

2012 Annual Report



Contents

Board of Managers.....	3
Introduction.....	4
2012 Financial Report.....	5
2013 Workplan.....	11
Appendix A; Audit Compliance Report	
Appendix B; EMWREP Education Report	
Appendix C; Local Articles	

Board of Managers

2012-2013

Manager	Position	Term Expires	City/County
Mr. Jack Lavold 6859 Ideal Avenue South Cottage Grove, MN 55016 651-459-8891	President	05/01/2014	Cottage Grove/Washington
Mr. Dennis Hanna, 9301 Grey Cloud Island Dr. St. Paul Park, MN 55071 651-459-2281	Vice-President	05/01/2016	Grey Cloud Island/Washington
Mr. Brian Johnson 4353 Dorchester Drive Woodbury, MN 55129 651-458-3739	Vice-President	05/01/2016	Woodbury/Washington
Mr. Don Pereira 8232 River Acres Road Cottage Grove, MN 55016 651-769-0429	Secretary	05/01/2015	Cottage Grove/Washington
Mr. Mike Madigan 2366 Hidden Lake Cove Woodbury, MN 55125 651-702-0488	Treasurer	05/01/2014	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. Another amendment to incorporate areas in its expanded boundary and the priorities and projects identified in the LSCWMO plan was completed in 2011.

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 2012.

2012 Financial Report

The 2012 audit report is in Appendix A. Revenue and program expenditure summaries 2011-2013 are presented below.

Revenue

Revenue Source	2011	2012	2013*
Ad Valorem Levy	\$ 687,279.00	\$ 711,043.00	\$ 718,224.32
Stormwater Utility			
25% Area	\$ 1,292,700.00	\$ 1,331,825.00	\$ 1,348,637.50
75% Area	\$ 1,094,850.00	\$ 1,080,975.00	\$ 1,091,812.50
E. Mississippi	\$ 257,200.00	\$ 262,000.00	\$ 270,365.00
Lower St. Croix	\$ 0.00	\$ 90,105.00	\$ 91,480.00
Total Revenue	\$ 3,332,029.00	\$ 3,475,948.00	\$ 3,520,519.32

*Anticipated Revenue

Program Expenditures

Program Area	2011 Budget	2011 Actual	2012 Budget	2012 Actual/Unaudited	2013 Budget
1.0 Floodplain Management	\$ 37,500	\$ 55,605.00	\$ 43,650	\$ 38,843.08	\$16,150.00
2.0 Stormwater Management	\$1,260,000	\$1,510,028.00	\$ 1,110,650	\$ 3,159,702.08	\$1,138,890
3.0 Water Quality	\$314,621	\$ 212,292.00	\$ 359,200	\$ 365,704.59	\$369,568.94
4.0 Wetlands	\$ 16,250	\$ 0.00	\$ 3,200	\$ 3,514.66	\$4,773.08
5.0 Natural Resources	\$ 20,400	\$ 22,266.00	\$ 42,800	\$ 8,986.48	\$42,800
6.0 Groundwater	\$ 102,500	\$ 5,500.00	\$ 87,400	\$ 2,486.48	\$87,400
7.0 Erosion and Sediment Control	\$ 13,169	\$ 2,177.00	\$ 3,200	\$ 2,637.41	\$3,200
8.0 Education	\$ 54,749	\$ 38,378.00	\$ 40,300	\$ 32,051.95	\$43,300
9.0 Long Range Work Plan/Finance	\$ 484,632	\$ 479,994.00	\$ 560,505	\$ 335,170.09	\$585,505
10.0 Data Management	\$ 251,352	\$ 205,733.00	\$ 194,686	\$ 192,138.18	\$178,755.20
11.0 General	\$ 239,855	\$ 210,816.00	\$ 253,357	\$ 232,738.40	\$265,327.10
12.0 Debt Service	\$ 537,000	\$525,875.00	\$ 777,000	\$ 696,769.99	\$784,850
Total Budget	\$3,332,028.00	\$3,268,664.00	\$3,475,948.00	\$5,070,743.39	\$3,520,519.32

2012 Activity Report

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.
- SWWD maintains extensive hydraulic and hydrologic modeling of the District. Staff continues to work with City staff to accommodate incoming developing while preserving critical floodplain storage in the District as identified in District models.

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 9 projects in 2012.
- 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. Reports for 2012 are expected to be available in mid-summer following completion of a new online monitoring database and interactive analysis and reporting application.
- In March 2011, the SWWD Board of Managers approved the purchase of 2011 General Obligation bonds to finance three Stormwater projects in the East Mississippi Sub-Watershed; The City of Newport Ravine Stabilization, Clear Channel Pond, and Grey Cloud Island Slough Crossing project. The Newport Ravine stabilization construction started in the spring of 2012 and was complete in September.



Newport Ravine Before



Newport Ravine After



Clear Channel Pond

- Demolition of the residential property for the Clear Channel pond project was complete in 2012. Project design work began in spring of 2012 on this site, and project construction is set to begin in 2013.
- Houston Engineering has completed preliminary plans and cost estimates for three crossing options for the Grey Cloud Island Slough project. In 2012, Houston Engineering provided SWWD a feasibility study for the project to determine a preferred crossing. Pursuit of various funding options for the project will continue in 2013.
- The SWWD continued the planning process for the Central Ravine Overflow project in 2012. The SWWD prepared ROW maps for the acquisition process and which will place the overflow pipe just inside the new roadway east of CSAH 19 and in the existing ROW west of CSAH 19. In 2012, HDR Engineering continued to work on design elements of the roadway and overflow.
- The SWWD prepared a voluntary Environmental Assessment Worksheet (EAW) for the overflow project in 2012. Submittal of the EAW was complete in December 2012.
- The purpose of the EAW is to determine if the overflow project had the potential for significant environmental effects. Based on comments received and need for additional information, SWWD determined that phase I of the project does not have the potential for significant environmental effects while effects from phase II will be further examined and addressed in an additional EAW. Staff is currently working with its consultants and staff of interested agencies to conduct additional review of phase IV. In 2012, SWWD and Cottage Grove reached an agreement to make improvements to the City's Central Draw storm sewer system to accommodate future connection to SWWD's CDSF. The City of Cottage Grove awarded the contract for those improvements in September. Work to extend the low flow outlet from the pond on the north side of 80th street to the south was complete. Construction of the re-routing of the watermain was complete, and the box culvert was in place by December. Construction will resume in spring of 2013. The CDSF connection to the Central Ravine system will also be constructed in 2013 along with phase I of SWWD's CDSF overflow.

Water Quality

- In 2012 SWWD continued a "performance based cost share" program. Instead of reimbursing land owners for a specific percentage of total project cost, SWWD now reimburses land owners based on the amount of phosphorus that their project is expected to retain. SWWD's 2012 reimbursement rate was \$5,000.00 per pound of phosphorus retained. SWWD allocated \$79,200.00 to 22 projects in 2012. Together, the projects funded by SWWD in 2012 are expected to capture 35 lbs of phosphorus. Projects with higher funding levels typically treated runoff from several properties. Included in the 2012 cost share grants, was SWWD Colby Lake raingarden projects. Neighborhood raingardens will be a critical component of the effort to clean up Colby Lake. A raingarden is simply a shallow depression that collects runoff from a house or street and soaks it into the ground before it can wash dirt and pollutants into storm sewers that connect to lakes and rivers. The Colby Lake neighborhood raingarden project is an initiative led by the SWWD in partnership with the WCD and the City of Woodbury to provide education, design assistance, and project oversight to help

homeowners around Colby Lake install raingardens in priority locations. Funding for the raingardens will be divided between State Clean Water Funds (from the Clean Water, Land and Legacy Amendment) and SWWD.



Colby Lake Raingarden (before)



Colby Lake Raingarden (after)

As of 12/31/2012, inlet structures for all 26 bioretention raingarden BMPs have been installed and were completed as part of the City of Woodbury's 2012 Roadway Reconstruction project. 14 of the 26 raingardens are complete, with the remaining 12 to be completed in the spring of 2013.

- The SWWD Board of Managers awarded \$475,000.00 through its Coordinated Capital Improvement Program (CCIP). \$228,505.00 was awarded to the City of Woodbury for deicing equipment, pond maintenance for treatment of both sediment and nutrients, and the Colby lake neighborhood street reconstruction water quality retrofits. All of the BMP's will reduce the magnitude of runoff volume and frequency of erosive, concentrated flows into Colby, Powers, and Wilmes Lake. \$246,495.00 was awarded to the City of Cottage Grove for ED-P5 pond improvements, Woodridge Park improvements, and a rain harvesting system installed at the new City Hall site. Together, the projects were estimated to reduce phosphorus in stormwater runoff by 192.09 lbs/yr.
- SWWD worked with the Washington Conservation District to complete the Wilmes Lake retrofit assessments. The retrofit assessment follows a protocol developed by the Metro Association of SWCDs to systematically identify the most cost effective projects for reducing the target pollutant. The Wilmes assessments focused on reducing total phosphorus.

Wetlands

- Effective June 1, 2012, SWWD became the Local Governmental Unit (LGU) for wetland permits within the SWWD boundary. In 2012, SWWD reviewed 4 applications, two violations, and four project sites. 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

- The prairie restoration work continued with the restoration/reconstruction of 30 acres for Phase II as well as continued debris and invasive removal over 5 acres of pine and invasive hardwoods. This

work will set the stage for a clean seed bed for restoration of these areas during the Phase III restoration. Seed collection and spreading of collected seed will continue to distribute over the remnant restoration areas and manage these areas for invasive weeds throughout the growing seasons of 2011-2013.

- In May 2012, SWWD received the City of Woodbury's Environmental Excellence Award for SWWD's partnership with Great River Greening to preserve and restore prairie within the Woodbury Conservation Corridor.

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.
- SWWD began collaboration with the Minnesota Department of Natural Resources to install additional monitoring wells on SWWD property as part of an effort to expand the State's groundwater monitoring network.

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

- SWWD continues to participate and support the Metro Watershed Partners program, Blue Thumb, and Project NEMO.
- Again in 2012, SWWD participated in the East Metro Water Resource Education Program (EMWREP). The EMWREP annual activities report is in Appendix B.

Long Range Work Planning and Finance

- SWWD continued collecting stormwater utility fees in the East Mississippi management unit. 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.
- In 2011, SWWD amended its WMP to establish the Lower St. Croix management district and incorporate priorities and projects identified in the LSCWMO WMP. In 2012, SWWD began collecting stormwater utility fees in the Lower St. Croix management unit. Revenue will be used to fund water quality projects only within the Lower St. Croix.

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. The completed online database is expected to be available mid-2013.

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. In 2011, the SWWD issued general obligation bonds for the construction of three projects within the East Mississippi management area.

2013 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	2010	2011	2012	2013	4-yr total
Budget	\$85,000	37,500	43,650	16,150	\$182,300

2013 Work Plan

South Washington Watershed District 2013 Budget				
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total

(1) Floodplain Management				\$13,750.00
Hydrologic Modeling				
Project Management		\$1,250.00		
Data Collection		\$2,500.00		
Model Development Calibration		\$5,000.00		
Assesment and Evaluation		\$2,500.00		
Reporting		\$2,500.00		
			\$13,750.00	

(1) Floodplain Management				\$2,400.00
Hydrologic Modeling				
Project Management		\$800.00		
Data Collection		\$0.00		
Model Development Calibration		\$0.00		
Assesment and Evaluation		\$800.00		
Reporting		\$800.00		
			\$2,400.00	

Management Area Goal

Opportunistically manage floodplains for multiple, non-development uses.

2013 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 FEMA Map 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	2010	2011	2012	2013	4-yr total
Budget	\$1,273,000	\$1,260,000	\$1,110,650	\$1,138,890	\$4,782,540

2013 Work Plan

South Washington Watershed District 2013 Budget					
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total	
(2) Storm Water Runoff Rate and Volume					\$1,001,550.00
Flood Damage Reduction					
FDR Grant Program				\$3,150.00	
Project Management		\$1,250.00			
Legal		\$1,900.00			
Modeling/Mapping/Protection					
Project Management		\$0.00			
Data Collection		\$0.00			
Model Development Calibration		\$0.00			
Assesment and Evaluation		\$0.00			
Reporting		\$0.00			
Overflow Design					
Project Management		\$20,000.00			
Data Collection		\$0.00			
Feasibility/Preliminary Design		\$12,500.00			
Final Design		\$12,500.00			
Final Plans and Specs		\$12,500.00			
Legal		\$5,700.00			
Watershed Overflow Implementation Fund					
Project Management		\$10,000.00			
Data Collection		\$10,000.00			
Appraisal		\$10,000.00			
Survey		\$10,000.00			
Legal		\$15,200.00			
Land Acquisition			\$350,000.00		
Implementation Fund			\$450,000.00		
Hydrologic Modeling					
Project Management		\$7,500.00			
Data Collection		\$15,000.00			
Model Development Calibration		\$20,000.00			
Assesment and Evaluation		\$15,000.00			
Meetings/Correspondance		\$7,500.00			
Reporting		\$15,000.00			

(2) Storm Water Runoff Rate and Volume						\$22,865.00
Hydrologic Modeling/Project Design						\$22,865.00
Project Management	15	\$125.00	\$1,875.00			
Data Collection	20	\$125.00	\$2,500.00			
Model Development Calibration	40	\$125.00	\$5,000.00			
Assesment and Evaluation	40	\$125.00	\$5,000.00			
Meetings/Correspondance	20	\$125.00	\$2,500.00			
Reporting	25	\$125.00	\$3,125.00			
Legal	15	\$191.00	\$2,865.00			

(2) Storm Water Runoff Rate and Volume						\$91,480.00
Hydrologic Modeling/Project Design						\$23,785.00
Project Management	20	\$125.00	\$2,500.00			
Data Collection	40	\$125.00	\$5,000.00			
Feasibility/Preliminary Design	30	\$125.00	\$3,750.00			
Final Design	45	\$125.00	\$5,625.00			
Final Plans and Specs	40	\$125.00	\$5,000.00			
Legal	10	\$191.00	\$1,910.00			
Sub Watershed Implementation Fund						\$51,410.00
Project Management	10	\$125.00	\$1,250.00			
Data Collection	10	\$125.00	\$1,250.00			
Appraisal			\$5,000.00			
Survey			\$5,000.00			
Legal	10	\$191.00	\$1,910.00			
Land Acquisition						
Implementation Fund				\$37,000.00		
Hydrologic Modeling						\$16,285.00
Project Management	10	\$125.00	\$1,250.00			
Data Collection	20	\$125.00	\$2,500.00			
Model Development Calibration	25	\$125.00	\$3,125.00			
Assesment and Evaluation	20	\$125.00	\$2,500.00			
Meetings/Correspondance	20	\$125.00	\$2,500.00			
Reporting	20	\$125.00	\$2,500.00			
Legal	10	\$191.00	\$1,910.00			

(2) Storm Water Runoff Rate and Volume				\$22,995.00
Flood Damage Reduction				\$6,465.00
FDR Grant Program				
Project Management	\$400.00			
Legal	\$2,865.00			
Modeling/Mapping/Protection				
Project Management	\$800.00			
Data Collection	\$0.00			
Model Development Calibration	\$0.00			
Assesment and Evaluation	\$800.00			
Reporting	\$1,600.00			
Overflow Design				\$7,665.00
Project Management	\$2,400.00			
Data Collection	\$0.00			
Feasibility/Preliminary Design	\$0.00			
Final Design	\$2,400.00			
Final Plans and Specs	\$0.00			
Legal	\$2,865.00			
Watershed Overflow Implementation Fund				\$4,465.00
Project Management	\$1,600.00			
Data Collection	\$0.00			
Appraisal	\$0.00			
Survey	\$0.00			
Legal	\$2,865.00			
Land Acquisition				
Implementation Fund				
Hydrologic Modeling				\$4,400.00
Project Management	\$400.00			
Data Collection	\$400.00			
Model Development Calibration	\$800.00			
Assesment and Evaluation	\$800.00			
Meetings/Correspondance	\$800.00			
Reporting	\$1,200.00			

Management Area Goal

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

2013 Action Items

- Coordinate design of overflow system in cooperation with Washington County and potential 70th CSAH 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 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 City of Cottage Grove on the East Ravine improvements.
- Planning and implementation for phase I of the overflow project.
- Work cooperatively with 3M for phase II of the overflow project.

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	2010	2011	2012	2013	4-yr total
Budget	\$160,000	\$324,620	\$359,200	\$369,568.94	\$1,203,389

2013 Work Plan

South Washington Watershed District 2013 Budget					
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total	
(3) Water Quality					\$203,800.00
Loading Assessment			\$60,000.00		
Project Management	\$5,000.00				
Data Collection	\$15,000.00				
Model Development Calibration	\$15,000.00				
Assessment and Evaluation	\$15,000.00				
Reporting	\$10,000.00				
Water Quality Cost Share Program			\$0.00		
Lake Assessment (TMDL/Impaired Waters/Non-Degradation)			\$143,800.00		
Project Management	\$5,000.00				
Data Collection	\$7,500.00				
Watershed Evaluation	\$7,500.00				
Modeling Water Quality Physical/Chemical	\$25,000.00				
Lake Biological Assessment	\$10,000.00				
Feasible Remedial Alternatives Analysis	\$15,000.00				
Lake Management Plan/Report	\$20,000.00				
Legal	\$3,800.00				
Sub-watershd implementation		\$ 50,000.00			

(3) Water Quality				\$165,768.94	
Loading Assessment				\$8,000.00	
Project Management		\$800.00			
Data Collection		\$1,200.00			
Model Development Calibration		\$1,200.00			
Assessment and Evaluation		\$1,600.00			
Reporting		\$3,200.00			
Water Quality Cost Share Program				\$98,800.00	\$48,568.94
Cost share to projects			\$70,000.00		
Water Quality Project Supplement			\$20,000.00		
Rain Barrels					
Project Management		\$2,400.00			
Assessment and Evaluation		\$2,400.00			
Final Design		\$2,400.00			
Reporting		\$1,600.00			
Lake Assessment (TMDL/Impaired Waters/Non-Degradation)				\$10,400.00	
Project Management		\$1,600.00			
Data Collection		\$800.00			
Watershed Evaluation		\$1,600.00			
Modeling Water Quality Physical/Chemical		\$1,600.00			
Lake Biological Assessment		\$1,600.00			
Feasible Remedial Alternatives Analysis		\$1,600.00			
Lake Management Plan/Report		\$1,600.00			

Management Area Goal

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

2013 Action Items

- Continue water quality BMP cost share program watershed wide.
- Develop watershed water quality model for one sub-watershed.
- Define loading capacity on a sub-watershed and water body scale.
- SWWD has been awarded a Clean Water Fund Grant for 2013 to install water reuse systems at Eagle Valley and Prestwick golf courses in cooperation with the City of Woodbury and Washington County.
- 2012 Clean Water Grant funds have been used to target priority projects identified through WCD's Top50P! project. Construction will continue in 2013.
- SWWD is working with Afton Alps and Minnesota DNR to identify and implement priority projects throughout the Afton Alps property with the goal of improving habitat in Trout brook and reducing runoff volume and phosphorus load to Trout Brook and Lake St. Croix.
- 2012 Clean Water Grant funds have been used to fund the Colby Lake Neighborhood Retrofit project. In 2012, the installation of 20-30 priority small-scale BMPs in the Colby

1st Addition reduced annual loading to Colby Lake by over 10 lbs. Colby Lake raingarden construction will continue in 2013.

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	2010	2011	2012	2013	4-yr total
Budget	\$85,000	\$16,250	\$3,200	\$4,773	\$109,223

2013 Work Plan

South Washington Watershed District 2013 Budget					
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total	
(4) Wetlands					\$4,773.08
Wetland Assessment			\$3,200.00	\$1,573.08	
Project Management	\$800.00				
Data Collection	\$400.00				
Model Development Calibration	\$400.00				
Assesment and Evaluation	\$400.00				
Meetings/Correspondance	\$800.00				
Reporting	\$400.00				

Management Area Goal

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

2013 Action Items

- Support Local Government Units (LGU) with implementation of the Wetland Conservation Act.
- Provide administration as the LGU 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	2010	2011	2012	2013	4-yr total
Budget	\$20,400	\$20,400	\$42,800	\$42,800	\$126,400

2013 Work Plan

South Washington Watershed District 2013 Budget				
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total

(5) Natural Resources and Recreation				\$40,400.00
Greenway Implementation			\$40,400.00	
Construction		\$20,000.00		
Site Monitoring	\$2,700.00			
Project Management	\$2,700.00			
Maintenance		\$10,000.00		
Replacement		\$5,000.00		

(5) Natural Resources and Recreation				\$2,400.00
Greenway Implementation			\$2,400.00	
Construction				
Site Monitoring	\$800.00			
Project Management	\$1,600.00			
Maintenance				
Replacement				

Management Area Goal

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

2013 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	2010	2011	2012	2013	4-yr total
Budget	\$105,000	\$102,500	\$87,400	\$87,400	\$382,300

2013 Work Plan

South Washington Watershed District 2013 Budget				
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total

(6) Groundwater				\$85,000.00
Groundwater Monitoring - quality			\$85,000.00	
Project Management	\$10,000.00			
Data Collection	\$10,000.00			
Model Development Calibration	\$10,000.00			
Assessment and Evaluation	\$12,500.00			
Reporting	\$7,500.00			
Implementation Fund		\$35,000.00		

(6) Groundwater				\$2,400.00
Groundwater Monitoring - quality			\$2,400.00	

Management Area Goals

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

2013 Action Items

- Work with the County and MDH to evaluate the potential impacts of regional stormwater infiltration.
- Coordinate with Washington County through groundwater planning.
- Coordinate with Minnesota DNR to install additional groundwater monitoring wells.

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	2010	2011	2012	2013	4-yr total
Budget	\$13,575	\$13,168	\$3,200	\$3,200	\$33,143

2013 Work Plan

South Washington Watershed District 2013 Budget					
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total	
(7) Erosion and Sediment Control					\$3,200.00
NPDES Phase II Construction Site Inspections			\$3,200.00		

Management Area Goals

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

2013 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 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	2010	2011	2012	2013	4-yr total
Budget	\$55,182	\$54,745	\$40,300	\$43,300	\$193,527

2013 Work Plan

South Washington Watershed District 2013 Budget					
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total	
(8) Education					\$43,300.00
Education Local			\$3,600.00		
SWWD specific program	\$1,600.00	\$2,000.00			
Public Input			\$2,600.00		
CAC	\$1,600.00	\$1,000.00			
Education			\$2,500.00		
Website Modifications	\$2,500.00				
Shared Education Position			\$25,800.00		
Washington County Education	\$800.00	\$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.

2013 Action Items

- Maintain membership in the EMWREP, Blue Thumb, Metro Watershed Partner, Friends of the Mississippi, and NEMO.
- 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	2010	2011	2012	2013	4-yr total
Budget	\$386,400	\$484,632	\$560,505	\$585,505	\$2,017,042

2013 Work Plan

South Washington Watershed District 2013 Budget				
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total

(9) Long Range Work Planning and Financing				\$558,600.00
Coordinated CIP			\$558,600.00	
Project Management		\$5,000.00		
Data Collection		\$5,000.00		
Model Development Calibration		\$10,000.00		
Assesment and Evaluation		\$10,000.00		
Meetings/Correspondance		\$5,000.00		
Feasibility/Preliminary Design		\$7,500.00		
Final Design		\$7,500.00		
Implementation Fund			\$500,000.00	
Reporting		\$5,000.00		
Legal		\$3,600.00		

(9) Long Range Work Planning and Financing					\$26,905.00
Coordinated CIP				\$7,265.00	
Project Management	\$800.00				
Data Collection	\$400.00				
Model Development Calibration	\$400.00				
Assesment and Evaluation	\$400.00				
Meetings/Correspondance	\$800.00				
Feasibility/Preliminary Design	\$400.00				
Final Design	\$400.00				
Reporting	\$800.00				
Legal	\$2,865.00				
Plan Amendment				\$9,420.00	
Project Management	\$800.00				
Data Collection	\$1,600.00				
Assesment and Evaluation	\$1,600.00				
Reporting	\$1,600.00				
Legal	\$3,820.00				
Design Manual				\$10,220.00	
Project Management	\$800.00				
Data Collection	\$1,600.00				
Assesment and Evaluation	\$1,600.00				
Meetings/Correspondance	\$800.00				
Reporting	\$1,600.00				
Legal	\$3,820.00				

Management Area Goals

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

2013 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.
- 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	2010	2011	2012	2013	4-yr total
Budget	\$247,836	\$251,352	\$194,686	\$178,755	\$872,629

2013 Work Plan

South Washington Watershed District 2013 Budget					
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget		Management Area Total
(10) Data Management					\$178,755.20
Web Site			\$3,300.00		
Project Management	\$400.00	\$2,500.00			
Data Collection	\$400.00				
Assessment and Evaluation	\$0.00				
Reporting	\$0.00				
Stormwater Utility Administration			\$22,810.00		
Annual Setup	\$800.00				
Rate Calculations	\$800.00				
Assessment and Evaluation	\$800.00	\$2,500.00			
Legal	\$1,910.00				
Washington County Administrative Fee		\$15,000.00			
Washington County Surveyor		\$1,000.00			
Surface Water Monitoring Program			\$132,319.22		
Lab Expense		\$20,164			
Capital Equipment Costs		\$11,200			
Surface Water Monitoring Program			\$7,200.00		
Project Management	\$1,600.00				
Data Collection	\$2,400.00				
Assessment and Evaluation	\$1,600.00				
Reporting	\$1,600.00				
Development Reviews			\$8,800.00	\$4,325.98	
Correspondence	\$1,600.00				
Plan review	\$2,400.00				
Meetings	\$1,600.00				
Project Management	\$1,600.00				
Site Review	\$1,600.00				

Management Area Goals

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

2013 Action Items

- Maintain and update 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.
- Launch online monitoring database and interactive analysis and reporting application.
- 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	2010	2011	2012	2013	4-yr total
Budget	\$233,004	\$239,855	\$253,357	\$265,327	\$991,543

2013 Work Plan

South Washington Watershed District 2013 Budget				
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total

(11) General				\$250,000.00
Salaries/Benefits			\$ 140,047.90	\$ 15,327.10
Manager Per Diem/Expenses			\$ 26,250.00	
Administration/Office				
Office Rent			\$ 22,606.00	
Employee Expenses			\$ 6,000.00	
Employee Training			\$ 4,000.00	
Office Equipment			\$ 9,000.00	
Office Supplies			\$ 1,500.00	
District Vehicle			\$ -	
Legal Notices			\$ 1,545.00	
Dues			\$ 6,180.00	
Insurance and bond			\$ 11,800.00	
Accounting				
payroll			\$ 2,100.00	
monthly accounting			\$ 2,229.00	
audit			\$ 12,800.00	
Legal			\$ 7,869.20	
HR/other consulting			\$ 2,400.00	

Management Area Goals

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

2013 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 stormwater management. Bonds were issued with a 15-year pay off, and refinanced in 2007. In 2011, SWWD bonded for three projects in the East Mississippi watershed (Newport Ravine, Clear Channel Pond, and Grey Cloud Slough).

Budget History

Year	2010	2011	2012	2013	4-yr total
Budget	\$535,000	\$537,000	\$777,000	\$784,850	\$2,633,850

2013 Work Plan

South Washington Watershed District 2013 Budget				
Management Area / Action Item	Professional Services	Capital Outlay	2013 Budget	Management Area Total
(12) Debt Service				
Debt Service				\$537,350.00
(12) Debt Service				
Debt Service			\$247,500.00	\$247,500.00

Management Area Goals

Sound financial planning for future infrastructure needs.

2013 Action Items

- Maintain adequate funding for the overflow project debt service.
- Maintain adequate funding for the East Mississippi subwatershed projects debt service.

Appendix A 2012 Audit Report on Compliance



2012 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. 2012 EMWREP partners 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, Willemie, West Lakeland Township, Washington County and the Washington Conservation District. A map and list of current EMWREP partners can be found at www.mnwed.org/cleanwater.

Purpose: The purpose of the shared education program is to provide education about the impacts of non-point source pollution on local lakes, rivers, streams, wetlands and groundwater resources and to engage people in projects that will help to protect and improve water quality in the region. In addition to educating the public, EMWREP also provides training for city, county and watershed staff and local elected officials.

Partnership Structure: EMWREP is guided by a steering committee comprised of representatives from each of the 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.mnwed.org/emwrep.

Accolades: In 2012, the Minnesota Association of Watershed Districts recognized EMWREP as the Watershed Program of the Year.

2013 Plans: In 2013, Woodbury has joined the EMWREP partnership and the Ramsey-Washington Metro Watershed District has increased its level of participation. EMWREP will continue efforts to protect and improve local water resources through education and outreach. Planned activities for 2013 include nearly a dozen clean-water landscaping workshops for area residents, two well water testing clinics, three seminars for city, county and watershed staff and officials, and direct outreach to key neighborhoods where watershed issues have been identified.

Summary of 2012 EMWREP Education Programs:

General 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.

Ongoing public education efforts in 2012 included community events, children's education events, newspaper columns, press releases, city newsletter articles, websites and social media. Special activities included helping to plan the Girl Scouts of the River Valleys' 100 Year Anniversary service event and hosting a presentation of the Mississippi State of the River Report in St. Paul Park.

EMWREP continued to play an active role in coordination of Watershed Partners activities, including a floating workshop on Pool 2 of the Mississippi River in June and an Education Roundtable in November. In addition, EMWREP worked with National Park Service, Washington County Parks and Belwin Nature Conservancy to begin building a resource network of water educators in the lower St. Croix Basin.

Blue Thumb Program: The Blue Thumb - Planting for Clean Water® program (www.BlueThumb.org) is a dynamic coalition of more than 85 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.

During 2012, EMWREP hosted Blue Thumb workshops in Cottage Grove, Forest Lake and Afton, organized neighborhoods parties in Lake Elmo, May Twp, Stillwater and Stillwater Twp, and participated in several local events, such as the 20th Annual Family Means St. Croix Valley Garden Tour. Blue Thumb partners had prominent exhibit space in the Eco Experience at the Minnesota State Fair and coordinated the Landscape Revival and Native Plant Sale in June.

EMWREP uses Blue Thumb as a marketing tool to promote partner BMP programs. In 2012, EMWREP also provided support for targeted outreach in Lake Elmo (VBWD), Stillwater's Lily Lake neighborhood (MSCWMO) and Woodbury's Powers and Colby Lake neighborhoods (SWWD).

Rural Outreach: EMWREP conducts educational activities to engage rural landowners in projects that protect water resources and also provides support for targeted outreach for watershed projects and programs. Workshops and outreach materials are designed to leverage interest in birds and wildlife, weed management and other topics of interest to engage people in planting projects that also reduce non-point source water pollution.

In 2012, EMWREP conducted two workshops for horse owners, held a buckthorn workshop in Afton, helped to coordinate water testing clinics in Denmark and Scandia, and participated in local community events. Shared education staff also provided targeted outreach assistance for Trout Brook (SWWD).

Blue Biz: The Blue Biz program consists of a website (www.cleawaterMN.org/businesses) and outreach materials that partners can use to engage commercial property owners in BMP projects. Shared education staff also conduct outreach to specific property owners as needed.

In 2012, EMWREP conducted outreach to two properties in Cottage Grove that were part of the Hwy 61 subwatershed analysis project: the former Hollywood Video and the new Famous Daves.

Stormwater U: 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.

2012 Stormwater U activities included a BMP introductory workshop for local communities and a winter maintenance workshop for contractors.

NEMO: The Northland NEMO program (Non-point Education for Municipal Officials - www.northlandnemo.org) 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 more than a dozen partner organizations. Program offerings include several basic presentations, as well as the interactive Watershed Game.

In 2012, EMWREP gave a NEMO presentation to the Washington County Planning Advisory Committee and Board of Appeals and also helped to facilitate discussions about the Lake St. Croix TMDL at the Washington Water Consortium meeting.

MS4 Toolkit: EMWREP developed the MS4 Toolkit (www.cleanwatermn.org/MS4toolkit) with a grant from the Minnesota Pollution Control Agency in 2009. 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 for partners to borrow. EMWREP continues to provide basic website maintenance for the MS4 toolkit.

2012 Program Activities and Highlights

Public Education: Ongoing public education efforts in 2012 included community events, children's education events, newspaper columns, press releases, city newsletter articles, websites and social media. Special activities included helping to plan the Girl Scouts of the River Valleys' 100 Year Anniversary service event and hosting a presentation of the Mississippi State of the River Report in St. Paul Park.

EMWREP continued to play an active role in coordination of WaterShed Partners activities, including a floating workshop on Pool 2 of the Mississippi River in June and an Education Roundtable in November. In addition, EMWREP is working with National Park Service, Washington County Parks and Belwin Nature Conservancy to build a resource network of water educators in the lower St. Croix Basin.

Community events: EMWREP participated in dozens of local community events, including:

- Perro Creek Clean-up (Bayport)
- Mahtomedi Rite of Spring
- St. Croix Basin Conference (River Falls)
- Explore Your Parks Day (Lake Elmo Regional Park)
- Family Means Garden Tour (West Lakeland Twp.)
- Waterfest (Lake Phalen)
- Belwin Bison Release (Afton)
- Cottage Grove Safety Camp
- Tamarack Swamp Nature Preserve Tour (Woodbury)
- Washington County Fair
- Washington County Bluegrass Festival (Lake Elmo Regional Park)
- Newport Community Buckthorn Pull
- Trout Unlimited Banquet (Lake Elmo)



Hundreds of people attended RWMWD's WaterFest at Lake Phalen.

Student Programs: EMWREP participated in the following children's education events:

- Da Vinci Festival, Stillwater ISD - Jan. 7 (2500 K-12 students and parents)
- MN Youth Outdoor Expo, Hugo, May 19-20 (2500 children and parents)
- OH Anderson Field Day, Mahtomedi - May 11 (100 3rd-5th grade students)



Woodbury Girl Scouts show off their new service event badges.

Girl Scouts 100 Year Anniversary Events: EMWREP helped Girl Scouts of the River Valleys' to plan community clean-ups for clean water to celebrate their 100-Year Anniversary. In the East Metro, Girl Scouts organized clean-ups near Forest Lake, Big Marine Lake, Square Lake, White Bear Lake, Lake Phalen, Beaver Lake, and at Ojibwe Park in Woodbury and Hamlet Park in Cottage Grove. Region-wide, girls marked 6,872 storm drains and distributed 50,000 door hangers. To learn more about the event, go to www.girlscoutsvr.org/about-us/girl-scouts-centennial/centennial-day-of-service.



Mississippi State of the River Report: On December 4, EMWREP partners South Washington Watershed District, Cottage Grove and Washington County hosted a special presentation of the State of the River Report for people living in southern Washington County. Approximately 35 people attended the workshop, held at Hidden Harbor Marina in St. Paul Park. The following week, Dakota Soil and Water Conservation District hosted a State of the River presentation in Hastings, which drew in folks from southern Washington County as well. In addition to learning about the report, workshop attendees also took home information about cost-share grants for clean water planting projects.

Newspaper articles: EMWREP coordinator Angie Hong 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 Patch - on-line newspaper with 6700 monthly readers, 800 facebook followers and 620 Twitter followers
- Stillwater Patch - on-line newspaper with 6434 monthly readers, 2000+ facebook followers and 800+ Twitter followers
- Woodbury Patch - on-line newspaper with 8243 monthly readers, 1820 facebook followers and 1100+ Twitter followers

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 more than 175,000 people through community newsletters in 2012. Below are some of the topics covered in these newsletters:

- Afton (pop. 2800) - [newsletter](#)
 - Jan - conservation farming practices
 - March - Blue Thumb and buckthorn workshops
 - April - Blue Thumb and buckthorn workshops
 - May - Nitrate water testing clinic
 - June - results of nitrate water testing clinic
 - July - low-mow lawns
 - October - St. Croix River TMDL
- Bayport (pop. 3200) - [newsletter](#)
 - March - Perro Creek Clean-up
 - June - Perro Creek Clean-up
- Baytown (pop. 1970) - "[Baytown Neighbors](#)" goes to 140 households
 - May - Nitrate water testing clinic
- Cottage Grove (pop. 34,000) - [newsletter](#)
 - Jan - rain barrel sale
 - Feb - Blue Thumb workshop, rain barrel sale
 - March - Where does water come from?
 - May - car washing
 - June - Green lawns for Blue Water
 - Sept - Keeping our water clean
 - Oct - Leaf raking
 - Nov - Mississippi River Report
- Lake Elmo (pop. 7647) - [newsletter](#)
 - Spring - water conservation, raingardens, tree sale, erosion and sediment control, illicit discharge, spring cleaning for clean water, rain barrel sale

- Lake St. Croix Beach (pop. 1051) - [newsletter](#)
 - Jan – septic systems, raingardens, road salt
 - Feb - septic systems, raingardens, road salt
 - March – septic systems, raingardens, road salt, lawn care
 - April – “Good bug, bad bug”
 - May - “Good bug, bad bug”
 - June - “Good bug, bad bug”
 - July - “Good bug, bad bug”, algae blooms
 - September – septic systems, road salt
- Lakeland (pop. 1830) - [newsletter](#)
 - April – grass clippings
 - May – grass clippings
 - June – “Green lawns for blue water”, grass clippings
 - July – grass clippings
 - Aug – grass clippings
 - Sept – grass clippings
 - Oct – Updates and progress on restoring the St. Croix River
- Mahtomedi (pop. 8000) - [newsletter](#)
 - April – June: Mahtomedi honored at Road Salt Symposium
 - July – Sept.: water conservation
 - Oct – Dec: Girl Scouts Day of Service, yard waste disposal
- Newport (pop. 3435) - [newsletter](#)
 - Spring – community backhoen pull
 - Fall – community backhoen pull, sealing unused wells
 - Winter – community backhoen pull
- Oak Parks Heights (pop. 4724) - [newsletter](#)
 - Second quarter – “Review the Past, Planning for the Future” – WCD
 - Third quarter – “Green lawns for blue water”
- Oakdale (pop. 27,300)
- Stillwater (pop. 18,000)
- West Lakeland (pop. 3547) - [newsletter](#)
 - March – Tree and rain barrel sale
 - Dec. – Horse workshop
- Woodbury (pop. 57,345) - [newsletter](#)
 - April / May - Streets to streams
 - Aug. – Native plant sale
 - Nov. – stormwater pollution prevention



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:

- In 2012, the Washington Conservation District website (www.mnwcd.org) received 11,356 visits from 6,518 visitors. EMWREP programs and partners are featured on several pages within the website, including www.mnwcd.org/cleanwater, www.mnwcd.org/emwrep, www.mnwcd.org/powild and www.mnwcd.org/water_blue_thumb. WCD has 100+ followers on facebook.
- The Blue Thumb website (www.BlueThumb.org) received 28,108 visits from 22,625 visitors. Blue Thumb has 700+ friends on facebook.
- The Clean Water Minnesota website (www.cleanwatermm.org) received 4,277 visits from 3639 visitors.
- The East Metro Water Blog (www.eastmtrowater.org/voices.com) had 7,584 visits in 2012.

WaterShed Partners: EMWREP is one of 65 partners in the WaterShed Partners, an innovative, dynamic coalition of public, private and non-profit organizations in the Twin Cities metro area that work collaboratively to teach residents how to care for area waters. WaterShed Partners coordinates the Clean Water Minnesota Media Campaign, maintains the www.cleanwatermn.org website and MS4 Toolkit, and has prominent exhibit space in the DNR Building at the Minnesota State Fair.



On June 13, WaterShed Partners conducted a floating workshop on Pool 2 of the Mississippi River, which was well attended by representatives from Washington County and EMWREP communities. During the workshop, speakers discussed the Mississippi Makeover Project and plans for preventing the spread of Asian Carp.

Another WaterShed Partners endeavor that EMWREP lent assistance towards was the November Education Roundtable event. Using a "world café" conversation approach, roundtable participants identified and discussed four priority areas for WaterShed Partners to work on in 2013: 1) Providing partners with tools and research to help them better understand audiences and create effective messaging; 2) Providing tools and resources to help MS4 entities conduct education; 3) Collaborating on k-12 education; and 4) Collaborating on education about aquatic invasive species.

The 2012 WaterShed Partners and Media Campaign annual report can be found at www.cleanwatermn.org.

St. Croix Educators Resource Network: During the fall of 2012, EMWREP began working with National Park Service, Washington County Parks and Belwin Nature Conservancy to develop a resource network for people and organizations doing water resource education in the lower St. Croix Basin. The initial kick-off meeting, held on Oct. 25, brought together more than 30 people from local units of government, non-profit and community groups, nature centers, parks and schools to discuss how we can work together to better protect the St. Croix River and other water resources in the basin.

During 2013, EMWREP will continue to work towards developing this new resource network in order to reach new audiences with our education messages and better promote and publicize EMWREP partner programs and projects.



Blue Thumb. During 2012, EMWREP conducted Blue Thumb workshops in Cottage Grove, Forest Lake and Afton, organized neighborhoods parties in Lake Elmo, May Twp, Stillwater and Stillwater Twp, and participated in several local events, such as the 20th Annual Family Means St. Croix Valley Garden Tour. EMWREP also provided support for targeted outreach in Lake Elmo (VBWD), Stillwater's Lily Lake neighborhood (MSCWMO) and Woodbury's Powers and Colby Lake neighborhoods (SWWD). Blue Thumb had prominent exhibit space in the Eco Experience at the Minnesota State Fair and coordinated the Landscape Revival and Native Plant Sale in June.

Workshops and presentations: In 2012, EMWREP conducted the following Blue Thumb workshops and presentations:

- Workshops
 - All Saints Lutheran in Cottage Grove, Feb. 28
 - Gander Mountain in Forest Lake, March 13
 - Afton City Hall, April 12
- Presentations:
 - Delta Kappa Gamma in Lake Elmo, April 2
 - Sunset Lake Association in Hugo, June 6
 - Lake Elmo Rotary, July 18

Neighborhood Parties

- RCWD "train-the-trainer" event (April 18) for citizen advisory committee members, resource teachers, and Bald Eagle Lake Association. Participants learned about the Blue Thumb program and how to hold neighborhood parties to educate community members about raingardens, shoreline plantings and TMDL projects.
- Neighborhood parties were held for Lake Demontreville (VBWD) and Square Lake (CMSCWD) on June 13 and July 17 to educate shoreline property owners and promote native shoreline plantings.
- Stillwater Twp. sponsored an "Evening on the Prairie" on Aug. 7 and more than 40 local residents attended to learn about planting prairies.
- A lake and garden neighborhood tour was held on Aug. 15 in BCWD's Croixwood neighborhood to highlight two recent residential raingarden projects and a large shoreline habitat planting on municipal property.



Non Olson hosted the Stillwater Twp prairie workshop on her three acre prairie.



Above: One of the new Colby Lake raingardens shortly after planting.

Targeted neighborhood outreach: Last year, shared education staff conducted targeted outreach in Lake Elmo (VBWD), Stillwater's Lily Lake neighborhood (MSCWMO), and Woodbury's Powers and Colby Lake neighborhoods (SWWD). Outreach activities included mailings, open house events and door-knocking. As a result, 50 new stormwater retrofit practices will be installed in these four neighborhoods:

- 14 residential right-of-way raingardens in Lake Elmo
- 8 residential right-of-way raingardens in Stillwater's Lily Lake watershed
- 25 residential right-of-way raingardens in Woodbury's Colby Lake watershed
- 2 large bioretention projects at the Fire Station and Townhomes in Woodbury's Power's Lake watershed

Blue Thumb Partner Events: The Blue Thumb program partnership, which includes more than 70 public and private partners in the upper Midwest, participated in the following large events in 2012:

- Minneapolis Home and Garden Show - March
- Living Green Expo - May
- Landscape Revival - June
- Minnesota State Fair - August

EMWREP assisted with promotions, coordination and volunteer recruitment for these events in addition to providing support for maintenance of the Blue Thumb website, and creating and distributing print materials.

Rural Outreach: In 2012, EMWREP conducted two workshops for horse owners, held a buckthorn workshop in Afton, helped to coordinate water testing clinics in Denmark and Scandia, and participated in local community events. We also provided targeted outreach assistance for Trout Brook (SWWD).

Horse Workshops: EMWREP coordinated two workshops to educate horse owners and boarders about protecting surface and groundwater resources.

- The Jan. 24 workshop, held at the Washington County Fairgrounds brought in 65 attendees and included presentations on veterinary care, nutrition, mud management, pasture management and rotational grazing for horses.
- On May 3, an on-site workshop was held at Rick-a-Shay Ranch in CLFLWD where a runoff management project was installed in 2011.



Above: Horse owners learned about protecting water resources.

Buckthorn Workshop: Held in Afton on April 5, this workshop provided residents with information about controlling buckthorn, replanting with native plants, and controlling runoff and erosion on wooded properties.

Water Testing Clinics: EMWREP partnered with Washington County Department of Public Health and the Environment to offer free nitrate well water-testing clinics in Denmark Twp. (June 4) and Scandia (June 5).

Community Events: In 2012, EMWREP attended the following community events for rural landowners:

- Hugo Feed Mill open house
- Stillwater Twp. small farms workshop

Targeted outreach: During the fall, EMWREP conducted targeted outreach to several property owners in the Trout Brook subwatershed (SWWD) that were identified in the Top50P! project. Outreach activities included a mailing, phone calls and in-person visits to meet with several of the landowners. Outreach for this project will continue in spring of 2013.

Blue Biz: In 2012, EMWREP conducted outreach to two properties in Cottage Grove that were part of the Hwy 61 subwatershed analysis project: the former Hollywood Video and the new Famous Dave's.

Stormwater U: 2012 Stormwater U activities included a BMP introductory workshop for local communities and a winter maintenance workshop for contractors.

Best Management Practices Workshops: In 2012, EMWREP began planning a four-part Stormwater U workshop series in conjunction with the University of Minnesota Extension. The first of these workshops was held in December at the Hugo City Hall and was a half-day BMP introductory course for city staff and officials.

Winter Maintenance Workshop: On Oct. 23, EMWREP partner Ramsey-Washington Metro Watershed District hosted a MPCA certification training to teach contractors how to reduce chloride impacts during winter road and parking lot maintenance. In advance of this training, EMWREP gathered contact information for contractors in the East Metro area and promoted the workshop through email and direct mail.

MPCA Certification: Contractor certification workshops for turf maintenance and winter roads and parking lots maintenance have been held several times over the past four years in various locations around the state. As a result, hundreds of staff from private companies, counties and municipalities, school districts, and churches around the metro area have been trained and certified in best management practices to protect water resources. In the EMWREP area we now have:

- 173 contractors certified in winter road and parking lot maintenance, including staff from the following local communities:
 - Forest Lake
 - Hugo
 - Landfall
 - Mahtomedi
 - Maplewood
 - Stillwater
 - St. Paul Park
 - Woodbury
 - Washington County
- 74 contractors certified in summer turf grass maintenance, including staff from:
 - Lakeland
 - Mahtomedi
 - Maplewood
 - North St. Paul
 - Oakdale
 - Stillwater
 - White Bear Lake
 - Woodbury
 - Washington County Parks

Find the full list of EMWREP area certified contractors for summer and winter maintenance at www.mnwd.org/water_education_city_staff.php

NEMO: In 2012, EMWREP gave a NEMO presentation to the Washington County Planning Advisory Committee and Board of Appeals and also helped to facilitate discussions about the Lake St. Croix TMDL at the Washington Water Consortium meeting.

Washington County presentation: On October 23, EMWREP educator Angie Hong gave a presentation to the Washington County Planning Commission and Board of Appeals about the Benefits of a Healthy Watershed. The goal of the presentation was to build knowledge about local water resources and provide information about policies, plans and practices that impact surface waters in the county so that advisory board members can make informed decisions. Topics addressed included:

- The impacts of development on lakes, streams, rivers and wetlands
- Impervious surfaces and their impact on stormwater runoff and water resources
- Local, state and federal programs, rules and regulations relating to surface water management (i.e. Watershed plans, TMDLs, etc.)
- County level plans, policies and practices that can protect Washington County surface waters

Water Consortium St. Croix TMDL Discussion: During the December Water Consortium meeting, Angie Hong facilitated a series of small group discussions about the Lake St. Croix TMDL. During these discussions, the group addressed four questions:

1. How can nested lake and stream TMDL's help to meet Lake St. Croix TMDL goals? What do we need to do to ensure our efforts address both sets of goals and that LGUs get credit for both?
2. What role do communities have in meeting TMDL goals? How do MS4 permits and non-degradation support this? What about non-regulated communities?
3. Do our current watershed rules and development rules help to move towards Lake St. Croix TMDL goal? How do we make sure they do?
4. How do BMP cost share programs and Capital Improvement Projects (CIPs) fit into the Lake St. Croix TMDL?

In 2013, the Water Consortium will continue to discuss the Lake St. Croix TMDL and the roles that different entities play in meeting the water quality goals outlined in the TMDL.

MS4 Toolkit: During 2012, EMWREP continued to provide basic website maintenance for the MS4 toolkit.

MS4 STORMWATER POLLUTION PREVENTION PROGRAM
Correlating Minimum Control Measures with EMWREP Programs and Audiences

1. Public Education and Outreach

- General Education Campaign (general public)
- Blue Thumb (homeowners)
- Rural outreach (non-ag rural landowners)
- Blue Biz (commercial property owners)

2. Public Participation

- General Education Campaign
- Blue Thumb
- Rural outreach
- Blue Biz

3. Illicit Discharge Detection and Elimination

- General Education Campaign
- MS4 Toolkit (multiple audiences)

4. Construction Site Storm Water Runoff Control

- Stormwater U (municipal staff and contractors)
- MS4 Toolkit

5. Post Construction Storm Water Management

- Stormwater U
- NEMO (local elected officials and decision makers)
- Blue Biz
- MS4 Toolkit

6. Pollution Prevention and Good Housekeeping in Municipal Operations

- Stormwater U
- MS4 Toolkit

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Washington County

21 LAKE/LAKE MINNAPOLIS RIVERWATER (MAY) / OAK PARK HINDS / ST. PAUL PARK SEASIDE / WASHINGTON COUNTY

Sunday 1-15-2012

Woodbury

City works to drain a 100-year rain

As growth continues, plan under way to remove increased storm runoff

By Mike Shaw
shaw@pioneerpress.com

Woodbury faces flood-like drainage problems.

As the city continues to grow, it's like a tub with a clogged drain. And if the rains pour out, what's called "a 100-year rainfall," which rarely

happened seven years ago, the sewers could be disastrous.

That's why design work is under way on the Central Drain Overflow Project, which will channel rain from Woodbury's Baker Lake sewer system south into the Mississippi River.

The South Washington Water-

shed District is leading the project, building outflows, underground pipes and outfalls through Woodbury and Cottage Grove.

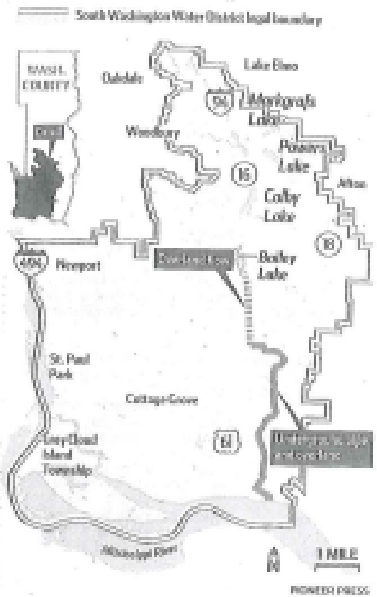
"Management in Woodbury is an interesting story," said Molly Stockton, east metro area hydrologist for the Minnesota Department of Natural Resources.

She said that in the 1970s, the lake was a small wetland. It where water collected from a of the watershed, which both east of Woodbury and part Lake Elmo, Oakdale, After Cottage Grove.

As Woodbury grew, the it increased and the wetland bec a lake.

SHAW@PIONEERPRESS.COM

runoff from Bailey Lake to the Mississippi River.



CONTINUED FROM 10

> Drainage problem

At least, it was a late summer. It rained in times of heavy rain, but the water seeped into the ground during dry times, shrinking Bailey back into a natural swamp.

In the 1990s Woodbury's growth was soaring — and so was the runoff from rooftops, driveways and streets.

The watershed district identified a potential problem in 1999, said district administrator Matt Moore.

But the solution seemed overwhelmingly expensive for a district whose annual budget today is \$25 million. So the district began to save money, said Moore, and now expects to complete the \$30 million project with no spike in taxes.

Woodbury helped the drainage problem in 1999. That's when it built a lift station to pump excess water from Bailey Lake into a bank

will continue to skyrocket. Woodbury is planning a development called Phase 2 that will house 20,000 people — all south of Bailey Road, mostly to the east of East Ridge High School.

Combine that new growth with potential for a heavy rainfall, and Moore starts to worry.

He wants to be ready for the Big One — the next 100-year flood, defined as 4.5 inches of rain in a 24-hour period. It almost happened Oct. 4 and 5, 2003, when 8 inches fell.

In times of heavy rain, the water will flow from Bailey Lake south, through several gullies. At 8th Street in Cottage Grove, the system of underground pipes will begin, some as wide as 8 feet. They will run east under Kent Avenue, then south through East Ravine Park to the Mississippi River.

Moore said the district is now in the planning stage of the project. Work will begin in 2011, and the project should be completed by 2015.

But Elmo can be reached at

FOR IMMEDIATE RELEASE / City of Cottage Grove / 3/10/12

For More Information Please Contact:

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Mayor Myron Bailey, myronbailey@aol.com

City of Cottage Grove Receives MECA Award for Environmental Excellence!

The City of Cottage Grove has been awarded the Minnesota Erosion Control Associations' Environmental Excellence Award (MECA). MECA is an organization comprised of contractors, suppliers, engineers and government agencies with a vision to protect the quality of Minnesota's soil and water natural resources. The MECA Award was given to Cottage Grove for completing two water quality pond improvement retrofit projects in 2011. Both projects involved local partnerships with the South Westington Watershed District (SWWD) and AmeriCorps; groups that share the City's vision of improving water quality, protecting groundwater resources, and enhancing natural resources through efforts like the construction of storm water improvement projects.

These projects are consistent with the water quality goals of both the City and the SWWD, the City financially partnered with the SWWD through the SWWD Coordinated Capital Improvement Program. This project was successfully completed in the fall of 2011 with all parties involved very pleased with the project outcome.

Pond ED-P8-9 located south of the East Central Ravine Park area includes a number of ravine segments separated by berms with cross culverts. The City identified that a number of these segments were unstable, downcutting into the ravine bottom and eroding around the existing pipes. This erosion was contributing a significant sediment load to the downstream stormwater conveyance system, including a sediment load contribution to the Mississippi River. To stabilize the eroded segments the City partnered with the SWWD and AmeriCorps to successfully implement the improvements.



Pond ED-P8-9 Improvements

The Pond C-P8 Improvements project, located within Pine Tree Valley Park, incorporated innovative water quality treatment and groundwater protection practices

into an existing dry pond. The water quality treatment practices included wet ponding areas discharging to a biofiltration swale designed to reduce pollutant loads to downstream wetlands and ultimately the Mississippi River. Our calculations estimate that the constructed water quality improvements will provide annual reductions in existing loads of approximately 75 pounds of Total Phosphorus and 40,000 pounds of Total Suspended Solids.



Pond C-6 Improvements

The City designed erosion corrections that involved raising and widening the existing eroded channel bottom, adding Turf Reinforcement Mat (TRM) in the new channel for stability, and including a rock weir structure to reduce ravine flow velocities.

The City worked with staff from AmeriCorps, an independent federal agency whose mission is to improve the lives, strengthen communities and foster civic engagement through service and volunteering. They helped clear brush and trees from the ravine area. "This is a great way to learn job skills you're not going to learn in school," explained Andrea Hefty, crew leader of the Conservation Corps. "Without this program I don't think I would have gotten into Graduate School." Andrea is pursuing her Master's in Entomology. The construction of the channel improvements and the stabilization of the site were then completed by a contractor. The assistance of AmeriCorp provided an enhancement to the environment and brought about financial savings to the City. The linked video below describes the ED-P0-9 Pond Improvements project in greater detail and highlights the partnership between AmeriCorps and the City.

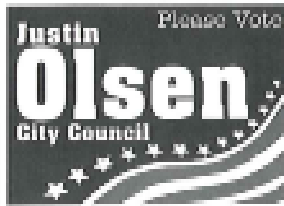
After hearing the news, Cottage Grove's Mayor, Myron Bailey commented, "It is very rewarding that the City of Cottage Grove has been designated as the example of excellence in 2012 by a statewide organization that has been in place for 24 years to advance effective stormwater management and erosion control practices."

SWWMD Board President Jack Lexold stated, "The SWWMD is continuously seeking these partnerships to improve water resources locally that contributes to the larger watershed picture."

The City received the award at the Minnesota Erosion Control Association's Annual Conference on March 9th. To view a video of this project please click on the following link <http://vimeo.com/537248813> or go to www.cottage-grove.org.

South Washington County Bulletin

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Published: October 26, 2012, 09:29 AM

Viewpoint: Watershed's work on 8th Street start of long-planned project

For 20 years the South Washington Watershed District (SWWD) has studied, planned and designed a stormwater management/flow control system for the entire watershed. Now in 2012, the watershed district is completing portions of the facilities that will support an upstream stormwater treatment in 2014 and 2015.

By: [Southwest Area Watershed District](#)

For 20 years the South Washington Watershed District (SWWD) has studied, planned and designed a stormwater management/flow control system for the entire watershed. Now in 2012, the watershed district is completing portions of the facilities that will support an upstream stormwater treatment in 2014 and 2015. The need for this work, the watershed district is making a significant capital investment to construct the current flow storage facility (overlaid pending wetlands and flood easements for the wetlands easements).

Facilities portions of the watershed, including Cottage Grove, will also be able to be done through the CDSP. Flood control, water quality improvements and stormwater management for run and existing development are primary goals of the CDSP overflow. Secondary goals will integrate with storage tanks, secondary and Washington County park/park space and trail systems. The project area stretches from Balow Lake in Woodbury, south to 8th Street in Cottage Grove through the flow facility.

The requirement to study to update their comprehensive plans in 2010 generated the opportunity to include projected 2030 land use and allowed local CDSP overflow storage tank to be done. As Cottage Grove and Woodbury move into the next phases of development, the need for this project increases. Development of the land around the CDSP will generate the need to provide a consistent solution for stormwater and necessary flood protection. Washington County is expected to increase traffic volumes by completing a major safety and mobility program on county roads. This presented an excellent opportunity for the city, county and watershed district to partner on the project.

This background information sets the context for the role of Cottage Grove SD-19 Water Quality Improvement/Flow Control System project. The city of Cottage Grove and the watershed district worked cooperatively to develop from the study the improvements. The emergency system for the pool on the north side of 8th Street in Cottage Grove. The 8th Street project will improve pond run flow and provide a dedicated emergency overflow (providing the capacity of the existing installation at a low cost) under 8th Street accommodate the emergency overflow. Flow regulation of the pool operation of the two current treatment storage and stormwater rain control installing stormwater drainage.

Additional pending approval to integrate these will improve water quality in this drainage area, ultimately flowing to the Mississippi River. These improvements will employ a new technology called flow float. This flow will increase removal efficiency of pollutants from stormwater runoff.

This multi-phased project includes drainage improvements, water quality improvements, emergency system, water quantity and potential enhancements. Park enhancements are the low cost but are a challenge in creating existing flow flow of pollutants and the flow across the runoff. This ongoing assistance a natural safety improvement for the Cottage Grove park and trail system.

A drainage connection at 8th Street will be a critical element of the CDSP. This allows limited drainage capacity for the CDSP through Cottage Grove prior to the overflow being fully operational. It also gives operational flexibility once the overflow is completed. In cooperation with the city of Cottage Grove this connection will be made during the next stormwater project.

The CDSP overflow project is not a short project. It has been contemplated and anticipated by the City since 1980. When the city established the watershed district in 1995, a major responsibility of the watershed district was to provide for this project. The SWWD has used the most current technology, data, and information to properly plan and design the overflow project. Updated land use information is one of the key points that are the design of the overflow project in motion.

What is being constructed at 8th Street is the beginning of a long-awaited project with the cooperation of many local government units.

SWWD is a watershed district in South Washington Watershed District

For updates, photos, or more

[More from around the web](#)



Published: November 05, 2013 at 12:00 AM

Viewpoint: Neighbors' cleanup efforts making dent in Woodbury

An act of random good citizens is making a small group of environmentalists busy with Woodbury's Colley Lake watershed and creating a difference that will last in the future.

While of the 100 water residents in October, a small group of homeowners living near Woodbury's Colley Lake gathered around a driveway table with plans to fix their yard. The group included actively an Tom Kline and Andy Babbitt, insurance specialists from the Washington Conservation District, (WCD), (www.wcdvt.org) here to help planting plans created for their newly installed catchpools. Altogether, 40 catchpools have been put in the neighborhood this year, and another 10 will be installed next spring. The project is part of an effort led by the South Washington Conservation District (SWCD) up Colley Lake and New England State Police.

Colley is a shallow, 10-acre lake that is fed by runoff from the surrounding Woodbury residences, as well as runoff from Wilson Lake to the north. Various agencies and volunteer have monitored the lake since 1994, and in 2008, the Vermont Pollution Control Agency listed Colley Lake as a publicly exposed lake due to excess phosphorus, a naturally occurring element that contributes to eutrophication of the lake. After analyzing water monitoring data and other research, the South Washington Watershed District determined that storm flow sediments would be needed to cause Colley Lake to reach a 2018 TMDL. With the amount of phosphorus runoff Colley from Wilson Lake would need to be reduced by 7.6 kg per year. Instead, instead of runoff that causes eutrophication to the extent of the lake is silted up would need to be reduced by 4.6 kg per year, and today, the amount of phosphorus being washed into the lake from the surrounding roads and neighborhoods would need to be cut by 6.9 kg per year. This was part of the equation to reduce the 10 run catchpools on the west side of Colley were into play.

One of the families that came by to pick up plans for a new catchpool that was Mike (phonetic), his wife Chloë and their two little boys. I had met the Gumpshaus family when early last September at their front yard meeting in April to see if they would be willing to participate in the Colley Lake improvement project. Through they had a house full of visiting family and other on the lake. Mike called outside with us to talk about where the catchpools would be located, how it would work and how it would help to keep pollution out of Colley Lake. We explained that the garden would be built during the summer when the city of Woodbury was completing its street improvement project, and would be designed so that when it rains, the water from the street flows into the garden and pools into the ground instead of entering the city sewer system and heading directly to Colley Lake. Though he was familiar with the South Washington Watershed District's studies, Mike was interested in adding a new garden to his yard and supportive of efforts to improve near high school lake.

Over the past 10 years, hundreds of homeowners in Washington County have built catchpools in their yards, some through technical cost-share projects and others through neighborhood scale efforts that you are in currently. The Colley Lake project is unique because it is the only catchpool by the Washington Conservation District has already identified the best possible places near the lake to capture sediment and phosphorus from the road runoff of storm and melt of the 20 run catchpools is in one of those priority locations. I am proud for the South Washington Watershed District, together with a grant from the Clean Water, Land and Legacy Amendment, have covered all costs for the catchpools' design and installation, which is a bonus for homeowners like Mike and Chloë who have volunteered time in their yards to benefit the common good. In future years, the watershed district will continue to work with businesses and homeowners around Colley and Wilson Lakes to reduce shoreline runoff and will also work with the city to manage early melt snow melt, maintain stream bank vegetation, and manage fish populations to reduce runoff fish and increase game fish in Colley Lake.

LEARN MORE about the South Washington Watershed District and its friends at www.wcdvt.org

And Here is an infographic for **East Water Valley** - www.northeast.org/infographic, which includes Vermont Green, Vermont Green - in Green, Vermont Green - Pure! Lake, White St. Creek, Ramsey Washington Bridge, West Green, South Washington and Valley Green Watersheds, George House, Delaware, Forest Lake Lake River, Killbuck River Lakes and Wilson. Washington County and the Washington Conservation District (WCD) for (802) 373-1129 x. 29 or enp@wcdvt.org

Apprentices, support, volunteer, photo, quotes

Here here around the web

- [Time there to their Woody Titled Bulletin ... in 99 Other News!](#)
- [13 Photo! Their Blue Water \(www.wcdvt.org\)](#)
- [A Photo Tour of the Five Green Watersheds of the World \(www.wcdvt.org\)](#)
- [Tom Taylor South's Handmade Home for Lake \(www.wcdvt.org\)](#)
- [Ten Mystical Approvals at homes ... and, please, suggest your \(www.wcdvt.org\)](#)
- [Tom Taylor's Home Home for Lake \(www.wcdvt.org\)](#)
- [Five Cat Home Via Love New \(www.wcdvt.org\)](#)
- [Photography: George House \(www.wcdvt.org\)](#)
- [The Vermont Conservation District \(www.wcdvt.org\)](#)

May 10, 2012

FOR IMMEDIATE RELEASE

Contact: Jennifer McLaughlin
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(651) 714-3522

Woodbury presents annual environmental awards May 10

A manufacturing company, a non-profit organization, a Woodbury family, and two students from New Life Academy were honored May 10 as recipients of the City of Woodbury's fifth annual Environmental Excellence Awards. Mayor Mary Gitudani Stephens presented the awards at the annual Business Town Meeting, held at the Central Park amphitheater. Recipients were recognized for their efforts in the areas of innovative storm water management, sustainable business practices, and waste reduction and recycling.

In 2006, the City Council adopted a sustainability resolution for the city, and has since supported several initiatives that are helping to make Woodbury a more sustainable community. The awards were developed in 2008 to promote sustainability in the community. The city's goal is to highlight local businesses, organizations, and individuals that are making Woodbury a more sustainable community through innovative programs and practices that demonstrate environmental leadership.

Listed below are the 2012 Environmental Excellence Award winners, along with a description of their achievements.

Great River Greening & the South Washington Watershed District – Innovative Storm Water Management Practices

Great River Greening and the South Washington Watershed District partnered to coordinate more than 500 volunteers to preserve and restore prairie within the Woodbury Conservation Corridor. The portion of the corridor within Woodbury consists of 70 acres, and is part of a larger natural gateway totaling 265 acres that will connect with Lake Elmo, Cottage Grove, and the Mississippi River.

Volunteers and staff from both organizations worked on invasive species control, seed harvesting, prairie seeding, and prescribed burns within the area. The gateway will serve as a connection of natural habitat, providing a natural drainage way, a bike trail and wildlife-viewing opportunities within an urban environment. The gateway is also a progressive tool to manage storm water runoff from developed areas.

Harvey Vogel Manufacturing Co. – Sustainable Business Practices