,250
5.0 Natural Resources	$ 100,000	$ 2,220.00	$ 20,400	$ 3,147.00	$20,400
6.0 Groundwater	$ 100,000	$ 51,952.00	$ 105,000	$ 500.00	$102,500
7.0 Erosion and Sediment Control	$ 23,095	$ 4,177.00	$ 13,575	$ 3,529.00	$13,169
8.0 Education	$ 48,114	$ 31,100.58	$ 55,182	$ 32,923.00	$54,749
9.0 Long RangeWork Plan/Finance	$ 29,510	$ 3,380.59	$ 393,014	$ 92,578.00	$484,633
10.0 Data Management	$ 279,059	$ 201,412.41	$ 247,836	$ 196,628.00	$251,352
11.0 General	$ 233,387	$ 209,767.08	$ 233,004	$ 218,853.00	$239,855
12.0 Debt Service	$ 549,000	$ 541,041.25	$ 535,000	$ 536,742.00	$537,000
Total Budget	**$3,560,223.00**	**$1,783,816.62**	**$3,314,361.00**	**$1,686,755.00**	**$3,332,029.00**

Floodplain Management

- SWWD monitored potential floodplain impacts from projects as part of its development review process. Multiple projects within the floodplain were reviewed, none of which decreased floodplain storage.
- The SWWD has continued collaboration with the City of Woodbury to address flooding issues on Wilmes Lake. The City has established a fund to assist homeowners to flood proof properties that are at risk from flooding. The SWWD provided both technical and financial support to this program. The SWWD has completed design of control structures for detention of stormwater upstream of Wilmes Lake. The control structures are being installed as part of a larger municipal project to address ravine erosion to Wilmes Lake. Construction will be completed in early 2011.
- SWWD provided the District's modeling data for the FEMA FIRM map update and worked with Municipalities to review and comment on updates. Staff worked with the City of Woodbury to review and amend several areas identified as floodplain in the completed FIRM maps.

Stormwater Runoff Rate and Volume

- SWWD ensures compliance with rate and volume requirements by coordinating development reviews with Municipalities that have adopted a local surface water management plan and updated official controls. Staff conducts full development reviews of projects in Municipalities that have yet to adopt their plan and update controls. Staff reviewed 22 projects in 2010.
- SWWD continued to operate an extensive stormwater monitoring network. Data collected as part of the program is used to identify trends in stormwater runoff. Monitoring reports are made available on the SWWD website at www.swwdmn.org. The 2010 report provides summaries of data collected. Additional trend analyses are performed for odd monitoring years.

South Washington Watershed District

2010 Monitoring Report

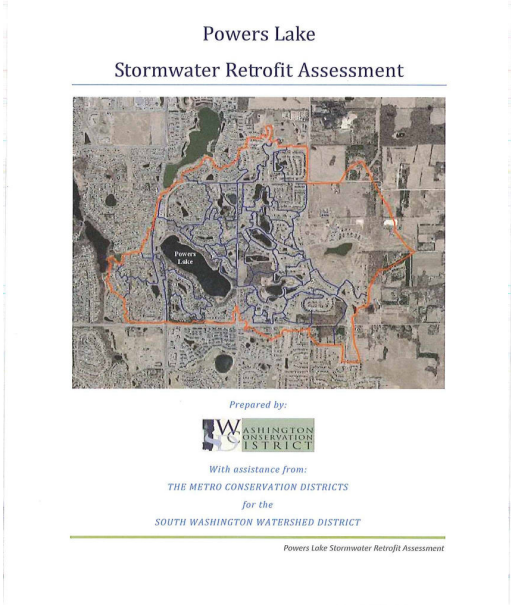
Prepared by John Loomis

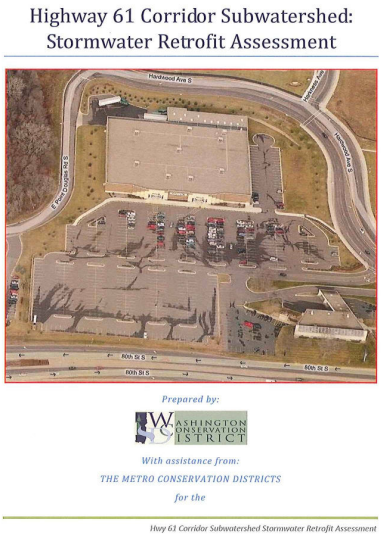
Water Quality

- SWWD's cost share program continued in 2010 with 26 projects approved for funding. Completion of all projects approved in 2010 will result in reductions of 12.76 lbs of total phosphorus, 15.15 lbs of nitrogen, and 1,832.08 lbs of total suspended solids in stormwater runoff.

- The SWWD Board of Managers awarded $342,625 through its Coordinated Capital Improvement Program (CCIP). $262,000 was awarded to the City of Woodbury for stabilization and restoration of two severely eroding ravines leading to Wilmes Lake. $80,625 was awarded to the City of Cottage Grove for the incorporation of raingardens into a planned pavement management project. Together, the projects were estimated to reduce phosphorus in stormwater runoff by 71.6 lbs/yr.

- SWWD worked with the Washington Conservation District to complete two subwatershed retrofit assessments—TH61 and Powers Lake. The retrofit assessments follow a protocol developed by the Metro Association of SWCDs to systematically identify the most cost effective projects for reducing the target pollutant. Both SWWD assessments focused on reducing total phosphorus. Implementation has begun on both assessments. One commercial project identified for the TH61 corridor was completed in 2010 through SWWD's traditional cost share program and staff expects construction on a second project to begin in 2011. The Washington Conservation District was awarded a Clean Water grant to implement projects identified in the Powers Lake assessment. Implementation is expected to begin in 2011.





Wetlands

- SWWD staff conducted development reviews to ensure compliance with SWWD wetland standards and participated as part of the Washington County Technical Evaluation Panel (TEP) to evaluate wetland impacts of proposed projects.

Natural Resources

- SWWD continued prairie restoration at the CD-P85/86 regional infiltration facilities. Partnering with Great River Greening, who secured LCCMR funding, SWWD was able to carry out controlled burning on approximately 20 acres of old field habitat clear invasive woody vegetation, and seed approximately 20 acres of previously farmed land. Maintenance included mowing and selective spraying for invasive weeds and over seeding of sparse areas. An additional 20-40 acres of currently farmed land are planned for restoration in 2011.

Groundwater

- SWWD staff worked with Washington County and the Minnesota Department of Health to begin a groundwater quality regional assessment program. The program consists of collecting seasonal water quality samples from wells existing around the CD-P85 and CD-P86 regional infiltration basins and Bailey Lake. Collected data are included in the SWWD monitoring report and will be used to monitor groundwater quality and serve as an indicator of potential impacts resulting from use of regional infiltration facilities.

Erosion and Sediment Control

- SWWD standards require projects to meet NPDES requirements for erosion and sediment control. SWWD standards also require Municipalities to identify an inspector and conduct regular inspections. In addition to City inspections, SWWD staff conducts four inspections annually to ensure that the City inspection programs are promoting compliance as intended. SWWD works with City staff to enforce compliance on issues identified in inspections.

Education

- Again in 2010, SWWD participated in the East Metro Water Resource Education Program (EMWREP). The EMWREP annual report is in Appendix B.

Long Range Work Planning and Finance

- SWWD began collecting stormwater utility fees in the East Mississippi management unit in 2010. It was the first time the fee will be charged to East Mississippi properties. Revenue will be used to fund water quality projects only within the East Mississippi, including stabilization of the Newport Ravine, construction of a stormwater pond to relieve capacity problems at the clear channel pond, and flow restoration to the Grey Cloud Island Slough.
- BWSR approved SWWD's petition to enlarge its jurisdictional boundary to incorporate 4 of the 5 subwatersheds from the dissolved Lower St. Croix Watershed Management Organization. SWWD is in the process of amending its WMP to establish the Lower St. Croix management district and incorporate priorities and projects identified in the LSCWMO WMP.

Data Management

- SWWD staff continues to collect and organize all SWWD monitoring data from the Washington Conservation District. Data will be uploaded to one database in one format. The database will serve as the basis for accessing monitoring data through the SWWD website.
- SWWD completed a website update and continues development of additional enhancements. Enhancements include an interactive mapping utility, enhanced development review tracking utility, cost share project tracking utility, and the ability to access SWWD monitoring data.

General

- The SWWD maintains a general fund for daily operations of the district. General fund operations include, staff, managers, office expenses, insurance, audit and legal services.

Debt Service

- The SWWD maintains a debt service fund for the purpose of retiring current debt. In 2002 the SWWD issued general obligation bonds for the purchase to property. The property provided the necessary downstream capacity for existing flood control conditions. Debt was issued on a 15 year term.

2011 Workplan

Floodplain Management

Floodplain management is an integral element of stormwater management in the South Washington Watershed. The watershed exhibits many large depressions in the landscape that are land locked. Preservation of locally identified floodplains provides adequate storage and flood protection for future development. Federal Emergency Management Agency recently completed a floodplain restudy of Washington County.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$85,000	85,000	37,500	$207,500

* 2008 dollars included in other management areas.

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(1) Floodplain Management				**$37,500.00**
Hydrologic Modeling			$37,500.00	
Project Management	$2,500.00			
Data Collection	$5,000.00			
Model Development Calibration	$10,000.00			
Assessement and Evaluation	$10,000.00			
Reporting	$10,000.00			

Management Area Goal

Opportunistically manage floodplains for multiple, non-development uses.

2011 Action Items

- Maintain adequate floodplain protection in newly developing areas.
- Ensure correct floodplain freeboard for newly built structures in developing areas.
- Provide assistance to County, Cities and Townships with application of updated FIRM's.
- Provide general assistance to watershed residents regarding floodplain information.

Stormwater Runoff Rate and Volume

A primary focus of the SWWD since creation in 1993 has been the management of stormwater runoff. Since the Northern Watershed is essentially land locked, the watershed is volume sensitive, therefore additions of stormwater runoff volumes due to development requires rigorous management. The major component of this management area is the planning, design and construction of the watershed overflow. The overflow will provide overflow capacity for excess runoff during extreme hydrologic events from the northern watershed to the Mississippi River.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$1,869,000	$1,273,000	$1,260,000	$4,402,000

* 2008 dollars included funds for flood damage reduction programs.

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(2) Storm Water Runoff Rate and Volume				**$1,002,800.00**
Flood Damage Reduction			**$97,000.00**	
FDR Grant Program				
Project Management	$5,000.00			
Legal	$4,500.00			
Modeling/Mapping/Protection				
Project Management	$10,000.00			
Data Collection	$10,000.00	$25,000.00		
Model Development Calibration	$15,000.00			
Assessement and Evaluation	$15,000.00			
Reporting	$12,500.00			
Overflow Design			**$94,400.00**	
Project Management	$5,000.00			
Data Collection	$10,000.00			
Feasibility/Preliminary Design	$25,000.00			
Final Design	$25,000.00			
Final Plans and Specs	$15,000.00			
Legal	$14,400.00			
Watershed Overflow Implementation Fund			**$731,400.00**	
Project Management	$10,000.00			
Data Collection	$10,000.00			
Appraisal	$10,000.00			
Survey	$10,000.00			
Legal	$14,400.00			
Land Acquisition		$300,000.00		
Implementation Fund		$377,000.00		
Hydrologic Modeling			**$80,000.00**	
Project Management	$7,500.00			
Data Collection	$15,000.00			
Model Development Calibration	$15,000.00			
Assessement and Evaluation	$15,000.00			
Meetings/Correspondace	$7,500.00			
Reporting	$20,000.00			

(2) Storm Water Runoff Rate and Volume						**$257,200.00**
Newport Ravine Stabilization					**$200,400.00**	
Project Management	20	$125.00	$2,500.00			
Data Collection	20	$125.00	$2,500.00			
Appraisal			$5,000.00			
Survey			$5,000.00			
Legal	30	$180.00	$5,400.00			
Land Acquisition				$80,000.00		
Implementation Fund				$100,000.00		
Project Design					**$36,800.00**	
Project Management	20	$125.00	$2,500.00			
Data Collection	40	$125.00	$5,000.00			
Feasibility/Preliminary Design	80	$125.00	$10,000.00			
Final Design	80	$125.00	$10,000.00			
Final Plans and Specs	60	$125.00	$7,500.00			
Legal	10	$180.00	$1,800.00			
Hydrologic Modeling					**$20,000.00**	
Project Management	20	$125.00	$2,500.00			
Data Collection	20	$125.00	$2,500.00			
Model Development Calibration	40	$125.00	$5,000.00			
Assessement and Evaluation	40	$125.00	$5,000.00			
Meetings/Correspondace	20	$125.00	$2,500.00			
Reporting	20	$125.00	$2,500.00			

Management Area Goal

Minimize existing and future potential damages to property, public safety, and water resources due to flood events.

2011 Action Items

- Coordinate design of overflow system in cooperation with Washington County and potential 70th CASH 19-20-22 Intersection realignment project.
- Maintain implementation fund for the watershed overflow project.
- Maintain and update watershed models to provide best available information to guide SWWD programs and projects.
- Work cooperatively with the City of Newport to stabilize the North Ravine located in the EMW.
- Work cooperatively with the City of Cottage Grove and St. Paul Park to provide stormwater control for the Clear Channel Pond project in the EMW.
- Work cooperatively with the Grey Cloud Island Township to secure funding and support for implementation of the Grey Cloud Channel project in the EMW.
- Work cooperatively with the St. Paul Park to provide pollution prevention and “Good Housekeeping” measures for deicing material storage and application.

Water Quality

Water quality improvement is the main focus of the SWWD 2007 watershed management plan. The SWWD has established water quality standards and rules to reduce pollutant loading and improve water quality throughout the watershed. The overall goal of work under this fund is to identify water quality impacts and implement projects to correct impacts. Over time this strategic approach will meet future TMDL requirements.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$224,058	$160,000	$314,620	$698,678

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(3) Water Quality				**$99,620.72**
Water Quality Cost Share Program			$81,700.00	
Cost share to projects		$70,000.00		
Rain Barrels				
Project Management	$3,600.00			
Assessement and Evaluation	$3,600.00			
Final Design	$2,700.00			
Reporting	$1,800.00			
(3) Water Quality				**$215,000.00**
Loading Assessment			$60,000.00	
Project Management	$5,000.00			
Data Collection	$15,000.00			
Model Development Calibration	$15,000.00			
Assessement and Evaluation	$15,000.00			
Reporting	$10,000.00			
Lake Assessment (TMDL/Impaired Waters/Non-Degredation)			$155,000.00	
Project Management	$5,000.00			
Data Collection	$7,500.00			
Watershed Evaluation	$7,500.00			
Modeling Water Quality Physical/Chemical	$30,000.00			
Lake Biological Assessment	$10,000.00			
Feasible Remedial Alternatives Analysis	$20,000.00			
Lake Management Plan/Report	$20,000.00			
Water Quality implementation	$5,000.00	$ 50,000.00		

Management Area Goal

Maintain, or where practical improve, the water quality of wetlands and water bodies within the District.

2011 Action Items

- Continue water quality BMP cost share program watershed wide.
- Develop watershed water quality model based on sub-watersheds for two sub-watersheds.
- Define loading capacity on a sub-watershed and water body scale.
- Establish accounting of stromwater BMP's for load reduction implementation

Wetlands

Provide for management of the watersheds wetland resources. The SWWD works with the Washington Conservation District and Local Government Units to effectively management the Districts wetland resources. The SWWD provides assistance with the Wetland Conservation Act and has established standards for management of the wetlands, including water quality, water quantity, buffers, and mitigation of impacts.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$20,000	$85,000	$16,250	$121,250

* 2008 dollars included in other management areas.

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(4) Wetlands				**$16,250.00**
Wetland Assessment			$16,250.00	
Project Management	$2,500.00			
Data Collection	$5,000.00			
Model Development Calibration	$0.00			
Assessement and Evaluation	$5,000.00			
Reporting	$3,750.00			

Management Area Goal

Manage the quantity and quality of wetlands within the watershed for their best function in a rapidly urbanizing environment.

2011 Action Items

- Support Local Government Units (LGU) with implementation of the Wetland Conservation Act.
- Evaluate LGU status for the Wetland Conservation Act.
- Apply wetland standards across the watershed to ensure future functions and values of wetland resources.

Natural Resources

This management area provides for the improvements to the natural resource of the watershed. The SWWD has developed a greenway plan to establish a multi-use green corridor through the watershed. This corridor utilizes planned green space by the Municipalities and natural features protected from development.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$100,000	$20,400	$20,400	$140,800

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(5) Natural Resources and Recreation				**$20,400.00**
Greenway Implementation			$20,400.00	
Construction				
Site Monitoring	$2,700.00			
Project Management	$2,700.00			
Maintenance		$10,000.00		
Replacement		$5,000.00		

Management Area Goal

Participate in conservation or creation of key natural areas with respect to habitat, wildlife, or recreation.

2011 Action Items

- Manage CD-P86 prairie restoration.
- Manage restoration activities in cooperation with grant from Great River Greening
- Pursue grant opportunities for further restoration work in CD-P86 focused on non-cropped areas.

Groundwater

In cooperation with Washington County, the SWWD provides management of groundwater resources as identified in the County Groundwater Plan. The SWWD's focus is on regional groundwater quality and potential impacts from stormwater management practices. The SWWD will continue to evaluate potential impacts from regional stormwater infiltration. Support to the County and Municipalities relating to other groundwater issues is also provided. The SWWD has partnered with municipalities to provide for management of deicing chemicals through application, storage and handling.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$100,000	$105,000	$102,500	$307,500

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(6) Groundwater				**$102,500.00**
Groundwater Monitoring - quality			$102,500.00	
Project Management	$10,000.00			
Data Collection	$12,500.00	$ 40,000.00		
Model Development Calibration	$15,000.00			
Assessement and Evaluation	$15,000.00			
Reporting	$10,000.00			

Management Area Goals

Pursue a sustainable balance between surface water management, land use activities, and groundwater integrity.

2011 Action Items

- Work with the County and MDH to evaluate the potential impacts of regional stormwater infiltration.
- Coordinate with Washington County through groundwater planning.

Erosion and Sediment Control

Erosion of soil presents one of the greatest threats to water quality. The SWWD implements an annual program to provide assistance to Municipalities that increases compliance with existing local state and national permits. Soil erosion and resultant deposition of sediment carries with it many pollutants delivered directed to the water resource. The SWWD has a role in controlling erosion and helping to prevent degradation of the water body.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$23,095	$13,575	$13,168	$49,838

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(7) Erosion and Sediment Control				**$13,168.96**
NPDES Phase II Construction Site Inspections			**$10,800.00**	
Project Management	$3,600.00			
Data Collection	$5,400.00			
Reporting	$1,800.00			

Management Area Goals

Facilitate erosion control and reduce impacts to wetlands and water bodies from sedimentation.

2011 Action Items

- Continue coordinated effort with the WCD and Municipalities to increase permit compliance on construction sites.
- Provide assistance to municipalities to correct erosion problems.
- Work with the City of Newport on stabilization of the Newport Ravines.
- Work with the WCD on stabilization of ravines tributary to the Mississippi River.

Education

The SWWD must provide an education program for Municipal Officials and residents of the watershed through the watershed management plan. The SWWD Board believes that County wide and Regional efforts are more effective educational programs than localized efforts. The SWWD is a member of the East Metro Water Resources Education Program and other regional efforts to provide annual education programming in the watershed. In addition these programs fulfill educational requirements places on the SWWD through its MS4 permit.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$48,114	$55,182	$54,745	$158,041

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(8) Education				**$54,748.72**
Education Local			**$5,800.00**	
SWWD specific program	$1,800.00	$4,000.00		
Public Input			**$2,800.00**	
CAC	$1,800.00	$1,000.00		
Education			**$2,500.00**	
Website Modifications	$2,500.00			
Shared Education Position			**$25,000.00**	
Washington County Education	$0.00	$25,000.00		
Education			**$8,800.00**	
Metro Watershed Partners	$0.00	$3,500.00		
Blue Thumb	$0.00	$1,800.00		
Project NEMO	$0.00	$3,500.00		

Management Area Goals

Heighten the awareness of key constituencies within the District, sufficient to modify behavior to improve the recognition and implementation of District policies, programs and activities.

2011 Action Items

- Maintain membership in the EMWREP.
- Provide local education opportunities in cooperation with Municipalities and other local organizations.
- Continue improvements to SWWD website and utilize as a primary information outlet.
- Establish link to school science programs and teachers at specific grade level.

Long Range Work Planning and Finance

The SWWD Board stressed implementation during development of the current 10 year plan adopted in 2007. As a result the SWWD established this management area to provide overall management of the watershed and focus effort and resources on implementation. This management area provides the short and long range work plan and funding authorities for the SWWD implementation. Through annual evaluation and work planning, the SWWD is provide flexibility to adapt or refocus as a result of changing environments or regulations.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$29,510	$386,400	$484,632	$900,542

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(9) Long Range Work Planning and Financing				**$456,100.00**
Coordinated CIP			$456,100.00	
Project Management	$5,000.00			
Data Collection	$5,000.00			
Model Development Calibration	$5,000.00			
Assessement and Evaluation	$10,000.00			
Meetings/Correspondace	$5,000.00			
Feasibility/Preliminary Design	$10,000.00			
Final Design	$7,500.00	$400,000.00		
Reporting	$5,000.00			
Legal	$3,600.00			

Management Area Goals

Utilize District funds to initiate or support long range work plan projects which reduce flooding or otherwise benefit key District resources.

2011 Action Items

- Continue implementation of Coordinated Capital Improvement Program focused on water quality improvements.
- Provide short and long range planning and implementation for the SWWD.
- Maintain an updated and current watershed plan to reduce future planning costs.
- Complete 2011 Plan Amendment to include the LSCWMO area and plan.
- Update SWWD rules to current standards.

Data Management

A primary role of the 2007 SWWD watershed management plan is to help guide decisions of the Board of Managers. A key element is the use of scientific data to assist the Managers in making decisions based on best available information. The SWWD maintains extensive data through studies, reports, monitoring, information and internal operations.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$279,059	$247,836	$251,352	$778,247

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(10) Data Management				**$251,352.11**
Web Site			**$2,500.00**	$548.37
Project Management	$1,250.00			
Data Collection	$1,250.00			
Assessement and Evaluation	$0.00			
Reporting	$0.00			
Stormwater Utility Administration			**$35,200.00**	$7,721.05
Annual Setup	$2,700.00			
Rate Calculations	$3,600.00			
Assessement and EvaluationReview, support, correctic	$1,800.00	$2,500.00		
Legal	$1,800.00			
GIS Maintenance	$1,800.00	$5,000.00		
Washington County Administrative Fee		$15,000.00		
Washington County Surveyor		$1,000.00		
Surface Water Monitoring Program	**travel**	**capital equip**	**$146,611.50**	$32,158.92
MS1-North Tributary to Wilmes Lake	$827	$100		
MS2-N Tributary to Bailey Lake	$827	$100		
O'Conner's Creek	$0	$0		
Trout Brook	$0	$0		
Wilmes Lake Outlet	$724	$100		
Central Ravine	$724	$100		
100th Street	$827	$100		
St. Paul Park	$724	$100		
Newport	$724	$100		
Waterbody Assess-Powers	$827	$100		
Waterbody Assess-Colby	$2,171	$300		
Lake Levels	$0	$0		
Flow--7 Locations	$4,180	$300		
In Lake Water Quality	$0	$0		
Groundwater	$0	$0		
Report	$0	$0		
Lab Expenses		$14,914		
Capital Equip		$11,800		
Surface Water Monitoring Program			**$8,100.00**	$1,776.72
Project Management	$900.00			
Data Collection	$2,700.00			
Assessement and Evaluation	$2,700.00			
Reporting	$1,800.00			
Development Reviews			**$13,725.00**	$3,010.55
Correnspondence	$2,025.00			
Plan review	$4,500.00			
Meetings	$1,800.00			
Project Management	$900.00			
Site Review	$4,500.00			

Management Area Goals

Collect and manage data in a manner which maximizes the availability to and use by constituents of the District.

2011 Action Items

- Maintain SWWD website with current information.
- Maintain and update the stormwater utility information annually.
- Maintain and operate an annual monitoring network that provides water resource information vital to SWWD programs and projects.
- Provide development review services to Municipalities.

General

Not specifically mentioned in the 2007 SWWD Watershed Management Plan as a management area, general is included in the SWWD annual budget as an accounting fund. The general fund provides the necessary revenue for daily operation of the SWWD. General fund revenue is levied district wide under MS 103D.905 and is capped at $250,000. General fund revenue is also collected through MS103B.241 taxing authority available to metropolitan watershed districts.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$233,387	$233,004	$239,855	$706,246

2011 Work Plan

Management Area / Action Item	Professional Services	Capital Outlay	2011 Budget	Management Area Total
(11) General				**$239,855.50**
Salaries/Benefits		$ 121,366.25		
Manager Per Diem/Expenses		$ 29,400.00		
Administration/Office				
Office Rent		$ 23,385.00		
Employee Expenses		$ 4,500.00		
Employee Training		$ 4,000.00		
Office Equipment		$ 12,751.65		
Office Supplies		$ 1,500.00		
District Vehicle		$ -		
Legal Notices		$ 1,500.00		
Dues		$ 4,800.00		
Insurance and bond		$ 11,500.00		
Accounting				
payroll		$ 1,977.60		
monthly accounting		$ 2,884.00		
audit		$ 12,875.00		
Legal		$ 7,416.00		

Management Area Goals

Provide for day-to-day operations of the South Washington Watershed District.

2011 Action Items

- Maintain adequate funding for SWWD daily operation.
- Provide for annual staff and manager training opportunities.
- Ensure adequate protection against legal actions towards the SWWD.

Debt Service

Not specifically mentioned in the 2007 SWWD Watershed Management Plan as a management area, debt service is included in the SWWD annual budget as an accounting fund. In 2002 the SWWD issued $5.8 million in General Obligation Bonds for the purchase of real property as described in the 1997 watershed plan. The SWWD completed acquisition of 150± acres for increased downstream stormwater system capacity, flood control and stromwater management. Bonds were issued with a 15-year pay off, and refinanced in 2007.

Budget History

Year	2009	2010	2011	3-yr total
Budget	$549,000	$535,000	$537,000	$1,621,000

2011 Work Plan

(12) Debt Service			$537,000.00
Debt Service		$537,000.00	

Management Area Goals

Sound financial planning for future infrastructure needs.

2011 Action Items

- Maintain adequate funding for debt service.

HLB TAUTGES REDPATH, LTD.
Certified Public Accountants

REPORT ON COMPLIANCE WITH MINNESOTA LEGAL COMPLIANCE
AUDIT GUIDE FOR POLITICAL SUBDIVISIONS

To the Board of Managers
South Washington Watershed District
Woodbury, Minnesota

We have audited the basic financial statements of the South Washington Watershed District, as of and for the year ended December 31, 2010 and have issued our report thereon dated April 28, 2011.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the provisions of the *Minnesota Legal Compliance Audit Guide for Political Subdivisions* promulgated by the State Auditor pursuant to Minnesota Statutes Section 6.65. Accordingly, the audit included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The *Minnesota Legal Compliance Audit Guide for Political Subdivisions* covers six categories of compliance to be tested: contracting and bidding, deposits and investments, conflicts of interest, public indebtedness, claims and disbursements, and miscellaneous provisions. Our study included all of the listed categories.

The results of our tests indicate that for the items tested, the South Washington Watershed District complied with the material terms and conditions of applicable legal provisions.

This report is intended solely for the information and use of the South Washington Watershed District's management, members of the Board and others within the Organization, and is not intended to be, and should not be, used by anyone other than these specified parties.

HLB Tautges Redpath, Ltd.

HLB TAUTGES REDPATH, LTD.
White Bear Lake, Minnesota

April 28, 2011

4810 White Bear Parkway White Bear Lake, MN 55110 651.426.7000 651.426.5004 fax www.hlbtr.com
Equal Opportunity Employer 100-Percent Employee-Owned

2010 Annual Report

Background: The East Metro Water Resource Education Program (EMWREP) is a partnership that was formed in 2006 to develop and implement a comprehensive water resource education and outreach program for the east metro area of St. Paul, MN. Members of the EMWREP partnership in 2010 included Brown's Creek, Carnelian-Marine-St Croix, Comfort-Lake Forest Lake, Rice Creek, Ramsey-Washington Metro, South Washington, and Valley Branch Watershed Districts, Middle St. Croix Watershed Management Organization, the cities of Cottage Grove, Dellwood, Forest Lake, Lake Elmo, Stillwater, and Willernie, West Lakeland Township, Washington County and the Washington Conservation District. The EMWREP region covers all of Washington County as well as the portions of Valley Branch and Comfort Lake - Forest Lake Watershed Districts that stretch into Anoka, Chisago and Ramsey Counties. A map and list of EMWREP partners can be found at www.mnwcd.org/cleanwater.

Purpose: The purpose of EMWREP is to educate the public and various other target audiences within the region about the impacts of non-point source pollution on local lakes, rivers, streams, wetlands and groundwater resources and engage people in projects that will help to protect and improve water quality in the region. EMWREP activities also help partners to meet education and public involvement requirements for MS4 Stormwater Pollution Prevention Permits and TMDL Plans.

Partnership Structure: EMWREP is guided by a steering committee comprised of representatives from each of the 17 partner organizations. The committee generally meets twice a year to provide recommendations on the program budget and activities. The EMWREP educator sends a quarterly e-newsletter to all partners' staff, council members and board members, and communicates one-on-one with individual partners on projects throughout the year. The EMWREP education plan is revised every two to three years to accommodate changing priorities and new target audiences. In addition, the EMWREP educator prepares an annual report on program activities and provides outreach data and statistics for partners' MS4 Permit reports. All EMWREP reports, plans, print materials and news articles are available on-line at www.mnwcd.org/emwrep.

Summary of 2010 EMWREP Education Programs:

Public Education Campaign: EMWREP engages in a number of activities aimed at increasing awareness of water resource issues, promoting a conservation ethic among local residents, and catalyzing behavior change. Many of these activities are accomplished in partnership with existing government, non-profit, and community based groups, as well through local media outlets. The general education campaign is also used to promote targeted outreach efforts and partner BMP programs.

Since 2006, EMWREP has produced weekly articles for several of the local newspapers, as well as providing material for 32 cities within the region to include in their newsletters. Articles are also featured on the blog http://eastmetrowater.areavoices.com and on the Washington Conservation District and Blue Thumb Facebook pages. EMWREP reached 7790 people at local community events in 2010, including the Washington County Fair.

Blue Thumb Program: (www.BlueThumb.org) The Blue Thumb – Planting for Clean Water program was developed by the Rice Creek Watershed District in 2006 and by 2010 was a dynamic coalition of more than 60 partner organizations working together to raise awareness about stormwater pollution and encourage homeowners to plant native gardens, raingardens and shoreline projects to protect surface and groundwater resources.

EMWREP uses Blue Thumb to promote partner BMP programs. This outreach is a critical component of an adaptive ecosystem management approach that connects outreach with project implementation and water monitoring. EMWREP uses workshops, neighborhoods parties and community presentations to connect local residents with resources available through Blue Thumb and the EMWREP partnership. Outreach in 2010 resulted in 130 new water quality projects in Washington County.

Blue Birds / Go Wild! (www.mnwcd.org/gowild) This is a new outreach strategy to leverage public interest in birds and wildlife in order to engage rural property owners in planting and habitat improvement projects in targeted areas where there will also reduce erosion and non-point source water pollution. Activities in 2010 included two bird habitat workshops, as well as surveys, focus groups and interviews to help develop new outreach strategies.

A key component of this program in 2011 will be collaborative outreach with local non-profits and sportsmen groups. EMWREP's role will be to support the outreach conducted by these groups, to help connect landowners with additional resources available through EMWREP partners, and to encourage projects that protect water as well as improving wildlife habitat.

Blue Biz: (www.cleanwaterMN.org/businesses) The Blue Biz program consists of a website and outreach materials that partners can use to engage commercial property owners in BMP projects. During 2010, EMWREP reached out to specific property owners identified in the Cottage Grove Hwy 61 sub-watershed assessment, resulting in two new bioretention projects.

Stormwater U: (www.extension.umn.edu/stormwater/) Stormwater U is a technical training series for municipal staff and contractors, including engineers, planners, inspectors and public works. Stormwater U workshops are hosted in collaboration with University of Minnesota Extension and the Minnesota Erosion Control Certification Program. In 2010, EMWREP hosted workshops on shoreline restoration, turf management and snow and ice management.

NEMO: (www.northlandnemo.org) 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 one of ten to twenty partner organizations. During 2010, EMWREP facilitated the Watershed Game activity with several groups of community leaders and helped to coordinate a workshop on the St. Croix River attended by 100 officials from communities in Minnesota and Wisconsin.

MS4 Toolkit: (www.cleanwatermn.org/MS4toolkit) EMWREP developed the MS4 Toolkit with a grant from the Minnesota Pollution Control Agency. The toolkit includes educational materials that partners can use to meet the six minimum control measures in the MS4 permit, such as brochures, posters, slide shows, training videos and more. In addition to the on-line materials, training videos for parks and public works staff and pop-up banners for community events are available partners to borrow. The website is now managed by the WaterShed Partners media campaign.

* A map of EMWREP program activities is included at the end of this report.

MS4 Permit requirements for the Stormwater Pollution Prevention Program
Correlating the Minimum Control Measures with EMWREP Programs and Audiences

1. Public Education and Outreach
1. Public Education Campaign (general public)
2. Blue Thumb (homeowners)
3. Blue Bird / Go Wild! (rural landowners)
4. Blue Biz (commercial property owners)

2. Public Participation
1. Public Education Campaign
2. Blue Thumb
3. Blue Bird / Go Wild!
4. Blue Biz

3. Illicit Discharge Detection and Elimination
1. Public Education Campaign
2. MS4 Toolkit (multiple audiences)

4. **Construction Site Storm Water Runoff Control**
1. Stormwater U (municipal staff and contractors)
2. MS4 Toolkit

5. **Post Construction Storm Water Management**
1. Stormwater U
2. NEMO (local elected officials and decision makers)
3. Blue Biz
4. MS4 Toolkit

6. **Pollution Prevention and Good Housekeeping in Municipal Operations**
1. Stormwater U
2. MS4 Toolkit

2010 Program Activities and Highlights

Public Education: General public education and outreach activities in 2010 included community events, student programs, mailings, newspaper columns, press releases, city newsletter articles, websites and social media. EMWREP also took part in the WaterShed Partners Clean Water Minnesota media campaign.

The Family Means St. Croix Valley Garden Tour featured a home in Mahtomedi with porous pavement and a raingarden.

Community events: EMWREP reached 7790 people at local community events including:

- Woodbury Sustainability Fair (50)
- Hugo Feed Mill Open House (50)
- Forest Lake Home Show (200)
- Cottage Grove Arbor Day Event (100)
- Marine Millstream Day (300)
- Lake St. Croix Beach Heritage Day (300)
- Family Means St. Croix Valley Garden Tour (850)
- Square Lake Triathlon (900)
- Washington County Fair (5000)
- Newport Community Buckthorn Pull (40)

Student Programs: EMWREP participated in two water education programs during 2010 for 3-5th grade students:

- OH Anderson Field Day, Mahtomedi – May (7 3rd-5th grade classes)
- Children's Water Festival, St. Paul – September (7 5th grade classes)

Targeted Mailings: Postcards were sent to 2490 residences during the year to advertise workshops and opportunities, including:

Postcards promoting native plants, raingardens and shoreline plantings were sent to shoreline property owners in Comfort Lake – Forest Lake Watershed District.

- 1034 shoreline property owners in Comfort Lake – Forest Lake Watershed
- 971 rural landowners with more than 5 acres in Washington County
- 71 woodland property owners within the St. Croix River bird habitat project area
- 244 landowners in Carnelian-Marine-St. Croix Watershed
- 80 homeowners with the Power's Lake Trees project area in Woodbury
- 90 rural landowners in priority outreach areas within Washington County

Newspaper articles: The EMWREP educator writes weekly articles (52 per year) for several local papers. These articles can be found on-line at the East Metro Water blog http://eastmetrowater.areavoices.com. In addition, the articles were printed in the following papers:

- Valley Life - 49,000 readers in Stillwater, Bayport, Oak Park Heights, Stillwater Township, Afton, Lakeland, Marine, Hugo, Lake Elmo, Houlton, Somerset and New Richmond.
- Lillie Reviews –34,392 readers in Oakdale, Lake Elmo, North St. Paul, Maplewood, White Bear Lake, White Bear Township, Gem Lake, Western Mahtomedi, and Landfall. (Articles are occasionally printed in Lillie owned papers outside the EMWREP area as well, reaching another 83,608 readers.)
- South Washington County Bulletin – 8616 readers in Cottage Grove, St. Paul Park, Newport and Grey Cloud.
- Oakdale and Woodbury Patch – on-line newspapers with more than 535 followers on twitter and facebook.

Press releases: Several other papers print press releases and news articles from EMWREP one to five times per year, including:

- Hugo Citizen - 10,000 readers
- Forest Lake Times – 13,029 readers
- Scandia Messenger – 1075 readers
- Woodbury Bulletin – 7811 readers
- Pioneer Press – 185,736 weekday readers

City newsletter articles: Information about water resources and EMWREP partner activities reached 355,174 people through community newsletters in 2010:

- Afton (pop. 2800)
  - Jan. – WCD tree and rain barrel sale; Benefits of trees
  - Feb. - Bird habitat & clean water
  - July - St. Croix River Awareness week & St. Croix Garden Tour
- Baytown (pop. 1970 - "Baytown Neighbors" goes to 88 households)
  - Feb. - Rain barrel sale
  - May - Bird habitat & clean water
- Birchwood (pop. 916)
  - Summer – Blue Thumb workshop insert
- Cottage Grove (pop. 34,000)
  - May – Car washing and chlorinated water discharges
  - June – Yard waste and lawn watering
- Dellwood (pop. 1035)
  - Summer mayor's letter – bird habitat

- Lake Elmo (pop. 7647)
    - April – Conserving water and lawn watering
    - Aug. – Illicit discharge, water conservation and erosion control
- Lakeland (pop. 1830)
    - January – Bird habitat and clean water
- Mahtomedi (pop. 8000)
    - Jan. – March – Winter salt and de-icing
    - April – June – WCD tree and rain barrel sale
    - Oct. – Dec. – New policies for city winter snow and ice management
- Newport (pop. 3715)
    - Spring – Stormwater Pollution
    - Fall – Buckthorn Day
- Oak Parks Heights (pop. 4724)
    - Second quarter – Rain barrel sale
- Stillwater (pop. 18,000)
    - April – Clean Water, lawn care, Blue Thumb
- West Lakeland (pop. 3547)
    - Spring insert – Blue Thumb workshop
- Woodbury (pop. 57,345)
    - Feb – WCD tree and rain barrel sale
    - Nov. stormwater update – Shallow lakes

Websites and Social Media: EMWREP uses several websites to provide information and resources for the public and also uses social media, such as facebook, twitter and the East Metro Water blog to reach people in the community:

- The Washington Conservation District website (www.mnwcd.org) received 11,192 visits from 4,375 visitors in 2010. EMWREP programs and partners are featured on several pages within the website, including www.mnwcd.org/cleanwater, www.mnwcd.org/emwrep, www.mnwcd.org/gowild and www.mnwcd.org/water_blue_thumb. WCD has around 50 friends on facebook.
- The Blue Thumb website (www.BlueThumb.org) received 24,324 visits from 17,286 visitors in 2010. Blue Thumb has around 340 friends on facebook.
- The Clean Water Minnesota website (www.cleanwatermn.org) received 2087 visits from 1633 visitors in 2010.
- The East Metro Water Blog was created in late October of 2010. It received an average of 68 visits per week in December.

Clean Water Minnesota Media Campaign: The WaterShed Partners are an innovative, dynamic coalition of over 50 public, private and non-profit organizations in the Twin Cities metro area that work collaboratively to teach residents how to care for area waters. The purpose of the WaterShed Partners is to promote a public understanding that inspires people to act to protect water quality in

The "rubber ducky" ads played on Channel 45 and cable television stations.

their watershed. EMWREP has been part of the WaterShed Partners since 2006.

WaterShed Partners coordinate the Clean Water Minnesota Media Campaign, which educates the public about stormwater pollution prevention through mass media such as television and radio. The group also maintains the www.cleanwatermn.org website, which provides resources for stormwater educators through the MS4 Toolkit (developed by EMWREP in 2009) and also has seasonal clean water tips for the public.

During 2010, the media campaign included billboards, commercials on cable television, Channel 45, and St. Paul Saints Television, and public service announcements on Minnesota Twins Radio and Minnesota Public Radio. Combined, these activities yielded an estimated 15,000,000 media impressions.

Blue Thumb: Blue Thumb – Planting for Clean Water activities in 2010 included workshops, meetings, presentations and community events. Last year, EMWREP also developed several new educational resources, including flyers and brochures, interactive displays and interpretive signs for local demonstration projects. Outreach in 2010 resulted in 130 new water quality projects in Washington County. Additionally, the Blue Thumb partnership maintains the www.BlueThumb.org website and reaches the public at several metro and statewide events each year.

Workshops, meetings and presentations: In 2010, 130 people attended Blue Thumb workshops, meetings and presentations organized by EMWREP partners.

- Blue Thumb
  - Oakdale – March 16 (16)
  - Woodbury – April 27 (20)
  - Birchwood – November 18 (8)
- Raingardens
  - St. Andrews, Mahtomedi, March 23 (13)
- Shoreline plantings
  - St. Andrews, Mahtomedi, April 6 (10)
  - Forest Lake, April 13 (15)
- Forest Lake Rotary, March 24 (15)
- Lake Elmo neighborhood party, June (8)
- CMSCWD lake meetings (40)
  - Long Lake, August
  - Sand Lake, August
  - Square Lake, August

LSCB volunteer raingarden planting

Newport neighborhood project

Community Events: In addition to the local community events listed under Public Education, Blue Thumb partners also provided education and resources at several high visibility regional events, including:

- National Geographic, Blue Planet 2010 Expedition, July 4 in Minneapolis
- Minnesota State Fair, Eco Experience (attended by 350,000)



National Geographic made Minnesota the first stop on its Blue Planet 2010 Expedition, and partnered with Blue Thumb on a July 4 community event.

Exhibits and Interpretive Signs: EMWREP has several Blue Thumb posters, banners and table top displays for use at community events. A new interactive display developed in 2010 allows people to actually see the lengths of native plant roots and is very popular with kids as well as adults. This past year, interpretive signs were also created for demonstration projects at:

- Square Lake Park in May Township
- Lake St. Croix Beach City Hall
- Valley Ridge Mall in Stillwater

Educational materials: EMWREP developed several new fact sheets and brochures for Blue Thumb outreach in 2010. Current materials offered include:

- Blue Thumb Year-Round Guide to Yard Care
- Native Flowers, Shrubs and Trees for Yards, Raingardens and Shorelines
- Raingardens – The secret to clean water is in the roots!
- Raingardens – Plan today, plant tomorrow!
- Shoreline Plantings – Let nature do the work for you!

New signs at Square Lake Park.

The retractable roots display is a conversation piece at community events.

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Blue Birds / Go Wild!: During the spring of 2010, EMWREP helped to host two workshops for landowners on the St. Croix River focusing on bird habitat and clean water. During summer and fall, EMWREP conducted surveys, focus groups and interviews with rural landowners in Washington County to help develop new outreach strategies for this audience. The goal for 2011 is to help more rural landowners install projects that reduce water pollution, especially on highly erodable lands that drain to rivers, lakes and streams within the area.

Bird Workshops: EMWREP collaborated with the WCD, Great River Greening and Audubon Minnesota to hold two workshops for large lot owners along the St. Croix River to promote projects, such as invasive species removal and native plantings, that would improve bird habitat and reduce runoff pollution. A total of 40 people attended.

- William O'Brien State Park – April 29 (24)
- Afton State Park – May 27 (16)

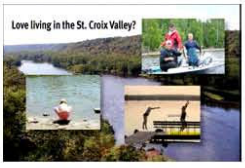
Postcard invitations were sent to people living in priority areas along the St. Croix River.

County Fair Survey: EMWREP surveyed 60 rural landowners at Washington County Fair in August. Findings indicated that:

- People are interested in:
  - Controlling weeds and invasive plant species
  - Reducing property taxes
  - Creating wildlife habitat
- They are not interested in planting buffers along streams and wetlands, fixing erosion or drainage issues or planting prairie.
- People with 5-10 acres are the most interested in conservation projects, while people with more than 40 acres and people with horses are the least.

Focus Group Interviews: During the fall, EMWREP worked with a student researcher from Macalaster University to conduct two focus group sessions with rural landowners in southern and northern Washington County.

- Afton – People in this focus group cited privacy, wildlife and woods as their favorite aspects to living in southern Washington County. They were very interested in buckthorn management. The people who mentioned surface water concerns lived on a waterway or had active erosion problems on their land
- Northern County – People in this group cited rural character and hunting and outdoor recreation as their favorite aspects to living in northern Washington County. They were most concerned with development pressure and perceived unfair treatment by cities, and thought outreach might be more successful if led by a non-profit or sportsman group instead of a government entity.



Survey and focus group participants expressed more interest in managing invasive plant species and creating wildlife habitat on their land than in doing projects to reduce water pollution.

- People from both groups expressed more interest in creating wildlife habitat and managing invasive species on their properties than in doing projects to reduce water pollution.

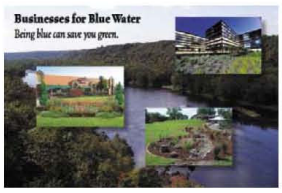
Interviews: During the fall, EMWREP worked with student volunteers from the University of Minnesota to conduct interviews with rural landowners who had done conservation projects in the past and with organizations and groups working on conservation in the area.

- Landowner interviews:
    - Half of the people who had done conservation projects in the past had done so to correct problems, such as erosion, on their land, while the other half had done so to protect local water resources.
    - They indicated that the design assistance and people at the Conservation District were critical to helping them do their projects.
    - Most were also interested in improving wildlife habitat.
- Organization interviews:
    - There are many groups doing education and activities around land and water conservation in the East Metro. Many expressed interest in working with EMWREP on outreach to local landowners.

Next Steps: EMWREP will continue to develop outreach strategies for rural landowners in 2011 and to work collaboratively with non-profit and sportsmen groups to encourage projects that protect water and improve wildlife habitat.

Blue Biz: During 2010 EMWREP developed new materials that partners can use for commercial outreach. In partnership with the South Washington Watershed District, Washington Conservation District and City of Cottage Grove, EMWREP attended a Cottage Grove Chamber event and reached out to specific businesses along Hwy 61 that were identified in a stormwater subwatershed assessment study. As a result, the South Washington County School District installed a bioretention area at their District Service Center and Target is working with the WCD and SWWD on a project plan. The following resources are available for commercial outreach:

- Website: www.cleanwatermn.org/businesses
- Minnesota Businesses for Clean Water – one page fact sheet
- Stillwater Country Club – case study fact sheet
- Valley Ridge Mall – case study fact sheet
- Blue Businesses postcard



A website and print materials are available for outreach to businesses.

Stormwater U: During 2010, EMWREP collaborated with Blue Thumb partners to offer a shoreline restoration training for contractors and designers. EMWREP also collaborated with Ramsey-Washington Metro Watershed District, University of Minnesota Extension and Fortin Consulting to offer workshops on turf maintenance and snow and ice management for contractors and municipal staff.

Shoreline Restoration: This course, offered on February 9, was for landscape design and installation professionals that work on shoreline restoration projects. It covered topics such as design, plant selection and installation techniques.

- 75 participants attended from companies around the Twin Cities area

Turf management: This course, offered on April 20, was geared towards parks and ground maintenance staff and landscaping professionals. It covered topics such as mowing, watering, fertilizers and weed control and gave participants tools to reduce runoff pollution and save money.

- 50 participants attended from cities and companies in Washington and Ramsey Counties

Contractors and municipal staff learned about turf management at a Stormwater U workshop in North St. Paul.

Snow and Ice Management: This course, offered on Oct. 26, was geared towards municipal road crews and private contractors that plow streets and parking areas. It provided instruction on reducing salt and chemical use while also maintaining safety.

- 50 participants attended from cities and companies in Washington and Ramsey Counties

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NEMO: In 2010, EMWREP used the newly developed Watershed Game activity to educate community leaders about practices that reduce runoff pollution. EMWREP also collaborated with the Minnesota DNR, Northland NEMO, St. Croix River Association, Middle St. Croix WMO, Washington Conservation District and the National Park Service to host a second workshop on the water for local elected officials and decision makers. EMWREP and partners also began work on the MIDS St. Croix project.

Watershed Game: EMWREP facilitated this activity with several groups, including:

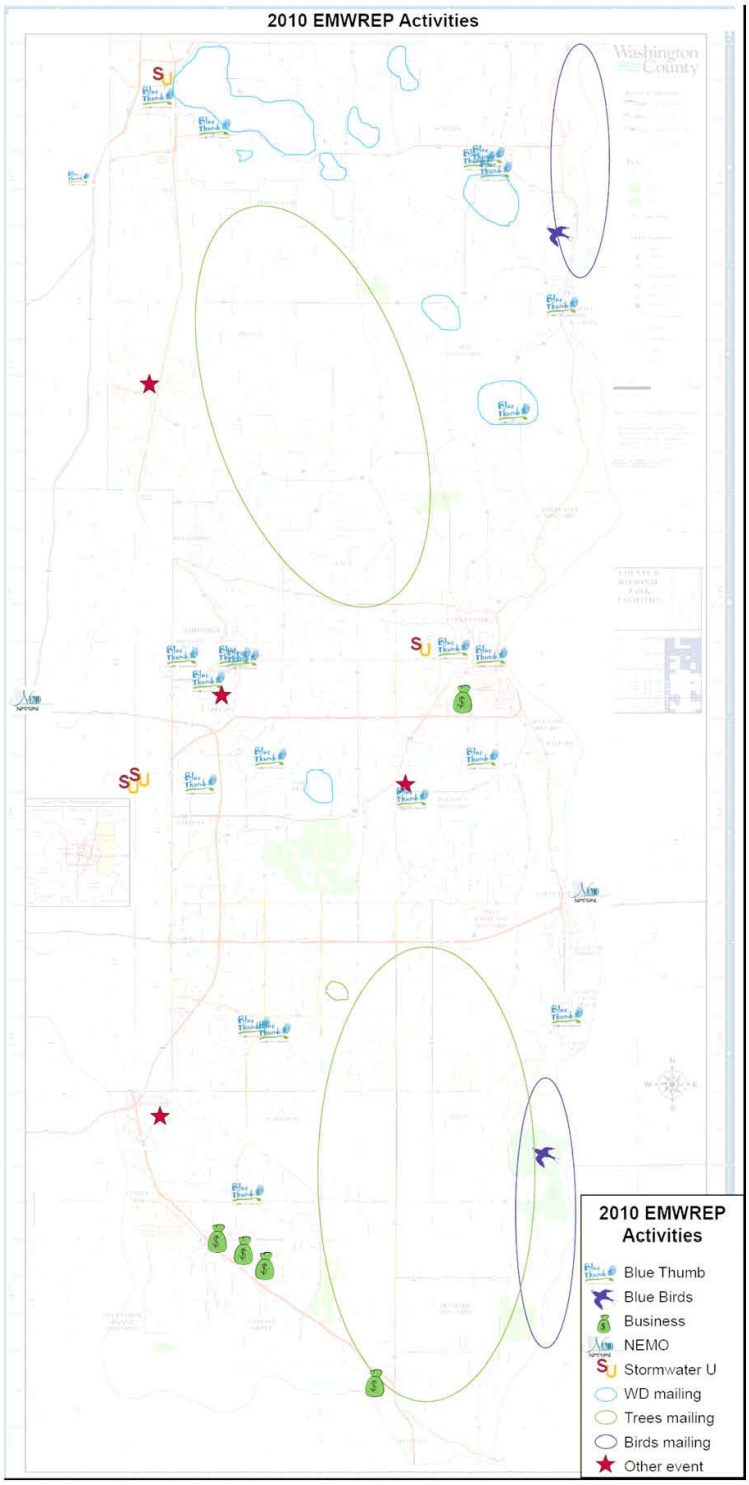
- DNR Stakeholder workshop
- RWMWD Citizen Advisory Committee

Over 100 people attended the July workshop on the water.

Workshop on the St. Croix River: Over 100 local elected officials and decision makers from communities on both sides of the St. Croix River attended the workshop on the water, held July 21. The event included a keynote speech by Jim Almendinger, Senior Scientist with the St. Croix Watershed Research Station, followed by three interactive learning activities. Workshop facilitators conducted a guided view from the river, showcasing stories of success from rural, developing and fully developed communities along the river. They also shared water samples, aquatic invertebrates and monitoring technology. A final activity was designed to help communities select appropriate policies and practices to protect water quality and achieve other community goals.

MIDS NEMO Project: Conservation St. Croix, a collaborative of nine Minnesota Soil and Water Conservation Districts in the St. Croix Basin received a 319 Clean Water grant to help communities update policies, procedures, ordinances, and zoning and subdivision codes to better protect the river. During 2011, EMWREP and other partners on the project began laying out the project timeline and conducting an inventory of existing community policies, ordinances and codes.

MS4 Toolkit: In 2011, EMWREP continued to use materials from the MS4 Education Toolkit for education and outreach to a variety of audiences about non-point source water pollution.


2010 EMWREP Activities
Washington County
2010 EMWREP Activities
Blue Thumb
Blue Birds
Business
NEMO
Stormwater U
WD mailing
Trees mailing
Birds mailing
Other event

14

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

MS4 Annual Report for 2010

Municipal Separate Storm Sewer Systems (MS4s)
Reporting period January 1, 2010 to December 31, 2010
Due June 30, 2011

Doc Type: Permitting Annual Report

Instructions: By completing this **mandatory** MS4 Annual Report form, you are providing the Minnesota Pollution Control Agency (MPCA) with a summary of your status of compliance with permit conditions, including an assessment of the appropriateness of your identified best management practices (BMPs) and progress towards achieving your identified measurable goals for each of the minimum control measures as required by the MS4 Permit. If a permittee determines that program status or compliance with the permit can not be adequately reflected within the structure of this form additional explanation and/or information may be referenced in an attachment. This form has significant limitations and provides only a snap shot of MS4 compliance with the conditions in the Permit. After reviewing the information, MPCA staff may need to contact the permittee to clarify or seek additional information. The MPCA enforcement policy is to provide the opportunity to respond to any alleged violations before any enforcement action is taken.

Submittal: This MS4 Annual Report must be submitted electronically to the MPCA using the submit button at the end of the form, from the person that is duly authorized to certify this form. All questions with an asterisk (*) are required fields (these fields also have a red border), and must be completed before the form will send. A confirmation e-mail will be sent in response to electronic submissions. To obtain an electronic copy of the 2010 MS4 Annual Report form, please visit the MPCA website at: http://www.pca.state.mn.us/water/stormwater/stormwater-ms4.html.

If you have further questions, please contact one of these MPCA staff members (toll-free 800-657-3864):

- Joyce Cieluch 218-846-7387
- Scott Fox 651-757-2368
- Amy Garcia 651-757-2377

General Contact Information (*Required fields)

*Name of MS4: South Washington Watershed District *Contact name: Matt Moore
*Mailing address: 2302 Tower Dr
*City: Woodbury *State: MN *Zip code: 55125
*Phone (including area code): (651) 714-3729 *E-mail: mmoore@ci.woodbury.mn.us
☐ Check here if this contact information is different than the contact indicated on the mailing label.

Minimum Control Measure 1: Public Education and Outreach [V.G.1] (*Required fields)

A. The permit requires each Permittee to implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and steps that the public can take to reduce pollutants in stormwater runoff. [Part V.G.1.a]

Note: Please indicate which of the following distribution methods you used during the 2010 calendar year. Indicate the number distributed in the spaces provided (enter "0" if the method was not used or "NA" if the data does not exist):

Media type	Number of media	Number of times published	Circulation/ Audience
Example: Brochures:	*3 different brochures*	*published 5 times*	*about 10,000*
Brochures:			
Newsletter:	10 Newsletters	Published 5 Cities	104,000 residents
Posters:			
Newspaper articles:	Weekly and Semi-weekly art.	15-20 articles 52 postings	104,000 vistors
Utility bill inserts:			
Radio ads:			
Television ads:			
Cable Access Channel:			
Other: Workshops	7 events	7 events	5200 participants
Other: Mailings	Neighborhood project	2 mailings	80 residents
Other: 2010 Clean Water Campaign	Various	Various	est. 15,000,000

B. *Do you use a website as a tool to distribute stormwater educational materials? ☒ Yes ☐ No

What is the URL: http://www.mnwcd.org/emwrep.php and http://www.swwdmn.org/

C. If you answered yes in question B. above, do you track hits to the site? ☒ Yes ☐ No

How many hits to the stormwater page during 2010: approx. 210,000

D. *Did you hold stormwater related events, presentations to schools or other such activities? ☒ Yes ☐ No

If yes, please describe:

E. *Have specific messages been developed and distributed during the 2010 calendar year for Minimum Control Measure (MCM):

MCM 1: ☒ Yes ☐ No MCM 4: ☐ Yes ☒ No

MCM 2: ☒ Yes ☐ No MCM 5: ☒ Yes ☐ No

MCM 3: ☒ Yes ☐ No MCM 6: ☒ Yes ☐ No

F. *Have you developed partnerships with other MS4s, watershed districts, local or state governments, educational institutions, etc., to assist you in fulfilling the requirements for MCM 1? ☒ Yes ☐ No

G. List those entities with which you have partnered during the 2010 calendar year to meet the requirements of this MCM and describe the nature of the agreement(s). Attach a separate sheet if necessary:

SWWD is a member of the East Metro Water Resources Education Program (EMWREP). Members are listed at http://www.mnwcd.org/emwrep.php.

H. *Have you developed methods to assess the effectiveness of your public education/outreach program? ☒ Yes ☐ No

If yes, please describe:

The EMWREP administrator routinely evaluates the effectiveness of the various public education/outreach programs through the use of surveys, evaluations, focus groups and interviews.

Minimum Control Measure 2: Public Participation/Involvement [V.G.2] (*Required fields)

A. *Did you hold a public meeting to present accomplishments for calendar year 2010 and to discuss your Stormwater Pollution Prevention Program (SWPPP)? [Part V.G.1.e] ☒ Yes ☐ No

If no, explain:

B. What was the date of the public meeting: 05/10/2011

C. How many citizens attended specifically for stormwater (excluding board/council members and staff/hired consultants)? 0

D. Was the public meeting a stand-alone meeting for stormwater or was it combined with some other function (City Council meeting, other public event, etc.)? ☒ Stand-alone ☐ Combined

E. *Each permittee must solicit and consider input from the public prior to submittal of the annual report. Did you receive written and/or oral input on your SWPPP? [Part V.G.2.b.1-3] ☐ Yes ☒ No

F. *Have you revised your SWPPP in response to written or oral comments received from the public since the last annual reporting cycle? [Part V.G.2.c] ☐ Yes ☒ No

If *yes*, describe. Attach a separate sheet if necessary:

Minimum Control Measure 3: Illicit Discharge Detection and Elimination [V.G.3] (*Required fields)

The permit requires permittees to develop, implement, and enforce a program to detect and eliminate illicit discharges as defined in 40 CFR 122.26(b)(2). You must also select and implement a program of appropriate BMPs and measurable goals for this minimum control measure.

A. *Did you update your storm sewer system map in 2010? ☐ Yes ☒ No

If *yes,* please explain which components (ponds, pipes, outfalls, waterbodies, etc.) were updated/added:

Note: The storm sewer system map was to be completed by June 30, 2008. [Part V.G.3.a]

B. *Have you modified the format in which the map is available? ☐ Yes ☒ No

C. If yes, indicate the new format:

☐ Hardcopy only ☐ GIS system ☐ CAD ☐ Other system: _____

D. *Have you established an ordinance or other regulatory mechanism to prohibit illicit discharges and/or non-stormwater discharges from entering the MS4? ☐ Yes ☒ No

Note: The Permit requires the ordinance or other regulatory mechanism to be established by June 30, 2010 [Part V.G.3.b]

If yes, indicate whether you've established an: ☐ Ordinance or ☐ Regulatory mechanism

E. If you answered yes in question D. above, provide the date the ordinance or other regulatory mechanism was adopted: _____

F. If you answered yes in question D. above, a complete copy of your illicit discharge prohibition ordinance or other regulatory mechanism addressing the requirements of Part V.G.3.b. of the Permit must be submitted with this MS4 Annual Report. Please provide the URL/reference where your illicit discharge ordinance or other regulatory mechanism may be found. Include specific code numbers if available:

_____

The ordinance may alternately be submitted as a separate electronic file attached to the e-mail submittal of this annual report. Are you submitting an electronic copy? ☐ Yes ☒ No

Minimum Control Measure 4: Construction Site Stormwater Runoff [V.G.4] (*Required fields)

The permit requires that each permittee **develop, implement, and enforce a program** to reduce pollutants in any stormwater runoff to your small MS4 from construction activities within your jurisdiction that result in a land disturbance of equal to or greater than one acre, including the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb one or more acres. [Part V.G.4.]

A. The permit requires an erosion and sediment control ordinance or regulatory mechanism that must include sanctions to ensure compliance and contains enforcement mechanisms [Part V.G.4.a]. Indicate which of the following enforcement mechanisms are contained in your ordinance or regulatory mechanism and the number of actions taken for each mechanism used during the reporting period (enter "0" if the method was not used or "NA" if the data does not exist). **Check all that apply.**

Enforcement mechanism	Number of actions
☐ Verbal warnings	#
☒ Notice of violation	# 0
☐ Administrative orders	#
☐ Stop-work orders	#
☐ Fines	#
☐ Forfeit of security of bond money	#
☐ Withholding of certificate of occupancy	#
☒ Criminal actions	# 0
☒ Civil penalties	# 0
☐ Other:	#

B. *Have you developed written procedures for site inspections? ☐ Yes ☒ No

C. *Have you developed written procedures for site enforcement? ☐ Yes ☒ No

D. *Identify the number of active construction sites greater than an acre in your jurisdiction during the 2010 calendar year: 10

E. *On average, how frequently are construction sites inspected (e.g., weekly, monthly, etc.)? quarterly

F. *How many inspectors, at any time, did you have available to verify erosion and sediment control compliance at construction sites during the 2010 calendar year: 2

Minimum Control Measure 5: Post-construction Stormwater Management in New Development and Redevelopment [V.G.5] (*Required fields)

The permit requires each permittee to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects within your jurisdiction that disturb an area greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or reduce water quality impacts. You must also select and implement a program of appropriate BMPs and measurable goals for this minimum control measure.

Note: The MS4 permit requirements associated with this minimum control measure were required to be fully developed and implemented by June 30, 2008.

A. *Have you established design standards for stormwater treatment BMPs installed as a result of post-construction requirements? ☒ Yes ☐ No

B. *Have you developed procedures for site plan review which incorporate consideration of water quality impacts? ☒ Yes ☐ No

C. *How many projects have you reviewed during the 2010 calendar year to ensure adequate long-term operation and maintenance of permanent stormwater treatment BMPs installed as a result of post-construction requirements? [Part V.G.5.b.and Part V.G.5.c]. 22

D. *Do plan reviewers use a checklist when reviewing plans? ☐ Yes ☒ No

E. *How are you funding the long-term operation and maintenance of your stormwater management system? (Check all that apply)

☐ Grants ☒ Stormwater utility fee ☒ Taxes

☐ Other: _____

Minimum Control Measure 6: Pollution Prevention/Good Housekeeping for Municipal Operations [V.G.6] (*Required fields)

The permit requires each MS4 to develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Your program must include employee training to prevent and reduce stormwater pollution from activities, such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

A. *Indicate the total number of structural pollution control devices (for example-grit chambers, sumps, floatable skimmers, etc.) within your MS4, the total number that were inspected in 2010, and calculate the percent inspected. Enter "0" if your MS4 does not contain structural pollution control devices or none were inspected in 2010. Enter "NA" if the data does not exist:

	*Total number	*Number inspected	*Percentage
*Structural pollution control devices:	0	0	

B. *Did you repair, replace, or maintain any structural pollution control devices? ☐ Yes ☒ No

C. *For each BMP below, indicate the total number within your MS4, how many of each BMP type were inspected and the percent inspected in 2010. Enter "0" if your MS4 does not contain BMPs or none were inspected in 2010. Enter "NA" if the data does not exist:

Structure/Facility type	*Total number	*Number inspected	*Percentage
*Outfalls to receiving waters:	0	0	
*Sediment basins/ponds:	3	3	100
*Total	3	3	100

D. Of the BMPs inspected in C. above, did you include any privately owned BMPs in that number? ☐ Yes ☒ No

E. If yes in D. above, how many? _____

Section 7: Impaired Waters Review (*Required fields)

The permit requires any MS4 that discharges to a Water of the State, which appears on the current U. S. Environmental Protection Agency (EPA) approved list of impaired waters under Section 303(d) of the Clean Water Act, review whether changes to the SWPPP may be warranted to reduce the impact of your discharge [Part IV.D].

A. *Does your MS4 discharge to any waters listed as impaired on the state 303 (d) list? ☒ Yes ☐ No

B. *Have you modified your SWPPP in response to an approved Total Maximum Daily Load (TMDL)? ☐ Yes ☒ No

If yes, indicate for which TMDL: _____

Section 8: Additional SWPPP Issues (*Required fields)

A. *Did you make a change to any BMPs or measurable goals in your SWPPP since your last report? [Part V.H.] ☐ Yes ☒ No

B. If *yes*, briefly list the BMPs or any measurable goals using their unique SWPPP identification numbers that were modified in your SWPPP, and why they were modified: *(Attach a separate sheet if necessary)*

C. *Did you rely on any other entities (MS4s, consultants, or contractors) to implement any portion of your SWPPP? ☒ Yes ☐ No

If *yes,* please identify them and list activities they assisted with:

The SWWD has not pursued an illicit discharge rule for the watershed since the City MS4's are providing illicit discharge detection, and the City stormwater systems discharge to the minimal SWWD system. Any illicit discharge would be detected prior to discharge to the SWWD system.

Owner or Operator Certification (*Required fields)

The person with overall administrative responsibility for SWPPP implementation and Permit compliance must certify this MS4 Annual Report. This person must be duly authorized and should be either a principal executive (i.e., Director of Public Works, City Administrator) or ranking elected official (i.e., Mayor, Township Supervisor).

☐ *Yes - *I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete (Minn. R. 7001.0070). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment (Minn. R. 7001.0540).*

*Name of certifying official: _____

*Title: _____ *Date: _____ *(mm/dd/yyyy)*

Submit

StarTribune.com

Technology shakes up road salt use in Cottage Grove

Cottage Grove is using a precise system of clearing road ice that is easier on the environment -- and the bottom line.

By JIM ANDERSON[1], Star Tribune

Last update: January 29, 2011 - 9:03 PM

Even in a winter like this, with seemingly endless snow, cities are discovering the benefits of putting a pinch on the salt that makes roads safe.

The South Washington County Watershed District, which manages numerous water quality projects in eight cities, is focusing new efforts on helping cities manage how they apply salt to roadways.

It's good for the environment and the bottom line, said Matt Moore, administrator of the watershed district.

"It's a win-win -- there's less chloride use and less environmental impact," he said. "But what's not going to go away is the need to balance that against safety."

In 2009, the watershed district awarded Cottage Grove a $50,000 cost-share grant to retrofit its fleet of snowplows with new technology that takes the guesswork out of applying road salt.

It uses GPS technology that regulates truck speed and an infrared system to gauge road temperature to automatically and precisely regulate how much salt is dispersed.

It's proven so successful, he said, that other cities are likely to pursue the technology.

A second project under consideration is a road salt storage facility in St. Paul Park. The district would fund half the building's $80,000 cost.

The upgrade will better prevent runoff of chlorides, Moore said.

Calcium chloride is the most common salt used to clear roads in winter, because it's more effective at melting ice at lower temperatures than sodium chloride, the chemical equivalent of table salt. It's also less harmful to the environment than the salt found in shakers, but still has potentially damaging effects.

Chloride can only be removed from water by

reverse osmosis, and it doesn't break down but moves along with water. That means it keeps building up in the environment.

In high concentrations, it can kill fish and other aquatic species. At chronic, lower levels, it can impair lakes, streams and other waters, according to the Minnesota Pollution Control Agency. Studies also have linked salt to bird deaths and suggest that some amphibian species like frogs are sensitive to high levels of road salt. It also hurts plants and makes soil more prone to erosion.

The first winter of the retrofitted plows in Cottage Grove brought a significant reduction in salt use, said Jennifer Levitt, city engineer. "The key thing is that it applies the correct amount of salt for the temperature and road conditions."

The technology is better able to adjust to all the variables that go into plowing and efficiently salting roadways: Truck speed, the rate at which salt comes out of the box and how wide a swath is being covered.

The computers now do those calculations, Levitt said. The infrared sensors even gauge the road temperature, so that when plows come to a colder bridge deck or shady spot, they will increase the salt being spread. This system even eliminates the problem of piling of salt at intersections.

Besides saving money and helping the environment, she said, the new system has virtually eliminated the need for spreading sand along with the salt. That also spares the environment and saves the city money, because in spring the sand must be swept from streets and removed from sewer pipes and ponds to keep sediment from building up.

Jim Anderson • 651-735-0999

Shortcuts To Links In Article

1. http://ezurl.co/4d01

South Washington County Bulletin

Published June 27 2010

Viewpoint: The little neighborhood that could

Nestled in the woods, high above the Mississippi River, sits a little Newport neighborhood with a whole lot of attitude.

By: **Angie Hong**, South Washington County Bulletin

Nestled in the woods, high above the Mississippi River, sits a little Newport neighborhood with a whole lot of attitude. Snaking up the hill along Wild Ridge Trail, you watch for deer and brake to let turkeys strut by. Although it feels more like up north, the neighborhood is just minutes from the Interstate 494 and Highway 61 interchange, and the impacts of civilization continue to creep in.

I first got a call from the folks in Newport two years ago when they were organizing a community buckthorn pull at the Bailey School Forest; it was clear to me immediately that they were not the sort of people to lay down at a challenge. Determined to keep invasive non-native buckthorn from invading further into the park, they organized local residents, recruited volunteers from the high school and set to work with chainsaws, hacksaws, weed-wrenches and gloves. By the end of the morning, the mangled corpses of fallen buckthorn were piled high along the edge of the woods, while volunteers happily headed home to do more of the same in their own back yards. Last year, they were at it again, cutting, pulling and poisoning buckthorn with murderous intent.

In the meantime, this feisty group of Newport neighbors has worked together to make improvements in their own yards that benefit the entire community. It all started when Susan Lindoo, a member of the Newport Parks Board, scheduled a site visit at her home with Washington Conservation District specialist Rusty Schmidt. They discussed strategies for controlling buckthorn in her yard, as well as native plants that could replace the buckthorn once it was gone. They also talked about installing a raingarden on her property to slow down runoff from her rooftop and driveway and soak it into the ground. When Susan learned that the South Washington Watershed District would be more likely to provide cost-share funding for a larger-scale neighborhood project, she set to work immediately convincing her neighbors to install raingardens and native plantings of their own.

Because it is at the top of its watershed, runoff from the houses and streets in the Bailey School Forest neighborhood heads downhill into town, where it picks up even more runoff before eventually dumping into the Mississippi River. By installing dry creek beds, raingardens, French drains and native plantings in their yards, these Newport residents are reducing erosion on the steep hillsides around their homes as well as taking a bite out of the polluted runoff that flows downhill into town. This June, the little neighborhood that could celebrated its achievements with a progressive dinner and tour of one another's new, blue, landscaping features. They traveled from home to home, eating appetizers and treats along the way, and marveled at one another's efforts. Not only were the new plantings off to a great start, but they could also see one another's homes for the first time in a long time now that so much of the buckthorn was gone!

I have no doubt that Susan Lindoo and her hardy crew of neighbors will be at it again this fall with another community buckthorn pull. There's an air of perseverance and spirit in the woods up there. Maybe it's something in the water, but my hunch is that it's the people.

Angie Hong is an educator for the East Metro Water Resource Education Program. Contact her at (651) 275-1136 extension 35 or angie.hong@mnwcd.org.

Tags: viewpoint, opinion

Woodbury Bulletin
The Official Newspaper of Woodbury, Minnesota

Published September 29, 2010, 07:33 AM

Bringing the prairie back to Woodbury

To the naked eye it's and 80-acre woodland area bordering an old farmer's field But to Tory Christensen, it's a vital environmental corridor that was once a healthy prairie between two rivers.

In one of the southern most parts of town, just beyond Bailey Road and west of Woodbury Drive, sits open acreage.

To the naked eye the 80-acre parcel is a woodland area bordering an old farmer's field. But to Tory Christensen, it's a vital environmental corridor that was once a healthy prairie between two rivers.

For the last year Christensen, an ecologist and project manager for Twin Cities-based Great River Greening, has been working on a plan to restore the open space to its natural prairie conditions. And on Saturday, Sept. 25, he had some help.

About 150 volunteers from around the Twin Cities met in the parking lot of nearby Crossroads Church at 8 a.m. to provide their muscle to take the first steps to bringing the prairie back to the southern portion of rural Woodbury.

One of those volunteers was 8-year-old Luke Mair.

Along with his mother Jamie, the Valley Crossing student helped move brush while others in the group cut down buck thorn, honeysuckle, and other non-native trees and shrubbery.

Jamie Mair said she learned of the prairie restoration event in a church bulletin and mentioned to her son it would provide an opportunity for him to earn his Cub Scout conservation badge.

"I was hoping for a little more sunshine, but it's still fun," Luke said, as he aided in removing brush from a large section of sumac trees and buckthorn.

For Jamie Mair, the event was a great teaching moment.

"It's so important that we help repair the damage we as humans have done to the land," Mair said. "If we can devote a few hours to help that happen, that's a terrific way to spend a Saturday morning."

JoAnn Kern heard about the restoration event via a company email. The Bailey Nurseries employee said she liked the idea of helping to restore a native prairie ecosystem just down the road from her workplace.

"It would take one guy all year to do the work we're doing in a few hours," Kern, of Hastings, said. "But with a group like this it's amazing to see how fast we're getting the job done."

A group of about 30 students of University of St. Thomas Law School, as a part of a required community service day, joined in the fray of felling the woodland -infested area. Saws and tree branch clippers came in handy along with gardening gloves provided by the project managers.

The sheer number of volunteers for the event was an encouraging sign, said event coordinator Mark Turbak.

"It seems like we are doing a pretty simple thing by hauling this brush from one spot to another," Turbak told volunteers. "But that simple act has a profound impact on the ecosystem, which eventually touches people's lives."

Long-range goal

Great River Greening takes on about two dozen conservation restoration projects in the Twin Cities every year. The project just to the south and west of Crossroads Church in Woodbury, presented a unique challenge, Christensen said. The swale-like area, which is owned by the South Washington Watershed District, is currently used as drainage by the city of Woodbury for stormwater runoff in the event of a significant rainfall.

Over the years the changing habitat around the acreage, including runoff of pollutants in the water, has slowly brought along the growth of woodland species like sumac, honeysuckle and buckthorn, Christensen said. These species have choked out the prairie species that are vital to many animals in the area, he added.

Christensen began developing a plan to restore the prairie that first included elimination of the invasive woodland species. Over the next few years Great River Greening project staff will seed the area to revive the native prairie grasses and then once every 3-5 years will orchestrate controlled burns of the area.

Over time, the native prairie will return and so should the vibrancy of the several bird species that thrive in the shrinking prairie environment, Christensen said.

Avian species specific to the prairie grassland near the Mississippi and St. Croix Valley areas include bobolinks, blue birds and sparrows along with red-tailed hawks and other predators that roam the environment.

"What we are really trying to restore is a connecting environment so these species can move along the corridor and continue to thrive," Christensen said, who added that native prairie grasslands are among the most endangered natural ecosystems in the world.

That's enough of an impact to keep Vera Wagner involved with such projects for years to come. A Woodbury resident and master gardener, Wagner has been volunteering for restoration projects with Great River Greening for the better part of a decade.

"A project like this is good for exposure, more than anything," Wagner said. "I've been a master gardener for nearly 20 years and even I didn't realize how important a piece of land like this is. The more people know about how important these connecting environments are, the better off we'll be."

Appendix E 2010 Monitoring Report Summary

Executive Summary

SWWD's monitoring programs are organized based on a Regional Assessment approach. By following a regional assessment approach, monitoring is focused on key crossings and checkpoints throughout the District. Data from those monitoring locations is used to identify regional issues for further investigation. In addition to monitoring at Regional Assessment Locations, SWWD conducts subwatershed assessment monitoring, participates in the Metropolitan Council's Citizen Assisted Monitoring Program (CAMP), and limited monitoring of groundwater levels.

In 2010, SWWD operated 8 Regional Assessment Locations, 5 Subwatershed Assessment Locations, participated in the CAMP program which monitored 7 lakes, conducted additional stormwater monitoring in watersheds of 2 lakes, monitored surface elevation on 2 additional lakes, and continued long term monitoring of groundwater levels near the District's regional infiltration facilities. This executive summary provides an overview of major findings from the 2010 monitoring data. The body of the Monitoring Report summarizes and presents data collected in 2010. Year to year analysis is performed following odd monitoring years and will be performed again for the 2011 report.

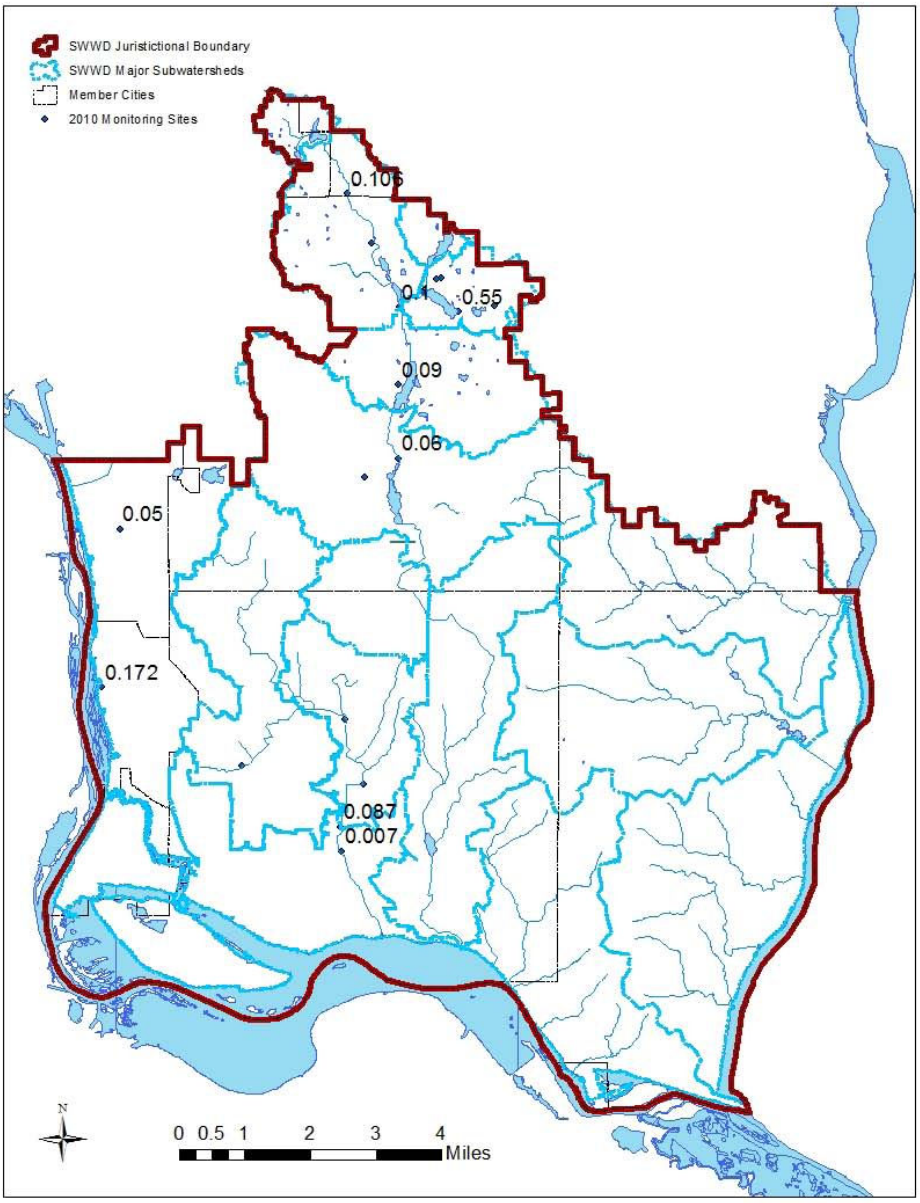
Regional Assessment Locations were generally monitored from early April through October. Some sites—MS2, 100th Street, and Wilmes Lake Outlet—display consistently good water quality. MS2 effectively serves as watershed outlet for the majority of the Northern major subwatershed of the District. Data collected at MS2 indicates that the Northern major subwatershed, though mostly developed, currently transmits relatively low runoff or pollutants. Likewise, the 100th St site effectively serves as the watershed outlet for the West Draw and Central Draw major subwatersheds and transmits low runoff and pollutants. The Wilmes Lake outlet met state water quality standards throughout the monitoring season; however, data indicates a high phosphorus load leaving the lake and flowing to Colby Lake.

Other Regional Assessment Locations—Newport, St. Paul Park, Central Ravine, and MS1—display flashy hydrographs indicating rapid transmission of even small storm events and high concentrations of pollutants. 2010 results for Newport, St. Paul Park, and Central Ravine which all drain to the Mississippi River, indicate heavy metal concentrations frequently in excess of state standards. However, all three sites did meet SWWD's total phosphorus loading standard for the Mississippi River. MS1 exceeded state water quality standards on several occasions and exceeded SWWD's total phosphorus loading standard for Wilmes Lake. 2010 total phosphorus loading rates at SWWD's regional and water body assessment locations are shown in Map ES1.

SWWD Lakes are held to two sets of standards. First, impairment status is determined based on state eutrophication standards. Second, SWWD sets interim goals for all shallow lakes in the District which are thought to be feasible for lakes in an urban environment. District rules and standards are set to achieve SWWD's interim goals while SWWD's programs and planning efforts are focused on meeting state standards. For Powers Lake, the District's only deep lake, SWWD sets goals that exceed state standards with the goal of protecting the priority water body.

All SWWD lakes are eutrophic except Markgrafs which is hyper-eutrophic. Light attenuation in most lake is dominated by algae which are nevertheless limited by some factor other than available phosphorus. Exceptions, however, include Markgrafs Lake which is dominated by non algal turbidity and Ravine Lake. Water quality in some lakes—Armstrong and Ravine—has shown improvement since monitoring began. Both lakes, while currently listed as impaired, are close to meeting state eutrophication standards. Water quality of La, Wilmes, and Colby Lakes has been consistent since monitoring began. Wilmes and Colby are both currently listed as impaired. Water quality of the remaining District Lakes—Markgrafs, O'Conner's, and Powers—appears to be declining. Markgrafs Lake exhibited continued, rapid degradation far exceeding both state eutrophication standards and SWWD water quality goals. Powers Lake, considered a priority water body by SWWD, also continued to exhibit a prolonged decline in all eutrophication. Further, stormwater monitoring within the Powers Lake watershed indicates routine phosphorus loading in excess of SWWD loading standards for the lake. Lakes grades are displayed in map ES2.

Map ES1: 2010 Total Phosphorus Loading Rates at SWWD Regional and Water Body Assessment Locations.



Map ES2: 2010 Lake Grades of Monitored SWWD Lakes