



South Washington
Watershed District

25
YEARS

2018 Annual Report



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Board of Managers

2018

Manager	Position	Term Expires	City/County
Mr. Don Pereira 8232 River Acres Road 6859 Ideal Avenue South Cottage Grove, MN 55016 651-769-0429	President	05/01/2021	Cottage Grove/Washington
Mr. Brian Johnson, 4353 Dorchester Drive Woodbury, MN 55129 612-710-8585	Vice-President	05/01/2019	Woodbury/Washington
Mr. Kevin ChapdeLaine 601 2 nd Avenue Newport, MN 55055 612-508-1284	Treasurer	05/01/2019	Newport/Washington
Mr. Mike Madigan 2366 Hidden Lake Cove Woodbury, MN 55125 651-702-0488	Secretary	05/01/2020	Woodbury/Washington
Mr. Jack Lavold 6859 Ideal Avenue South Cottage Grove, MN 55016 651-459-9981	Manager	05/01/2020	Cottage Grove/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." In 2018, the SWWD celebrated its 25th year Anniversary as the 42nd watershed district in Minnesota. SWWD partnered with Great River Greening in October to host a volunteer planting and anniversary celebration at the SWWD prairie. In December 2018, the SWWD anniversary milestone was recognized at the Minnesota Association of Watershed District Annual Meeting.

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 2020 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.

In 2016, the SWWD updated the WMP dated 2007, amended in 2010 and 2011. On October 26, 2016, BWSR approved the October 2016 WMP, and the SWWD Board adopted the WMP in November 2016.

This third generation WMP once again builds on past work in the District and is intended to serve SWWD for decades to come. It is structured in three parts.

Part I serves as a summary of various District plans and assessments and points the reader to more regularly updated District data, all of which is available on the District's website, www.swwdmn.org. The website which includes the District's water quality database and web map viewer with extensive spatial data and serves as a repository for District plans and reports. Part II includes identified issues and goals and serves as the basis for all actions that the District takes. Progress toward achieving goals will be routinely assessed and implementation actions adjusted as necessary. Should additional issues be identified by SWWD they will be incorporated through amendment. Part III serves as the District's implementation plan, establishing District programs, Long Range Workplan, and Administrative procedures. This part will be routinely updated through amendment to continue to serve the District.

The WMP complies with Minnesota Rules Chapter 8410, "Metropolitan Area Local Water Management," (July 13, 2015), 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 2018.

2018 Financial Report

The 2018 audit report is in Appendix A. Revenue and program expenditure summaries 2018-2019 are presented below.

Revenue

Revenue Source	2018	2019*
Ad Valorem Levy	\$ 1,077,887.75	\$ 1,142,061.00
Stormwater Utility		
Northern Area	\$ 1,620,000.00	\$ 1,459,850.00
SWWD Area	\$ 715,000.00	\$ 733,000.00
E. Mississippi	\$ 407,500.00	\$ 358,000.00
Lower St. Croix	\$ 128,000.00	\$ 100,000.00
Total Revenue	\$ 3,948,387.75	\$ 3,792,911.00

*Anticipated Revenue

Program Expenditures

Program Area	2018 Budget	2018 Actual/Unaudited	2019 Budget
1.0 Planning	\$ 300,909	\$ 266,803	\$ 207,540
2.0 Regulatory	\$ 108,850	\$ 52,994	\$ 85,428
3.0 Implementation & Maintenance	\$ 2,699,235	\$ 2,495,116	\$ 2,611,570
4.0 Education & Information	\$ 128,586	\$ 111,964	\$ 156,440
5.0 Operational	\$ 383,306	\$ 349,205	\$ 406,933
6.0 Debt Service	\$ 327,500	\$ 271,550	\$ 325,000
Total Budget	\$3,948,387	\$3,547,632	\$3,792,911

2018 Activity Report

Fund 1-Planning

PURPOSE: TO PROVIDE CURRENT, SOUND GUIDANCE FOR IMPLEMENTATION

Surface Water

- Climate Adaptation and Resiliency Plan. In September 2017, SWWD held a two-day climate adaptation and resiliency plan workshop. The workshops were focused on adaptation and building resiliency into infrastructure and systems. This planning effort is an opportunity for our communities to address risks due to non-climate concerns as well; including poor planning, under-design, lack of maintenance, etc. Representative from local governments, institutions, and businesses participated in the workshops. The workshops resulted in a plan that identifies vulnerabilities and prioritizes actions to address them (https://www.swwdmn.org/wp-content/uploads/2018/03/FINAL_SWWD-Climate-Resiliency-Plan-3_26_2018.pdf). That completed plan was adopted by the SWWD Board in 2018 and has been incorporated into the Watershed Management Plan as a guidance document. One of the common concerns across cities was a need to coordinate on flood response. In early 2019 SWWD will work with HDR, Inc to update SWWD's flood response and mitigation plan. The focus of our plan is SWWD's central draw storage facility at the Woodbury/Cottage Grove border.
- Development of XPSWMM models in SWWD's East Mississippi area is included in SWWD's Watershed Management Plan. Those models were completed in 2018 and cover all of Newport, St. Paul Park, and Grey Cloud Island Township.
- In 2018, SWWD completed the Newport retrofit analysis that identifies targeted BMPs within the City to most cost effectively achieve District goals. Included in the report is an underground filtration BMP in existing City right of way at 15th and Cedar which would tie in to the City of Newport's storm sewer system. The system will primarily target sediment that would otherwise discharge directly to the Mississippi River. The project is in final design and will be constructed in 2019 or 2020 once funding is secured. Watershed based Clean Water Fund grants (Washington County) will fund a portion of the project.
- SWWD completed development of data and work products associated with PTMapp for SWWD's Lower St. Croix area in 2018. PTMapp will help staff identify and target rural BMPs to benefit Trout Brook and Lake St. Croix both at the field and watershed scale.

Natural Resources

- Glacial Valley Interpretative Center. SWWD's Watershed Management plan, identifies the potential and need for a facility (learning center) on the CDSF Prairie site to carry out desired functions of the site. In 2017 SWWD and its partners began work on scoping and designing a future facility and evaluating the need for the facility. A completed schematic design includes parking, regional and interior trail alignments and circulation, a shelter facility with restrooms, informational/interpretive kiosks, and gateway and wayfinding signage/structures. That schematic design has been

incorporated into the SWWD Watershed Management Plan as a guidance document. SWWD and its partners will begin pursuing funding opportunities in 2019. The SWWD in partnership with Washington County and MNDNR will update the management plan for the prairie to include the conceptual design.

- Trout Brook Ravine Inventory. In 2017, the SWWD began working with the Washington Conservation District to inventory and prioritize ravines within the Trout Brook subwatershed that have the greatest potential for pollutant load reduction for Trout Brook. The completed assessment was adopted as a guidance document to the SWWD Watershed Management Plan. Staff is moving forward with plans to address priority ravines. Implementation will begin in 2019.

Water Quality Assessment

- SWWD Lake Management Plans. Consistent with the SWWD Watershed Management Plan, SWWD worked with its consultants to review existing SWWD lake management plans and develop a new plan for La Lake throughout 2017 and 2018. The completed plan has been adopted as a guidance document to SWWD's Watershed Management Plan and provides updated load reductions necessary to meet SWWD goals and State water quality standards. Analysis completed as part of the review indicated that SWWD's lakes are seeing more inflow and higher internal loading than previously thought.
- Regional BMP Feasibility. Concurrent with review of SWWD's lake management plans, SWWD, its consultants, and City staff evaluated feasibility of potential regional BMPs in the Armstrong, Wilmes, and Powers Lake watersheds. Several potential BMPs were identified to make large reductions in lake nutrient loading. SWWD and its partners will continue project development in 2019.

Fund 2-Regulatory

PURPOSE: TO LIMIT THE AFFECTS OF LAND ALTERATIONS AND PROTECT THE PUBLIC HEALTH, WELFARE, AND NATURAL RESOURCES OF THE DISTRICT

Development Reviews

- Development Reviews. 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 or update controls. In Municipalities with an adopted plan and updated controls, SWWD reviews projects for regional impact. Staff reviewed 15 projects in 2018.
- In 2014, SWWD began the process for updating the SWWD Rules and Standards. SWWD's current rules were adopted December 13, 2011. Since that time, a new MS4 general permit has been issued, the District has updated its hydrologic guidance documents to include Atlas 14 rainfall rates, and the District updated its Ravine Lake management plan. All of these changes necessitate changes

to District Rules. After the public comment period, the Rules were formally adopted by the SWWD in early 2015.

- 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.
- Multiple projects within the Wilmes Lake watershed were reviewed for potential downstream impact at Wilmes Lake which has exhibited past flooding. No projects reviewed in 2018 are expected to exacerbate existing flooding concerns.
- SWWD maintains extensive hydraulic and hydrologic modeling of the District. Staff continues to work with City staff to accommodate incoming development while preserving critical floodplain storage in the District as identified in District models.

Wetland Conservation Act

- Wetland Conservation Act Administration. In 2012, SWWD became the Local Governmental Unit (LGU) for wetland permits within the SWWD boundary. In 2018, SWWD reviewed 27 applications. SWWD staff conducted development reviews to ensure compliance with SWWD wetland standards and participated as part of the Technical Evaluation Panel (TEP) to evaluate wetland impacts of proposed projects.

Erosion and Sediment Control

- 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 and upon request 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.

Fund 3-Implementation and Maintenance

PURPOSE: TO PROVIDE INFORMATION NECESSARY TO ASSESS STATE OF DISTRICT RESOURCES AND IMPACT OF DISTRICT ACTIONS

Monitoring

- SWWD continued to operate an extensive stormwater monitoring network. Data collected as part of the program is used to identify trends in water quality which are largely driven by changes in stormwater runoff. Monitoring reports for 2017 were completed and added to the SWWD website. The monitoring data is available on the SWWD Web-based database that allows users to access District data and performs basic statistical and plotting functions. 2018 data will be uploaded to the website when available.

Maintenance

- In 2018, Great River Greening continued contract work on the prairie restoration and maintenance at SWWD's Central Draw Storage Facility. The contract includes proposed work through June 2020 and includes prairie/savanna establishment and maintenance, development and coordination of volunteer events, development and oversight of a simulated grazing (i.e. haying) program, and development of research opportunities with the University of Minnesota. This work will partially be funded through LCCMR funds through Great River Greening. Once restored, the basins will provide regional water quality treatment and flood control while also serving as public open space and providing key connections in regional greenway and trail corridors.
- SWWD, the City of Woodbury, and Great River Greening (GRG) initiated work through GRG's Pollinator Seed Initiative to address the shortage of pollinator-friendly seed. The primary goal of the initiative is to create a sustainable future for pollinator habitat restoration and conservation by creating local sources of genetically appropriate seed which could be harvested when commercial seed suppliers lack sufficient inventory. In 2018, over 10 acres of Koch pipeline corridor and adjacent parkland from Bailey Road to Ojibway Park in Woodbury was planted in native vegetation. This corridor is a prime location not only for seeding and propagation - where the corridor is accessible by trail and the current vegetation needs improvement, but also as an ideal setting to engage the neighborhood and schools adjacent to the corridor – over 1,500 households and 3 schools within 0.5 miles of corridor.

Capital Improvement Plan

- Central Draw Overflow Phase III and IV. In cooperation with Washington County, Overflow Phases III and IV were started in 2017 and completed in 2018. Work was completed as part of Washington County's CSAH 19 and Ravine Park improvements project. The new park circulation road includes a new lake outlet to control lake bounce and downstream flooding as part of the Overflow project (Phase III). While the park was closed during construction of the new circulation road, SWWD implemented Phase IV of the Overflow that included stabilization of the ravine North of Ravine Lake. Stabilization techniques include re-enforced channel, drop structures, and check dams to reduce stormwater velocities. The stabilized channel will protect to park from erosion due to flow.

Ongoing work will include vegetation management to restore ground and shrub layer vegetation throughout the park which will act to further stabilize the ravine.

- Central Draw Overflow Phase V. SWWD and its consultants advanced design for Phase V of the Overflow throughout 2018. This final phase will consist of nearly 1 mile of 72" pipe connecting the Phase I pipe to the top of the stabilized ravine at Ravine Park. The new pipe will be aligned with future City roads as much as possible. Final design will be complete in early 2019. Permitting will be complete in late 2019. Land acquisition is underway and SWWD is on track to deliver the completed project by end of 2020.
- Improvements to the Central Draw Storage Facility (CDSF) continued in 2018. Improvements include stabilization of the CSAH 19 embankment for future water impoundment, grading of SWWD's CDP86SN basin, and a berm separating the CDP86SN and CDP86N basins to maximize storage capacity of the CDP86N basin. All work is being completed in cooperation with the City of Cottage Grove and as a part of the City's Ravine Parkway construction project. Work will be completed in 2019.
- Central Draw Overflow Media Production. In 2018, SWWD Contracted with North Star Aerial to produce photo, video, and aerial footage capturing the watershed overflow project. Phase III and Phase IV post-construction footage was documented along with grading of the final basin in CDSF as part of Ravine Parkway construction Cottage Grove.
- Restoration of Trout Brook was identified as a local priority by the former Lower St. Croix Watershed Management Organization which previously managed SWWD's Trout Brook watershed. Throughout 2017, SWWD worked with MNDNR and Afton Alps Ski Area to develop a restoration project for Trout Brook. The project includes a re-meandered stream section around Afton Alps' primary parking lot along with a new culvert and pedestrian bridges that span the new 100 year floodplain. Funding and permits are in place. Construction is expected to begin at the end of the ski season in spring 2019 and be complete by the end of October 2019.

Incentives

- In 2018 SWWD continued its performance-based cost-share program. Instead of reimbursing land owners for a specific percentage of total project cost, SWWD reimburses land owners based on the amount of phosphorus that their project is expected to retain. SWWD's 2018 reimbursement rate was \$5,000.00 per pound of phosphorus retained with reimbursement capped at total project cost. SWWD allocated \$70,000 to 19 projects in 2018. Together, the projects are expected to capture 51 lbs of phosphorus. 6 of the projects were completed in 2018 along with 4 cost share projects funded through past years' programs. The remaining projects are pending. Of the 50 site visits with landowners in 2018, 20 received technical assistance, 19 received funding, and the others are either pending or were directed to other opportunities. Projects with higher funding levels typically treated runoff from several properties.
- In 2018 the SWWD implemented a BMP Maintenance Program. The SWWD has recently installed several stormwater BMPs in conjunction with road improvements projects with Cities where

vegetation maintenance is the responsibility of the SWWD. Other older stormwater BMPs installed were also in need of maintenance. In March 2018, SWWD sent out request for professional services for maintenance services for the BMPs. The SWWD Contract with Outdoor Lab Landscape Design, Inc. for 2018 BMP Maintenance.

- SWWD used Lower St. Croix Stormwater Utility Fees (SUFs) to secure match funding to install several grade stabilization projects in Denmark Township matching grant dollars provided by the Washington Conservation District's Top50P! Phase II CWF grant.
- The SWWD Board of Managers awarded \$651,830 through its Coordinated Capital Improvement Program (CCIP) in 2018. \$163,892 was awarded to the City of Cottage Grove for stormwater BMPs at the Eastbrooke development. \$152,500 was awarded to the City of Cottage Grove for stormwater BMPs at the new East Metro Law Enforcement Training Center. \$4,327 was awarded to City of Lake Elmo for de-icing equipment to improve operations on one vehicle. \$17,000 was awarded to Oakdale for the purchase of a regenerative sweeper truck. \$22,500 was awarded to the City of Woodbury for the purchase of a brine production system to improve de-icing operations. \$66,611 was awarded to the City of Cottage Grove stormwater BMPs at the new Dodge Nature Center facility. \$200,000 was awarded to the City of Woodbury for pond maintenance. \$25,000 was awarded to the City of Oakdale for construction of a stormwater BMP.
- The Grey Cloud Slough is a side channel of the Mississippi River in southern Washington County. This section of the River is within the Mississippi National River and Recreational Area and is a designated State water trail. Flow from the Mississippi River into the slough was cut off following construction of an earthen embankment and roadway across the mouth of the slough in the 1960s. As a direct result, the slough experienced stagnation, poor water quality, and severely degraded backwater aquatic habitat. In 2014, the Township and County decided that construction of a bridge would best maintain the full hydro connectivity with the main channel. With the help of former County Commissioner Karla Bigham (now State Senator Bigham) the SWWD and Washington County worked with former Senator Sieben, former Representative Schoen and former Representative McNamara to support legislation to provide \$520,000 from the Clean Water Legacy Funds for the project. Construction of the bridge was completed in October 2017.



- In 2018 SWWD contracted with Minnesota Native Landscapes to provide 2018-2019 maintenance work on the Clear Channel pond project. Work will consist of mowing, weed control, and prescribed burning.

- SWWD staff worked with Washington Conservation District and the Minnesota Pollution Control Agency to continue development and operation of 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. This effort is part of a larger initiative by State agencies to evaluate potential effects of large scale infiltration.
- SWWD continued its collaboration with the Minnesota Department of Natural Resources with monitoring wells on SWWD property as part of an effort to expand the State’s groundwater monitoring network. Information on these wells located on SWWD property can be found at <http://www.dnr.state.mn.us/waters/cgm/index.html>.
- The SWWD maintains communications with Municipal water suppliers to understand the implications of the North and East Metro Groundwater Management area draft plan. A major effort of the draft plan is promoting water conservation. The SWWD partners with Municipal water suppliers to promote water conservation through residential irrigation retro-fits, education, smart technology and stormwater reuse.
- In 2018, the SWWD partnered with the Cities of Woodbury and Cottage Grove to address water conservation through smart irrigation, a City wide Residential Irrigation Controller program.

Fund 4-Education and Information

PURPOSE: TO EFFICIENTLY INFORM AND EDUCATE DISTRICT RESIDENTS AND STAKEHOLDERS

- SWWD participated and continued support of the East Metro Water Resource Education Program (EMWREP). The EMWREP annual activities report is in Appendix B.
- SWWD partnered with Refuge Friends in 2018 formally known as Kids4Conservation to provide education activities and workshops with 5th graders from Grey Cloud Elementary and Middleton Elementary schools. Refuge Friends activities include a 6-week, in-class program focused on water quality and watershed science. The program culminates with a daylong field trip to Minnesota Valley National Wildlife Refuge. The program will continue in 2019. Feedback from Refuge Friends and the teachers will be used to further develop SWWD’s experiential learning program for expansion and full rollout by 2020.
- In 2018 SWWD was a Road Salt Symposium Sponsor. The symposium was presented by the Freshwater Society, and it encourages smart salt use which protects the environment, reduces expense, and ensures safe roads.
- SWWD continued using social media as well as the Districts website as a communication platform. A Facebook and Twitter account were created in 2017.

- In 2018, SWWD Contracted with North Star Aerial to produce photo, video, and aerial footage capturing the watershed overflow project and the Grey Cloud Slough Crossing. The footage has been shared on the Districts website and social media accounts.
- SWWD staff continues to collect and organize all SWWD monitoring data from the Washington Conservation District. SWWD maintains an online database for accessing monitoring data through the SWWD website.
- South Washington County School District Campus Greening. In 2017, SWWD began working with facilities staff of South Washington County Schools to create an open space plan at the Lake Middle School and Middleton Elementary School (93 acre site - Woodbury) that not only supports active recreation, but provides both water quality and habitat goals. These schools are located within the SWWD greenway corridor. Partners with the 'greening' of the school sites are SWWD, the City of Woodbury, and District 833. 15 acres of turf to prairie conversion and 200 trees were planted in 2018. SWWD worked with Tree Trust, a local nonprofit to engage students and staff to plant nearly half of the trees. SWWD is engaging stakeholders for additional opportunities to be considered as part of the project, including outdoor classrooms at Middleton Elementary school and Lake Middle school.
- In 2017 and 2018, the SWWD has provided funds to the MN Stormwater Research Council (MSRC). The MSRC is an independent organization of stormwater professionals, practitioners, managers, engineers, and researchers working cooperatively to facilitate applied stormwater research in MN. Identified research priorities for 2018 include stormwater reuse, chloride effectiveness and deicing alternatives, and development or evaluation of stormwater practices and technologies. Projects funded in 2017 include research into optimizing iron enhanced sand filters and assessment of pretreatment practices for curb inlet BMPs.

Fund 5-Operational

- The SWWD District Board annually prioritizes work activities from the long range work plan constituting targeted efforts for the coming year. These work activities translate into the annual work plan and budget for the SWWD. The annual work plan allows the District Board to establish a short term operating budget while maintaining connection to the overall long term management goals of the District. Six Management areas have been defined through which the SWWD will work to execute the annual work plan. The areas are: (1) Planning, (2) Regulatory, (3) Implementation & Maintenance, (4) Education & information, (5) Operational, and (6) Debt Service Fund. According to Minnesota Statute 103D.911 the SWWD must hold a hearing and adopt a preliminary budget on or before September 15th of each year. The Final budget certification is due to Washington County by December 31st of each year.

- In 2018, SWWD continued collecting stormwater utility fees in the South Washington Watershed, East Mississippi, and Lower St. Croix management units. Revenue will be used to fund water quality projects only within each of the management units.
- 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.

Fund 6-Debt Service

- In 2011, the SWWD issued general obligation bonds for the construction of three projects within the East Mississippi management area. In 2016, SWWD refinanced the 2011 general obligation bonds. Those bonds are set to cross over to general obligation refunding bonds in early 2019 saving SWWD \$186,000.

2019 Workplan

As part of its annual reporting, the District evaluates performance of programs and progress toward meeting goals through implementation indicators established in this Plan and adopted guidance documents. SWWD has developed a workplan layout matching issues and program categories and subcategories outlined in the Watershed Management Plan:



Progress Evaluation for the Issue: FLOODING
Subcategories: FLOOD DAMAGE REDUCTION AND MITIGATION

Issue Goal:

Minimize existing and complete establishment of a controlled overflow from SWWD’s Northern Watershed to the Mississippi River resources due to flood events.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Prevent increases in runoff from development activity through development and enforcement of District Rules;	Ongoing.	-	Enforce SWWD rules.
2	Prevent increases in flooding risk due to development (e.g. Wilmes, Ravine, and O’Conner’s Lakes);	Ongoing.	-	Enforce SWWD rules.
3	Achieve no net loss in inventoried key flood storage areas;	Ongoing.	-	Enforce SWWD rules.
4	Achieve progress towards identified inter-community flow limits as development occurs;	Ongoing.	-	Enforce SWWD rules. Review inter community flow limits from Woodbury into Cottage Grove as part of model update process.
5	Maintain implementation flexibility (program framework and funding) to respond to identified flood damage reduction/mitigation needs that may arise.	Limited funds budgeted to begin building a reserve balance. Engaged Woodbury and Cottage Grove to begin review and update of flood response and mitigation plan.	-	Continue to budget for unexpected flooding issues. Update SWWD flood response and mitigation plan and expand to East Mississippi and Lower St. Croix.



Progress Evaluation for the Issue: FLOODING

Subcategories: CENTRAL DRAW STORAGE FACILITY AND OVERFLOW

Issue Goal:

Complete establishment of a controlled overflow from SWWD’s Northern Watershed to the Mississippi River.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Phase III, modification of the Ravine Lake outlet by 2017;	Complete	-	None
2	Phase IV, stabilization of Ravine Park by 2018	Complete	-	Monitor vegetation establishment, Continue to manage invasive species
3	Phase V, construction of remaining pipe sections by 2019;	Final Design is complete, construction is planned for 2020	Adjust Phase V completion date to December 31, 2020	Complete land acquisition, solicit project for bids in Fall 2019
4	Completion of functioning overflow system by January 1, 2020 as specified in SWWD/Lower St. Croix WMO consolidation agreement, unless otherwise agreed to by Cottage Grove, Woodbury, and SWWD.	Anticipated completion date of Phase V set for the end of 2020, last remaining regional basin grading planned for 2019	Adjust functioning overflow system date to December 31, 2020	Continue to work on Phase V and finish final regional basin grading near Ravine Parkway



Progress Evaluation for the Issue: WATERSHED ALTERATIONS
Subcategories: SURFACE WATER DEGRADATION AND IMPAIRMENT

Issue Goal:

Protection and restoration of District resources to meet local resource goals and State standards.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Adoption of completed TMDLs for Statewide and Regional resources for which implementation actions are identified for SWWD;	N/A	-	Review TMDLs as they are finalized.
2	Colby Lake: Restore Colby Lake to state eutrophication standards by reducing the annual total phosphorus load by 1,303 lbs/yr.	SWWD estimates that the annual TP load has been reduced by 220 lbs.	Analyze subwatershed for regional BMP opportunities	Prioritize potential BMPs from completed feasibility study, monitor potential locations, and develop budget strategy
3	Wilmes Lake: Restore North and South Wilmes Lake to state eutrophication goals by reducing the annual total phosphorus load by 265 and 108 lbs, respectively.	SWWD estimates that the annual TP load to Wilmes Lake has been reduced by 99 lbs.	Analyze subwatershed for regional BMP opportunities	Prioritize potential BMPs from completed feasibility study, monitor potential locations, and develop budget strategy
4	Powers Lake: Protect Powers Lake from exceeding state eutrophication standards by maintaining existing watershed phosphorus load.	Powers Lake continues to meet State standards.	Analyze subwatershed for regional BMP opportunities	Prioritize potential BMPs from completed feasibility study, monitor potential locations, and develop budget strategy
5	Armstrong Lake: Protect Armstrong Lake from exceeding state eutrophication standards by reducing the annual total phosphorus load by 89 lbs	2019 construction 15 th and Hilo IESF will reduce annual total phosphorus load by 6.2 lbs,	Analyze subwatershed for regional BMP opportunities	Construction of 15th and Hilo pond maintenance and IESF BMP; Prioritize potential BMPs from completed feasibility study, monitor potential locations, and develop budget strategy
6	Markgrafs Lake: Restore Markgrafs Lake to state eutrophication standards by	N/A	Conduct a Subwatershed Retrofit Analysis to	Conduct a Subwatershed Retrofit Analysis in 2019 to identify BMP opportunities

	reducing the annual total phosphorus load by 209 lbs/yr		identify BMP opportunities	
7	Ravine Lake: Restore Ravine Lake to state eutrophication standards by reducing the growing season total phosphorus load by 141 lbs/yr at full build-out through enforcement of established total phosphorus loading standards.	N/A	-	Opportunistically implement projects as they arise through development.
8	Mississippi River: Meet proposed TMDL loading rate of 154 lbs/ac/yr of Total Suspended Solids;	Conducted a Subwatershed Retrofit Analysis (SWA) for City of Newport in 2018; Received Watershed Based Funding for an underground filtration BMP in Newport (identified in the SWA) capturing 7300 lbs TSS/yr reducing catchment loading from 356 lbs/ac/yr to 194 lbs/ac/yr; Proposed developments tributary to the Mississippi River are being reviewed for compliance with the TMDL loading rate.	-	Complete final plans for underground filtration BMP in Newport – 2020 construction anticipated; work with stakeholders on other identified BMPs to develop projects; Review proposed developments for compliance. Promote sediment control BMPs as part of proposed municipal projects.
9	Lake St. Croix: Achieve 36%, or approximately 315 kg of total phosphorus load reduction for Trout Brook as specified in the Lake St. Croix TMDL.	Multiple BMPs have been installed in the Trout Brook watershed to date. Monitored stream load at SWWD's regional assessment location meets the proposed TMDL loading rate.	-	Continue project development in the Trout Brook watershed. Projects under development include land cover conversion, stream restoration, and ravine stabilization.
10	No net loss in wetland acreage or function;	Ongoing.	-	Enforce SWWD and WCA rules.
11	Protect/promote soil health as part of District projects and through District rules as a means to limit hydrological impacts of land alteration.	N/A	-	
12	Continue existing Incentive programs to encourage voluntary implementation of BMPs;	Programs are ongoing.	-	Distribute up to \$70,000 for BMP cost share.
13	Coordinate CIP plan with municipalities through	Program is ongoing.	-	Distribute up to \$500,000 for CCIP projects.

	engagement of a standing Technical Advisory Committee and implementation of the District's CCIP program;			
14	Evaluate impact of emerging contaminants and identify District programs or actions to control or mitigate that risk.	N/A	-	Nothing planned.



Progress Evaluation for the Issue: WATERSHED ALTERATIONS
Subcategories: EROSION

Issue Goal:

Prevent resource degradation of District resources from bluff, streambank, shoreland, and construction site erosion.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	In partnership with State and Municipal programs, promote and ensure erosion and sediment control compliance at active construction sites.	SWWD rules require compliance with ESC rules. SWWD staff assists its municipalities in site inspections during the construction season.	-	Enforce SWWD rules. Continue to support municipalities with ESC inspections.
2	Develop and implement buffer regulatory measures to comply with State requirements;	N/A	-	Review State requirements as part of planned WMP amendment.
3	Establish and maintain a 50 foot, permanently vegetated buffer along all bluffs, ravines, lakes, and streams;	N/A	-	Work with developers to ensure adequate buffers as part of development.
4	Identify and prioritize actively eroding ravines and address as budget allows;	Inventory complete for Trout Brook – McQuade ravine prioritized. Ongoing for rest of St. Croix watershed.	-	Design and construct McQuade Ravine Stabilization. Continue work on a ravine inventory and prioritization.
5	Maintain and enforce rules which prevent increased channel instability due to development;	Rule is in place and enforced during development.	-	Enforce SWWD rules.



Progress Evaluation for the Issue: GROUNDWATER SUSTAINABILITY

Subcategories: SUPPLY

Issue Goal:

Implement conservation efforts to ensure long term viability of groundwater resources in South Washington County.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Participate in development of a county-wide groundwater monitoring effort as identified in the County Groundwater Plan;	N/A	-	Continue partnership with MPCA to monitor SWWD wells as part of the MPCA ambient groundwater monitoring program.
2	Maintain rules and permitting program necessary to adequately protect groundwater resources, protect recharge potential, and promote low impact development as identified in the County Groundwater Plan	Ongoing.	-	Enforce SWWD rules.
3	Implement conservation actions identified through regional planning efforts identified in the County Groundwater Plan;	Ongoing.	-	Continue to support cities in improving De-icing operations.
4	Incentivize practices that reduce demand on groundwater supply;	Ongoing. SWWD is currently assisting Woodbury and Cottage Grove with several pilot conservation programs.	-	Continue to support pilot conservation programs.
5	Promote and incentivize feasible re-use of water;	Ongoing.	-	Nothing planned.
6	Promote use of infiltration as a tool for recharge where appropriate;	Not started.	-	Nothing planned.
7	Evaluate feasibility of active recharge.	Not started.	-	Nothing planned.



Progress Evaluation for the Issue: GROUNDWATER SUSTAINABILITY

Subcategories: PROTECTION (POLLUTION PREVENTION)

Issue Goal:

Protect groundwater resources through pollution prevention and management of surface water groundwater interactions.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Continue enforcement of existing karst rules;	Ongoing.	-	Enforce SWWD rules.
2	Consider pollution potential in siting and design of District funded stormwater BMPs;	Ongoing.	-	Enforce SWWD rules.
3	Utilize alternative compliance sequencing for meeting District development rules in areas where infiltration is not appropriate;	Ongoing. Several proposed developments in SWWD have used alternative compliance sequencing due to shallow bedrock, wellhead protection, and poor soils.	-	Enforce SWWD rules.
4	Participate in State and regional efforts to quantify risks to groundwater resources from de-icing operations;	SWWD is partnering with MPCA to include SWWD's groundwater monitoring sites as part of the MPCA ambient groundwater monitoring program.	-	Continue monitoring program.
5	Supplement County incentive programs to prevent pollution from septic systems and abandoned wells;	Not started.	-	Nothing planned.
6	Incentivize road authority upgrades to de-icing operations to prevent overuse of road salt;	Ongoing. SWWD continues to incentivize improvements through its CCIP program.	-	Continue to support cities in improving De-icing operations.

<p>7</p>	<p>Continue groundwater quality monitoring at District regional infiltration facilities sufficient to identify potential impacts to groundwater from large scale infiltration practices.</p>	<p>Ongoing.</p>	<p>-</p>	<p>Continue monitoring program.</p>
<p>8</p>	<p>Consider additional protection of surface water features with potential to impact groundwater quality with guidance from State Agencies.</p>	<p>Not started.</p>	<p>-</p>	<p>Nothing planned.</p>



Progress Evaluation for the Issue: **NATURAL RESOURCES**

Issue Goal:

Protect, restore, and reconstruct native terrestrial and aquatic habitat for the benefit of resource management.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Protect, restore, and reconstruct native terrestrial and aquatic habitat for the benefit of resource management.	Ongoing. SWWD continues restoration efforts on its Central greenway which includes over 200 acres of prairie and 50 acres of woodland restoration.	-	Continue current restoration efforts at SWWDs CDSF and Ravine Park. Work with Xcel Energy, Great River Greening to transition utility corridors from turf to prairie.
2	Participate in development of regional programs to address spread and management of invasive terrestrial and aquatic invasive species;	Not started.	-	Nothing planned.
3	Implement local actions identified in regional planning efforts;	Not started.	-	Nothing planned.
4	Avoid impacts to rare, unique, and high quality habitats as part of all District projects;	Ongoing.	-	Nothing planned.
5	Maintain natural buffers or riparian areas on all District water resources;	Ongoing.	-	Nothing planned.
6	Promote use of site appropriate native plants as part of District funded projects;	Ongoing.	-	Continue use of native plants on SWWD projects and promote their use throughout the District.
7	Promote compliance with guidance for pollinator friendly design practices as part of District funded projects;	Ongoing. Designed and installed (with partner funding) 10 acres of turf to pollinator prairie in a woodbury/flint hills resources	-	Work with Dist 833 schools to continue turf to prairie conversions. Continue use of pollinator-focused native plants on SWWD projects and promote their use throughout the District.

		pipeline corridor and converted 15 acres of turfgrass to pollinator prairie at the Lake and Middleton Campus		
8	Consider preservation or restoration of native habitat and benefits to pollinators and other wildlife in allocation of incentive funding.	Ongoing.	-	Continue use of pollinator-focused native plants on SWWD projects and promote their use throughout the District.
9	Evaluate potential credit mechanisms to incentivize developers to maintain mature trees during development within 3 years;	Not started.	-	Evaluate options in cooperation with Cities.
10	Implement habitat improvement practices identified in completed Resource Management Plans.	SWWD has completed an update of its Lake Management Plans and continues to monitor vegetation in its lakes. While there are potential improvements that could be made, SWWD’s focus in the near term will remain on reducing watershed nutrient loading. Reductions to watershed loads will make in-lake management more effective in the future.	-	Develop and pursue watershed loading reductions. Continue vegetation monitoring of lakes.



Progress Evaluation for the Issue: **CLIMATE CHANGE**

Issue Goal:

Facilitate increased resilience of District resources and public infrastructure through development of information and strategies and implementation of accepted climate adaptation practices.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Consider adaptive capacity—ability of a system to adjust to climate change to mitigate potential damages, take advantage of opportunities, or cope with consequences— of District systems and resources in Developing projects and management plans;	Not started.	-	Nothing planned.
2	Require use of up to date hydrologic data for meeting District development and redevelopment standards;	Ongoing. SWWD requires use of Atlas 14.	-	Enforce SWWD rules.
3	Utilize District surface water modeling and County Groundwater model to explore changes in surface water/groundwater interactions as a result of predicted changes in hydrologic conditions and water demand;	Not started.	-	Nothing planned.
4	Utilize District CCIP or similar program framework to assist Cities in adapting their infrastructure systems to increase resiliency—capability to anticipate, prepare for, respond to, and recover from significant threats with minimum damage to social well-being, the economy, and the environment;	SWWD’s CCIP program has been modified to include resiliency focused projects as eligible for funding.	-	Continue CCIP program.

5	Promote use of alternative landscapes which require less water;	Not started.	-	Implement turf to prairie conversion on utility corridors and at school campuses.
6	Promote water re-use where feasible to reduce demand on aquifers;	Not started.	-	Nothing planned.
7	Work with local partners to improve delivery of soil conservation programs to prevent increased field erosion from changing precipitation patterns.	SWWD and its partners will begin engaging landowners on soil conservation efforts as part of the Lower St. Croix 1W1P development.	-	Work with partners to engage landowners in SWWD.



Progress Evaluation for the Issue: INFORMATION AND EDUCATION

Subcategories: RESOURCE ASSESSMENT

Issue Goal:

In partnership with Local, State, and Regional partners, operate a monitoring program adequate to establish baseline water quality and quantity measures and identify long-term trends. Operate a monitoring program adequate to detect changes in loading rate as a result of District implementation actions.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Maintain equipment inventory to quickly establish additional monitoring locations in response to identified resource concerns;	Ongoing.	-	Repair and replace monitoring equipment as needed.
2	Biennially, complete trend analyses for all lakes and Regional Assessment Locations and complete a review of the District’s Monitoring Plan;	Ongoing.	-	Complete SWWD monitoring reports for inclusion on the website.
3	Expand groundwater monitoring program in partnership with Washington County, MnDNR, MDH, and MPCA to adequately characterize groundwater resources in the District;	Ongoing.	-	Continue partnership with MPCA to monitor SWWD wells as part of the MPCA ambient groundwater monitoring program.



Progress Evaluation for the Issue: INFORMATION AND EDUCATION
Subcategories: DISTRICT-WIDE HYDROLOGIC MODELING

Issue Goal:

Maintain updated, District-wide hydrological modeling to inform District and Municipal management of resources and infrastructure.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Complete development of subwatershed models to complete District-wide coverage within 6 years;	Ongoing. Completed model for East Mississippi;	-	Review and Update the West Draw model.
2	Calibrate completed models to collected monitoring data once every 3 years.	Not started.	-	Nothing planned.
3	Promote use of District models and modeling specifications through dissemination on SWWD website.	Ongoing. Draft modeling spec is available on web. Models are available through request.	-	Update website to ensure that stakeholders can access models as needed.



Progress Evaluation for the Issue: INFORMATION AND EDUCATION

Subcategories: RESEARCH

Issue Goal:

Work with local and regional partners to advance knowledge of watershed management issues.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Further identify and refine research and information needs as ongoing role of Technical Advisory Committee;	Identified climate related topics as part of climate adaptation plan.	-	Nothing planned.
2	Pursue research opportunities to provide for identified information needs;	Ongoing. SWWD staff participates on the Stormwater Research Council advisory board and contributes funds to the collaborative effort.	-	Participate in the MN Stormwater Research Council through staff participation on advisory board and through contribution of funds.
3	Biannually publish a summary of completed and ongoing research efforts as part of annual reporting.	Not started.	-	SWWD will work to disseminate results of research completed as part of the MSRC.
4	As part of annual reporting, review existing District web tools for improvements and incorporation of new technologies.	Completed PTMapp model for the rural portions of SWWD; Updated monitoring database to improve function	-	Regular website info updates.



Progress Evaluation for the Issue: INFORMATION AND EDUCATION
Subcategories: EDUCATION

Issue Goal:

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.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	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.	Ongoing. Participated in the Master Water Steward Program with 4 participants	-	Continue to participate in the Master Water Steward Program, See EMWREP
2	Actively participate in regional education efforts as an active partner in the East Metro Water Resources Education Partnership (EMWREP);	Ongoing.	-	See EMWREP
3	Develop District facilities for use as interpretive and educational sites as user demand grows with development (i.e. Signage trails, programming at CDSF);	Ongoing. Developed conceptual plan for future learning center at CDSF with Cities and stakeholders	-	Incorporate learning center plans into WMP and LRWP through plan amendment. Pursue grant funds for construction.
4	Evaluate the need and opportunity for shared Learning Center at the Central Draw Storage Facility;	Complete	-	None
5	Develop shared interpretive and educational programming through EMWREP for use at Municipal and District facilities focused on identified District issues;	Ongoing. Developed Watershed and project-specific signage in Cottage Grove Ravine Park	-	Develop water and habitat signage at two outdoor classrooms constructed in summer 2019
6	Engage local public, private, and NGO partners to develop experiential programming for children;	Ongoing. Pilot effort continues with Refuge Friends, the successor to Kids 4 conservation.	-	Continue pilot with Refuge Friends. Evaluate other potential partnerships.

7	Maintain a website to disseminate consistent information and coordinate program implementation;	Ongoing.	-	Update website as needed.
8	Utilize existing Municipal committee structure to educate residents and disseminate information as part of the District’s Citizen Advisory Committee;	Ongoing.	-	Engage TAC in development of regional BMPs identified in completed feasibility study. Engage CAC in ongoing pollinator/greenway efforts.
9	Develop a mechanism to gauge effectiveness of educational programming efforts.	Not started.	-	Nothing planned.



Progress Evaluation for the Issue: EFFICIENCY AND ACCOUNTABILITY

Subcategories: PROGRESS EVALUATION

Issue Goal:

Utilize a Results Based Accountability approach in evaluating and refining implementation strategies for achieving resource goals and to evaluate and improve program performance.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Ongoing development and use of documented strategies and actions (i.e. Management plans and other guidance documents) to achieve established resource goals;	Ongoing. Minor plan amendment to be adopted in April 2019 to incorporate new and updated guidance documents.	-	Continue to refine reporting and documentation methods.
2	Incorporate strategy documentation, progress evaluation, and annual workplan into annual report;	Ongoing.	-	Continue to refine reporting and documentation methods.
3	Amend Watershed Plan as necessary to provide the District with programs and tools necessary to implement identified strategies.	Not started. Minor plan amendment to be adopted in April 2019.	-	No new efforts planned in 2019.



Progress Evaluation for the Issue: EFFICIENCY AND ACCOUNTABILITY

Subcategories: UNIFORM STANDARDS

Issue Goal:

Establish and maintain District controls necessary to achieve established District resource goals, comply with mandated permits and programs, and maximize regulatory consistency with neighboring jurisdictions.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Regularly review and update District Rules as necessary to keep pace with changing resource issues and mandated regulatory programs;	Ongoing.	-	Nothing planned.
2	Ensure uniform MS4 program coverage across District using a documented cooperative approach;	Ongoing.	-	Complete required MS4 reporting. Apply for continued coverage under new permit.
3	Work with neighboring Watershed Districts to develop uniform standards where possible;	Not started.	-	Engage in ongoing discussions as part of Metro WDs collaboration.
4	Require municipal adoption of District Rules within 2 years of any completed update;	Ongoing.	-	Assist municipalities in Comp Plan and ordinance updates as requested.



Progress Evaluation for the Issue: EFFICIENCY AND ACCOUNTABILITY

Subcategories: COLLABORATION AND COORDINATION OF EFFORTS

Issue Goal:

Limit duplication of planning and implementation efforts by the District and its State and Local partners by improving collaboration and coordination of efforts. Create efficiencies in implementation through partnerships.

	Implementation Indicator	Issue Progress	Recommended Change /Action	Current Year Workplan
1	Collaborate and coordinate agency efforts through engagement of a standing Technical Advisory Committee;	Ongoing. TAC was engaged as part of climate adaptation planning in 2017. TAC members were engaged as part of regional BMP feasibility study.	-	Continue to work with City staff as members of TAC to develop and pursue regional projects.
2	Incorporate local input into District planning efforts through engagement of a standing Citizens Advisory Committee	Ongoing. CAC was engaged in development of minor plan amendment to adopt new and updated guidance documents.	-	Engage CAC in pollinator and greenway efforts.
3	Inform State and Regional agencies and organizations of local efforts through participation in their advisory committees;	Ongoing.	-	Participate as opportunities arise.
4	Combine local implementation to gain economy of scale;	Ongoing. Grey Cloud restoration completed in cooperation with Washington County. CDO III and IV were completed in cooperation with Washington County.	-	Continue to partner with Cottage Grove to complete CDSF improvements as part of Ravine Parkway construction.
5	Incorporate implementation actions identified in regional planning efforts into District programs.	Not started.	-	Nothing planned.



Progress Evaluation for the Program: Planning

Subcategories: RESOURCE, FLOOD DAMAGE REDUCTION & MITIGATION PLAN, CLIMATE ADAPTATION PLAN, NATURAL RESOURCES, GROUNDWATER, GUIDANCE DOCUMENTS, ADVISORY COMMITTEES, MODELING

Program Purpose:

Through its various planning efforts, SWWD evaluates resource issues, risks, and uncertainty in formulating a strategy or identifying practices to address identified issues. The District routinely collects information to evaluate success of implemented practices and better informed understanding of resource issues. Using that information, the District re-visits planning efforts to revise strategies as necessary.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Maintain up to date planning documents necessary to guide District Implementation (staff time);	Ongoing.	\$ 532,206.00	\$ 121,804.00	SWWD has submitted minor plan amendment in early 2019 to add and update guidance documents as well as updating general information.	As Planned	-	\$ 63,240.00
2 Complete SWWD Flooding Emergency Response Plan within 6 years;	Complete by 2023.	\$ 45,000.00	\$ -	Staff and consultant have begun this process in 2019. An initial workshop with city staff has already occurred.	Ahead of schedule	-	\$ 45,000.00
3 Complete development of subwatershed hydrologic models within 6 years;	Complete by 2023.	\$ 160,000.00	\$ 85,711.00	An East Mississippi, St Paul Park, and Grey Cloud	As Planned	-	\$ 72,100.00

					XP model was completed in 2018. PTMapp has been developed in SWWDs Lower St. Croix area.			
4	Update/calibrate completed hydrologic models every 3 years	Ongoing.	\$ 390,208.00	\$ -	SWWDs West Draw model will be updated in 2019.	As Planned	-	\$ -
5	Review and update inter-community flow limits within 3 years (modeling);	Review/update by 2020.	N/A, included above	\$ -	To be reviewed along with 2019 model update.	N/A, will be evaluated in 2019.	-	\$ -
6	Complete resource management plans for all lakes and perennial open channel streams within the District within 6 years;	All plans completed by 2023.	\$ 100,000.00	\$ 57,316.00	Plans were completed in 2018 and included in the minor amendment submittal in early 2019	Ahead of schedule	-	\$ 57,316.00
7	Re-assess completed management plans at a minimum of once every 3 years to evaluate progress and review and adjust strategies;	Re-assess all plans by 2020. Every 3 years thereafter.	\$ 227,821.00	\$ -	Review and update of plans were completed in 2018.	As Planned	-	
8	ID excessively eroding bluff ravines within 3 years;	Completed by 2020.	\$ 45,000.00	\$ 6,806.00	ID process underway via WCD. A Ravine Stabilization project is scheduled for 2019	As Planned	-	\$ -
9	Update the District's Greenway Plan within 3 years;	Completed by 2020.	\$ 30,000.00	\$ -	Plan will be updated as part of County's greenway	N/A, will be evaluated in 2019.	-	

					plan update process			
10	Develop a Climate Adaptation Plan within 6 years;	Completed by 2023.	\$ 105,000.00	\$ 107,000.00	Completed plan was adopted by Board. Plan was included in the minor amendment submittal in early 2019 as guidance document to WMP.	Ahead of schedule	Effort accelerated upon community request.	
11	Participate in State or Regional planning efforts to coordinate groundwater resource assessment and regulation.	Ongoing.	N/A, included above	\$ -	Not Started	N/A, will be evaluated in 2019.	-	\$ -
12	Work with partners to develop a Strategic Groundwater Assessment Plan to guide and coordinate groundwater monitoring efforts within 3 years;	Completed by 2020.	\$ 8,000.00	\$ -	Limited coordination with MPCA. SWWD's groundwater monitoring efforts now under umbrella of MPCA ambient groundwater monitoring program.	N/A, will be evaluated in 2019.	-	\$ -
13	Work with partners to develop a Strategic Groundwater Regulatory Coordination Plan within 3 years;	Completed by 2020.	\$ 15,000.00	\$ -	Not started.	N/A, will be evaluated in 2019.	-	\$ -

<p>1 4</p>	<p>Update and finalize the Districts Wetland inventory within 3 years.</p>	<p>Completed by 2020.</p>	<p>\$ 50,000.00</p>	<p>\$ -</p>	<p>Planned for 2018-2019.</p>	<p>As planned</p>	<p>-</p>	<p>\$ 25,000.00</p>
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Progress Evaluation for the Program: REGULATORY
Subcategories:

Program Purpose:

Established under authorities granted in MN Statute 103D.341, District Rules seek to limit the affects land alterations to protect the public health, welfare, and natural resources of the District, reduce the need for additional storage capacity and the potential need for the construction of systems to convey storm water, preserve floodplains and wetland storage capacity, maintain or improve the chemical and physical quality of the surface and groundwater, reduce sedimentation, preserve the hydraulic and navigational capacity of water bodies, preserve natural shoreland features, and minimize the public expenditure to avoid or correct such problems in the future.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Development Reviews and Assessments	Ongoing	\$ 343,916.00	\$ 52,456.00	Ongoing	As planned	-	\$ 56,228.00
2 Wetland Conservation Act	Ongoing	\$ 30,000.00	\$ -	Ongoing	As planned	-	\$ 1,500.00
3 Erosion and Sediment Control (Staff Time)	Ongoing	\$ 140,000.00	\$ 52,688.00	Ongoing	As planned	-	\$ 15,945.00
4 Rules (Staff Time)	Ongoing	\$ 10,000.00	\$ 4,600.00	Ongoing	As planned	-	\$ 3,679.00



Progress Evaluation for the Program: **IMPLEMENTATION AND MAINTENANCE**

Subcategories: MONITORING

Program Purpose:

To optimize monitoring efforts for regional assessment, the District has designated key locations at critical crossings and checkpoints throughout the watershed as regional assessment locations (Chapter 6, Section 8 of the SWWD 2007 WMP, Houston Engineering). Locations were chosen to characterize water quality and quantity entering or leaving a region and are included on the District's web viewer. Data collected at these locations is used to identify trends in regional water quality and quantity as well as potential areas for concern, develop and verify regional models, set benchmarks for regional water quality, evaluate effectiveness of District Rules and evaluate regional effects of proposed development projects. Once established, all regional assessment locations are part of the District's permanent monitoring program and will be operated until deemed unnecessary by analysis and modeling.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Survey aquatic vegetation of District Lakes a minimum of every 3 years;	Survey completed in 2015. Re-survey every 3 years.	N/A, included in monitoring budget	\$ -	Surveyed in 2018,	As Planned	-	\$ -
2 Annually implement District's monitoring plan;	Ongoing.	\$ 1,776,901.00	\$ 297,986	Ongoing.	As Planned	-	\$ 164,860.00
3 Monitor levels and water quality of all publicly accessible lakes annually;	Ongoing.	N/A, included in monitoring budget	\$ -	Ongoing.	As Planned	-	\$ -
4 Monitor established Regional Assessment Locations a minimum of 3 out of every 6 years;	Monitor established sites 3 of every 6 years.	N/A, included in monitoring budget	\$ -	Ongoing.	As Planned	-	\$ -
5 Implement recommendations of the Strategic Assessment Plan once complete.	TBD	N/A, included in monitoring budget	\$ -	Not started.	N/A, will be evaluated in 2019.	-	\$ -



Progress Evaluation for the Program: **IMPLEMENTATION AND MAINTENANCE**

Subcategories: WATERSHED RESTORATION, RECONSTRUCTION, AND RESILIENCY

Program Purpose:

The District's Watershed Restoration, Reconstruction, and Resiliency program provides implementation funds to address problems that these changes cause including altered hydrographs or increase in peak flows as water runs off of the watershed more quickly, stabilization of natural drainage systems to withstand anticipated discharges, protection and restoration of rare and native communities, increasing resiliency of natural and man-made systems against climate changes, reducing habitat fragmentation by creating or maintaining linear corridors, managing invasive species, and protecting groundwater resources.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Establishment and protection of identified greenway corridors (Greenway Plan);	Limited implementation on ongoing under SWWD's existing greenway plan.	\$ 700,000.00	\$ -	Work continues on the Central Greenway (Lake Elmo to Ravine Park) in cooperation with Washington County, Woodbury, Cottage Grove, and S Washington School District.	As Planned	-	\$ -
2 Implementation of completed resource management plans as guided by accompanying retrofit analyses;	Ongoing.	\$ 3,875,000.00	\$40,997.00	No additional projects were completed in 2018. Projects are under development in cooperation with Cities	As Planned	-	\$ 30,000.00

3	Establishment and protection of vegetated buffers along streams, ravines, bluffs and around lakes and wetlands (Buffers, Part II);	TBD	\$ 100,000.0 0	\$ -	Not started.	N/A, will be evaluated in 2019.	-	\$ -
4	Stabilization of identified ravines to prevent downstream transport of sediment and nutrients (Ravine Survey and Assessment Plan);	TBD	\$ 179,591.0 0	\$	Survey of Trout Brook is complete. Stabilization of a top identified ravine is planned for 2019	As Planned	-	\$
5	Implementation of yet to be identified practices to increase resiliency of natural and man-made systems against land use and climate change (Climate Adaptation Plan)	TBD	\$ 1,000,000. 00	\$ -	Plan complete. Resiliency efforts now eligible for funding through SWWDs CCIP program.	Ahead of schedule	-	\$ 50,000.00
6	Implementation of regionally identified strategies to address aquatic and terrestrial invasive species.	TBD	\$ 40,000.00	\$ -	Not started.	N/A, will be evaluated in 2019.	-	\$ -
7	Implement yet to be identified flood damage reduction and mitigation projects and practices (Flood Damage Reduction and Mitigation Plan);	TBD	\$ 101,423.0 0	\$ -	Update of Emergency Response Plan began in early 2019	N/A, will be evaluated in 2019.	-	\$ -
8	Identify willing landowners and begin operation of pilot agriculture BMP research program within 6 years;	Identify participants, develop program, and roll out by 2023.	\$ 383,123.0 0	\$ -	Working with a farmer to showcase cover crop techniques in Denmark Twp.	N/A, will be evaluated in 2019.	-	\$ 10,000.00
9	Provide adequate funding for local implementation actions identified in the Washington County Groundwater Plan		\$ 132,026.0 0	\$ -	Not started.	N/A, will be evaluated in 2019.	-	\$ -



Progress Evaluation for the Program: IMPLEMENTATION AND MAINTENANCE

Subcategories: INSPECTION AND MAINTENANCE

Program Purpose:

Communities rely on public watercourses, both natural and piped, for conveyance of stormwater runoff. Additionally, the District and its partners utilize an increasingly long list of BMPs to meet local resource goals. Conveyance systems and physical BMPs need routine inspection and maintenance to ensure long term functionality.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Maintain database of all physical BMPs;	Ongoing.	\$ 185,000.00	\$ 2,000.00	Work completed annually in cooperation with WCD and other Washington County WMOs.	As Planned	-	\$ 1,000.00
2 Inspect BMPs at a minimum of 10, 33, and 66% of expected BMP lifetime;	Ongoing.	\$ 50,000.00	\$ 8,500.00	Work completed annually in cooperation with WCD and other Washington County WMOs.	As Planned	-	\$ 6,500.00
3 Perform maintenance or enforce maintenance agreements as necessary to maintain full resource benefits of BMPs.	Ongoing.	\$ 523,194.00	\$ 36,910.00	SWWD currently contracts with WCD to complete maintenance needs identified as part of annual inspection program.	As Planned	-	\$ 28,000.00



Progress Evaluation for the Program: IMPLEMENTATION AND MAINTENANCE

Subcategories: CAPITAL IMPROVEMENT

Program Purpose:

Consistent with MN Rule 8410.0080 subp. 2, SWWD defines Capital Improvement Project (CIP) as a physical improvement with an extended useful life. For the purposes of its CIP Program, the District further defines a CIP as having a lifetime of greater than 25 years and a total project cost greater than \$50,000. Generally, projects implemented under the District's CIP are developed and analyzed through completion of a feasibility study

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Provide adequate funding to carryout identified capital projects	Ongoing.	N/A	\$ -	Current funding levels are adequate to complete planned work. SWWD collected revenue will begin dropping in 2018 as larger projects are completed.	N/A, will be evaluated in 2018.	-	\$ -
2 Deliver Capital improvements as scheduled in the long-range workplan	Ongoing.	\$ 18,183,123.00	\$ 2,914,895.00	Work on phases 3 and 4 of the CDO were completed in 2018. Excavation of regional basins at CDSF began in 2018 and will continue through 2019. Trout Brook and improvements will begin in 2019.	N/A, will be evaluated in 2018.	-	\$ 1,410,000.00



Progress Evaluation for the Program: IMPLEMENTATION AND MAINTENANCE

Subcategories: INCENTIVES

Program Purpose:

Implementation need outpaces the District's implementation capacity. To address that need and gain efficiency by drawing on the capacity of public and private entities in the District, SWWD operates several incentive programs to facilitate implementation by District residents and partners. Those programs are briefly described here. Additional information is available on the SWWD website.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Maintain and refine existing incentive programs to adequately leverage community interest;	Ongoing.	\$ 6,738,742.00	\$ 1,649,697.00	Programs were modified for use as incentivizing improvements identified in development of SWWD's climate adaptation and resiliency plan. Includes funds granted to Woodbury for their irrigation controller cost share program.	As Planned	-	\$ 683,760.00
2 Expand existing cost share program to effectively target rural areas for source reduction within 3 years;	Expand/refine program by 2020.	N/A, included above.	\$ -	Not started.	N/A, will be evaluated in 2019.	-	\$ -
3 Annually review District's role in and need for supplementing County groundwater focused cost share and loan programs.	Ongoing.	N/A	\$ -	Not started.	N/A, will be evaluated in 2019.	-	\$ -



Progress Evaluation for the Program: **INFORMATION AND EDUCATION**

Program Purpose:

SWWD is a member of the East Metro Water Resource Education Program. EMWREP is a partnership formed in 2006 that serves 20 local units of government in the east metro area. The purpose of the shared education program is to provide education to District communities and their residents about the impacts of non-point source pollution (e.g. Nutrients, de-icing chemicals) on local lakes, rivers, streams, wetlands and groundwater resources and to engage them in projects that will help to protect and improve water quality in the region.

SWWD intends for this plan and its website to serve as a repository of water resource related information. The District's website includes several tools which serve to deliver information to District residents and stakeholders including: Resource Library, Water Quality Monitoring Database, Web Map Viewer and project Story Maps.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Continue support of and participation in EMWREP;	Ongoing.	\$ 366,844.00	\$ 104,284.00	Ongoing. Includes support for EMWREP, Master Water Stewards, Watershed Partners, and K4C/RFI education effort.	As Planned	-	\$ 96,220.00
2 Increase use of Website and Web Tools (staff time);	Ongoing.	\$ 261,376.00	\$ 59,774.00	Ongoing. Improvements planned for 2019, including web userface of PTM App dataset completed in 2018	As Planned	-	\$ 60,220.00
3 Annually update story mapping as part of annual report to reflect current project status;	Ongoing.	N/A, included above	\$ -	Ongoing	As Planned	-	\$ -
4 Annually update water quality database to	Ongoing.	N/A, included above	\$ -	Database is current through the 2018	As Planned	-	\$ -

	include previous year's data;				monitoring season.			
5	Annually update web viewer to reflect most recent spatial data;	Ongoing.	N/A, included above	\$ -	Ongoing.	As Planned	-	\$ -
6	Distribute semi-annual newsletter to District residents and stakeholders regarding District efforts and progress in addressing identified resource issues.	Ongoing. News distributed in 2018 via website, Twitter, and Facebook.	N/A, included above	\$ -	Information distributed via social medial and website.	Continue to increase news distribution via web.	-	\$ -
7	Maintain up to date files on electronic library;	Ongoing.	N/A, included above	\$ -	Ongoing.	As Planned	-	\$ -



Progress Evaluation for the Program: **ADMINISTRATION**

Program Purpose:

Watershed administration program has five focus areas to develop and maintain: District Boundary, Funding, Local Water Plans, Reporting and Progress Evaluation and Long Range Workplan.

Performance Indicator	Implementation Schedule	Long Range Work plan Budget	Amount Spent to Date	Status	Program Performance	Recommended Change	Current Year Work plan
1 Annually, evaluate District progress in achieving identified issue goals and effectiveness of District programs (staff);	Ongoing.	\$2,226,090	\$ 667,989	Ongoing.	As Planned	-	\$ 406,933
2 Maintain funding levels adequate to meet implementation demand of the District;	Ongoing.	N/A, included above	N/A, included above \$ -	Ongoing.	As Planned	-	N/A, included above \$ -
3 In partnership with neighboring Districts, maintain legal boundary that reflects SWWD's hydrological boundary.	Ongoing.	N/A, included above	N/A, included above \$ -	Ongoing.	As Planned	-	N/A, included above \$ -



Progress Evaluation for the Program: **DEBT SERVICE**

Program Purpose:

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 paid off in 2017. In 2011, SWWD bonded for three projects in the East Mississippi watershed (Newport Ravine, Clear Channel Pond, and Grey Cloud Slough). In 2016, SWWD refinanced the 2011 general obligation bonds. In 2019, the 2016 general obligation bonds will cross over to general obligation **refunding** bonds, which will save the SWWD \$186,134.

Appendix A 2018 Audit Report on Compliance

The 2018 Audit will be completed and submitted in May 2019

Appendix B Education



2018 Annual Report



Above: (Clockwise from upper left) Washington County Fair; Planting trees with Bobby and Belinda Jensen at Lake Middle School; Storm drain stenciling in Forest Lake; Workshop for local leaders on the St. Croix River.

Members of the East Metro Water Resource Education Program:

Brown's Creek Watershed • Carnelian-Marine-St. Croix Watershed •
 Comfort Lake-Forest Lake Watershed • Cottage Grove • Dellwood • Forest Lake
 Grant • Hugo • Lake Elmo • Middle St. Croix Watershed • Newport • Oak Park Heights • Oakdale
 Ramsey-Washington Metro Watershed • Rice Creek Watershed • South Washington Watershed
 Stillwater • St. Paul Park • Valley Branch Watershed • Willernie • West Lakeland
 Woodbury • Washington Conservation District • Washington County

**East Metro Water Resource Education Program
2018 Annual Report**

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About the East Metro Water Resource Education Program

Background: The East Metro Water Resource Education Program (EMWREP) is a partnership formed in 2006 to implement a comprehensive water education and outreach program for the east metro area of St. Paul, MN. Current EMWREP partners include:

- Washington Conservation District (host)
- Washington County
- Watershed management organizations: Brown’s Creek, Carnelian-Marine-St. Croix, Comfort-Lake Forest Lake, Rice Creek, Ramsey-Washington Metro, South Washington, and Valley Branch Watershed Districts, and the Middle St. Croix Watershed Management Organization
- Cities and townships: Cottage Grove, Dellwood, Forest Lake, Grant, Hugo, Lake Elmo, Newport, Oakdale, Oak Park Heights, Stillwater, St. Paul Park, Willernie, and Woodbury, West Lakeland Township

Purpose: The purpose of the shared education program is to educate community residents, businesses, staff and decision-makers about issues affecting local lakes, rivers, streams, wetlands and groundwater resources and to engage people in projects that will help to protect and improve the health of these water resources.

Partnership Structure: EMWREP is guided by a steering committee comprised of representatives from each of the 24 partner organizations. The committee generally meets twice a year to provide recommendations on the program budget and activities. The EMWREP coordinator communicates regularly with partner staff, council members and board members; prepares an annual report on program activities; provides outreach data and statistics for partners’ MS4 Permit reports; and communicates one-on-one with individual partners on projects throughout the year. All EMWREP reports, plans, and education updates are available on-line at www.mnwcd.org/emwrep.

Staff: Angie Hong is the EMWREP program coordinator. Additional education support in 2018 was provided by Lauren Haydon and Cameron Blake.

Coordination with Other Regional Education Efforts: The EMWREP partnership helps to strengthen relationships between Washington Conservation District, Washington County and the eight watershed management organizations and 14 cities that constitute the partnership. This translates into better coordination and less overlap in the management of local water resources.

EMWREP staff provide leadership for Watershed Partners (a collaborative of more than 60 non-profit and public entities in the Twin Cities metro area), participate in the Blue Thumb partnership and Master Water Stewards programs, and work actively with organizations in the St. Croix Basin, including partners in the Lower St. Croix “One Watershed” Plan.

Accolades: EMWREP was the 2012 MAWD Watershed Program of the Year.

2018 EXECUTIVE SUMMARY

PUBLIC EDUCATION AND ENGAGEMENT

EMWREP continues to lead water education efforts in the East Metro area through outreach, community engagement, public education, and media communications.

Highlights from 2018 include:

1. Public education:

1. Engaging lake associations and lakeshore residents: Two (2) workshops and a semi-monthly e-newsletter delivered to 150 lake association leaders
2. Landscaping workshops: Five (5) workshops focusing on prairie maintenance and invasive species management
3. Dozens of presentations, community events, and educational activities
4. Weekly articles in local newspapers: www.eastmetrowater.org

2. Volunteer engagement:

1. Master Water Stewards:
 - o Seven stewards completed their capstone projects and were certified in November 2018.
 - o Three new stewards are in training to become certified in 2019.
 - o Volunteers get 50-hours of on-line and in-person training, complete a capstone project, and volunteer 25-50 hours per year after they are certified.
2. AIS Detectors:
 - o One new AIS Detector was trained in 2018 (25hrs of on-line and in-person classes)
 - o The nine AIS Detectors that were trained in 2017 provided 163 hours of volunteer support in 2018.
3. Adopt-a-Raingarden:
 - o EMWREP launched a pilot “Adopt-a-Raingarden” program in Stillwater
 - o 40 residents volunteered to adopt raingardens
 - o 50+ volunteers participated in raingarden clean-up and weeding events in May and June of 2018

3. Youth education:

1. School programming:
 - o Groundwater lessons for 4th grade classes at Royal Oaks Elementary (Woodbury) and River Grove Elementary (May Twp.)
 - o Outdoor field programs with students from Royal Oaks, Grey Cloud (Cottage Grove), and Middleton (Woodbury) Elementary Schools
 - o Groundwater lessons for 4th graders at the Children’s Water Festival
2. Teacher training: Trained 10 local teachers to use Project WET curriculum and watershed lessons in the classroom
3. Campus Greening: Helped students at Lake and Middleton schools to plant 200 trees as part of their Campus Greening project

OUTREACH SUPPORT FOR PROJECTS AND PROGRAMS

EMWREP promotes watershed landowner incentive programs (BMP cost-share) and conducts outreach for special programs and projects.

1. **BMP program outreach:** EMWREP promotes partner BMP cost-share programs through workshops, presentations, and media communications. Last year's outreach helped to support:
 - 208 landowner site visits with Washington Conservation District staff
 - 41 projects installed through watershed BMP programs
 - 190 lbs/yr of phosphorus kept out of surface waters
2. **Outreach for Lower St. Croix “One Watershed, One Plan”:** Local government partners in the Lower St. Croix, many of whom are also EMWREP partners, are working together to create a shared watershed plan. Angie Hong has coordinated outreach and stakeholder engagement for this project. Activities in 2018 included:
 - Three (3) workshops in Hudson, Taylors Falls, and North Branch
 - Public survey (86 responses)
 - Articles in local newspapers and partner newsletters
 - Interviews with farmers in the Lower St. Croix watershed (12) and a survey to rural and agricultural landowners in Chisago and Washington County (61 responses)

PROFESSIONAL TRAININGS FOR BUSINESS AND LOCAL GOVERNMENT

EMWREP provides professional training for businesses and local government through Stormwater U, NEMO, and partnerships with MN Extension, U of MN Erosion and Stormwater Management Program, MN Erosion Control Association (MECA), Fortin Consulting, St. Croix River Association, and MN Department of Natural Resources (DNR).

Highlights from 2018 included:

1. Watershed workshops for local leaders: for city councils and commissions; county commissioners; watershed boards and CACs; stormwater professionals; and community leaders
 - St. Croix River Workshop on the Water – July 11 (155 attendees)
 - Forest Lake stormwater workshop and tour – Sept 11 (40 attendees)
2. Winter salt trainings for parking lot and road maintenance crews: EMWREP partners sponsored local workshops in Blaine, Shoreview, Hugo, and Woodbury
3. Two (2) workshops for realtors:
 - Training topics included: groundwater and wells; septic systems; shoreline and riverway rules; watershed district programs
 - 60 attendees total

NEW MATERIALS AND RESOURCES

In 2018, EMWREP received \$50,000 in funding to update the 2009 MS4 Toolkit and create new stormwater education materials. The project will be complete in 2019.

Staff also created new materials to support the Adopt-a-Raingarden program.

Public Education and Engagement

Minimum Control Measure Addressed

<input checked="" type="checkbox"/> Public education & outreach	<input type="checkbox"/> Construction site runoff controls
<input checked="" type="checkbox"/> Public participation & involvement	<input type="checkbox"/> Post-construction storm water management
<input checked="" type="checkbox"/> Illicit discharge detection and elimination	<input type="checkbox"/> Municipal pollution prevention & good housekeeping

Audience: General Public, Urban and Rural Landowners, Youth

Program Goals:

1. Educate the public about nonpoint source water pollution, groundwater conservation, and basic watershed ecology and management.
2. Build partnerships with state and local government, non-profit organizations, and community groups.
3. Engage citizen volunteers to help conduct education and outreach.
4. Motivate urban and rural landowners to practice behaviors that protect water resources.
5. Train and assist urban and rural residents to complete projects on their land that reduce runoff pollution, conserve groundwater, and increase infiltration.

Educational Objectives:

Citizens will learn:

1. That nonpoint source water pollution comes from a variety of land uses - residential, commercial, and agricultural.
2. That common pollutants impacting surface and groundwater resources in the east metro area include phosphorus, sediment, nitrates, *E. coli*, chloride, and mercury.
3. That a watershed includes all of the land draining to a lake, stream or river, and that Watershed Districts and Watershed Management Organizations are special-purpose local units of government charged with managing the resources of a given watershed to prevent flooding and protect water quality.
4. That surface and groundwater resources interact.
5. That area residents can help to prevent nonpoint source water pollution through a variety of behaviors, including raking leaves and grass clippings out of the street, using less fertilizers and chemicals on lawns and gardens, covering bare soil during landscaping and construction, picking up pet poop, replacing failing septic systems, using less salt for winter maintenance and water softening, disposing of household waste properly, and using less electricity.
6. That landowners can help to reduce runoff pollution, conserve groundwater, and increase infiltration by installing best management practices such as habitat plantings, raingardens, and shoreline plantings; repairing erosion; and managing drainage around homes, farms, and commercial buildings.

PUBLIC EDUCATION AND ENGAGEMENT ACTIVITIES IN 2018

1) Public Education

Engaging lake associations and lakeshore residents

- May 17 workshop in Forest Lake (25 attendees)
 - Don Pereira, MN DNR State Fisheries Chief, talked about fisheries management
- June 26 workshop in White Bear Lake (6 attendees)
 - Staff from Ramsey and Washington Conservation Districts showed people how to identify aquatic invasive species (AIS) and common native “look-alikes”
- A semi-monthly e-newsletter was sent to 150 lake association leaders with information about programs, AIS research, and upcoming events

Landscaping Workshops

- (2) Prairie maintenance workshops
 - Scandia – Feb. 13
 - Afton – Feb. 21
- (3) Buckthorn and bittersweet workshops
 - Cottage Grove – June 24
 - May Twp. – Sept. 18
 - Lake Elmo – Sept. 22
- (4) Brown’s Creek Open Yards events - hosted by members of the BCWD citizen advisory committee
 - June 18 – Stillwater (raingardens)
 - June 27 – Stillwater (suburban yard)
 - July 18 – Stillwater (urban bee-keeping)
 - Aug 7 – Grant (prairies)

Presentations

- March 28 - Lily Lake meeting, Stillwater
- May 10 - Sentence to Serve training
- May 22 - Bone Lake meeting, Scandia

Family nature events: hands-on, outdoor events to teach children and adults about lake and river health

- June 13 – Cottage Grove, Highlands Park
- June 19 - Woodbury, Battle Creek Lake
- June 26 - Forest Lake (Arts in the Park)
- July 17 – Cottage Grove, Mooers Park

Community events: EMWREP partnered with other organizations to plan, promote, provide educational materials, and conduct educational programming at these events.

- Feb. 13 - Mahtomedi Garden Club
- Feb. 17 - Phalen Freeze Fest
- Feb. 27 - Lift Bridge event, Stillwater
- March 14 - Smart irrigation pick-up, Woodbury
- April 24 - St. Croix Summit
- April 28-29 – WCD Tree sale, Lake Elmo

- May 5 - Stillwater raingarden clean-up
- May 12 - Bike and Boat to Bayport
- May 20 - Millstream Day
- May 30 - Woodbury pollinator planting
- June 2 - RWMWD WaterFest
- June 3 - Master Gardener plant sale
- June 7 - Raingarden weeding
- June 9 - Landscape Revival, Oakdale
- June 18 - Tanners Lake HOA picnic
- June 28 - Forest Lake “Arts in the Park”
- Aug. 1-5 - Washington County Fair
- Aug. 23 - Sept. 3 - MN State Fair
- Sept. 16 – Brown’s Creek 20th Anniversary Event (Stillwater)

2) Volunteer engagement:

Master Water Stewards: In 2018, EMWREP received an \$81,000 Clean Water grant to train 20 Master Water Stewards and install up to 10 stormwater management capstone projects.

- Program details: Volunteers participate in 50-hours of in-person and on-line training, then complete a capstone project to become certified. Once certified, stewards volunteer 50-hours during their first year of service and 25-hours per year afterwards to remain in the program.
- 2018 Updates: During 2018, the first seven stewards who began training in 2017 completed their capstone projects and became certified in November. In October, three new stewards began training to become certified in 2019.
- Capstone projects: Capstone projects completed by stewards in 2018 will reduce phosphorus loading to receiving waters by 1.2lb/yr. Our total project goal for the grant is 2lb of phosphorus. Projects included:
 1. Sally Arneson (MSCWMO) – Upland native planting on St. Croix River bluff in Lakeland,
 - 3500 sq ft, estimated to capture 0.50lb/yr of phosphorus
 2. Tom Furey (CLFLWD) – Upland native planting on Bone Lake in Scandia
 - 6280 sq ft, estimated to capture 0.14lb/yr of phosphorus
 3. Nathan Zerbe (SWWD) – Woodland invasive species removal and restoration in Marsh Creek Preserve, Woodbury
 - 1.5 acres, estimated to capture 0.05lb/yr of phosphorus
 4. Cole Williams (SWWD) – river shoreline planting on Mississippi River in Cottage Grove
 - 5,750 sq ft, estimated to capture 0.5lb of phosphorus
 5. Susan Goebel & Joan Nichols (SWWD) – designing native plantings, interpretive signs and lesson plans for outdoor classrooms at Lake and Middleton Schools in Woodbury

6. John Goodfellow (CMSCWD) – developing a plan for a county-wide weed cooperative to help landowners with management of invasive species such as buckthorn

AIS Detectors: Using Washington County aquatic invasive species (AIS) funds we have helped ten (10) local residents to become AIS Detectors through a partnership with the University of Minnesota.

- Program details: Participants complete 6-8 hours of on-line training and attend one full-day, in-person workshop. They learn how to identify invasive species including: Eurasian watermilfoil, hydrilla, starry stonewort, spiny waterflea, rusty crayfish, zebra mussels, quagga mussels, bighead carp, silver carp, round goby, and ruffe. Volunteers received a certificate upon completion of training and are asked to volunteer 25 hours per year.
- 2017 AIS Detectors:
 - John Bower - Big Carnelian (CMSCWD)
 - Jeff Dahlberg - Big Marine (CMSCWD)
 - Tony Vavoulis - Big Marine (CMSCWD)
 - Sam Hathaway – Bone (CLFLWD)
 - Gary Lee – Clear (RCWD)
 - Link Lavey - Demontreville/Olson (VBWD)
 - Dale Dorschner – Elmo (VBWD)
 - Del Peterson – Lily (MSCMWO)
 - Mike Ziegelski – Sand (CMSCWD)
- 2018 updates: We training one new AIS Detector in 2018
 - Karen Lien - Lake Demontreville (VBWD)
- 2018 volunteer projects: In 2018, AIS Detectors provided 163 hours of volunteer support. Activities included:
 - Conducting AIS surveys on area lakes
 - Welding rakes to create 150 aquatic plant sampling rakes for the Starry Trek event held each year
 - Volunteering at the AIS Summit, MAISRC research and Management showcase, and Upper Midwest Invasive Species Conference
 - Piloting new training and providing useful feedback for new AIS educational programs at the University of MN
 - Other AIS education/outreach, including staffing booths at the State Fair and community events and creating newsletter articles

Adopt-a-Raingarden: Last year, EMWREP launched a pilot “Adopt-a-Raingarden” program in Stillwater. The program can be expanded into other communities in Washington County as interest arises.

- Program details: The goal of the program is to recruit community residents and volunteers to help care for some of the 100+ raingardens in Stillwater. Volunteers weed, thin plants, pick up litter, and remove built-up sediment in inlets.
- Partners and funding: Partners for the program and clean-up events in 2018 included Middle St. Croix WMO, City of Stillwater, Lily Lake Association, Sustainable Stillwater

MN, and Washington County Master Gardeners. The Stillwater Area Foundation provided \$4200 in grant support to develop the program.

- **Results:**
 - 40 residents have volunteered to adopt raingardens
 - 50+ volunteers participated in raingarden clean-up and weeding events in May and June of 2018
 - Guidance materials are online at www.mnwcd.org/adoptaraingarden

Engaging existing volunteer networks: EMWREP continues to work in partnership with Washington County Master Gardeners and to provide support for education initiatives led by St. Croix Watershed Stewards.

3) **Youth education:**

School programming: EMWREP staff conduct groundwater education for schools in Washington County in addition to helping with special planting projects.

- **Groundwater education:** Taught lessons to five 4th grade classes at Royal Oaks Elementary (Woodbury) and River Grove Elementary (May Twp.) with classroom and field tour components.
- **Outdoor field programs:** Led outdoor programs at Minnesota Valley Wildlife Refuge for students from Royal Oaks and Grey Cloud (Cottage Grove) and Middleton (Woodbury) Elementary Schools.
- **Children's Water Festival:** 1700 4th grader students from 23 schools attend the event each year. Lessons focus on water conservation, water quality, stormwater and runoff, groundwater and wells, native plant benefits to water, aquatic species (fish, macro-invertebrates and invasive species), mercury, and more. EMWREP staff talked about groundwater using the interactive model and displays.
- **Campus Greening:** Helped students at Lake and Middleton schools in Woodbury to plant 200 trees as part of their Campus Greening project.

Teacher training:

- Hosted a one-day training for 10 local teachers to share Project WET curriculum and other watershed lessons for the classroom.
- Helped to recruit teachers for Mississippi and St. Croix River workshops led by Hamline University and St. Croix River Association.

Informal youth education:

- May 3 - Woodbury Elementary garden maintenance event
- May 8 - Forest Lake stormdrain stenciling with Daisy troop
- May 21 – Invasive species presentation: Stillwater Middle School
- June 27 - Cottage Grove Safety Camp

4) Media and communications:

Newspaper articles: Angie Hong continues to write articles about water and conservation for local newspapers. Read them on-line at www.eastmetrowater.areavoices.com. Tailored versions are sent to local community papers, including:

- **Chisago Press** (Circulation - 3963)
- **Forest Lake Lowdown** (Circulation – 13,997)
- **Forest Lake Times** (Circulation - 13,029) – *Hong column featured monthly*
- **Hugo Citizen** (Circulation – 14,500)
- **Oakdale-Lake Elmo Review** (Circulation – 11,066)
- **Ramsey Review** (Circulation – 24,326)
- **Scandia Country Messenger** (Circulation - 1075)
- **South Washington County Bulletin** (Circulation - 8616)
- **St. Croix 360** (On-line: 25,647 followers)
- **St. Croix Lowdown** (Circulation – 5000)
- **Valley Life / Stillwater Gazette** (Circulation - 17,479) – *Hong column featured weekly*
- **White Bear Press** (Circulation – 19,331)
- **Woodbury Bulletin** (Circulation - 7811)

Newsletters: EMWREP also provides content for city, watershed and WCD newsletters.

- Afton (pop. 2800) - [newsletters](#)
 - April – Compost Bin/Rain Barrel Sale
 - Oct – Bee Kind
- Bayport (pop. 3200)
 - Spring –Cost Share Promotion (MSCWMO)
 - Summer – Smart Outdoor Water Use
- Birchwood (pop. 875) - [newsletter](#)
 - Summer – Illicit Discharge
- Browns Creek Watershed District – content for annual newsletter
- Carnelian-Marine-St. Croix Watershed District – content for annual newsletter
- Cottage Grove (pop. 34,000) - [newsletter](#)
 - April – Arbor Day event
 - May – Blue and Green Environmental Challenge (water conservation)
 - June – SMART Irrigation Controller Program
 - July – No Grass Clippings in the Street
 - Sept – Master Water Stewards
- Forest Lake
 - Summer mailer (city-wide) – included an insert with information about stormwater and recent watershed projects in the city
 - Fall utility mailer – included an insert with information about raking leaves and composting
- Lakeland (pop. 1830) - [newsletter](#)
- Mahtomedi (pop. 8000) - [newsletter](#)
 - Jan/Feb – Halt the Salt
 - March – Illicit Discharge
 - May – Compost Bin/Rain Barrel Sale

- Oakdale (pop. 27,726) – [newsletter](#)
 - Spring – Clean Spring Runoff
 - Summer – Only Rain in the Drain
- Oak Park Heights (pop. 4724) - [newsletter](#)
 - March – Prairie Restoration at City Hall
 - Sep – MSCWMO cost share promotion
- Stillwater (pop. 18,000) - [newsletter](#)
 - Fall – Leaves + Streets = Scummy Lakes and Wetlands
- Stillwater Twp. (pop. 3000) - [newsletter](#)
- St. Paul Park
 - Spring – Illicit Discharge
 - Fall – SMART Salting; Leaves + Streets = Scummy Lakes and Wetlands; No Grass Clippings in the Street
- Washington Conservation District – content for bi-annual newsletters
- White Bear Lake (pop. 24,555) - [newsletter](#)
 - Illicit Discharge
 - Rain barrels available for purchase
- Woodbury
 - Feb – SMART Irrigation Controller program
 - Jun – Water Efficiency programs
 - Sept – SMART Irrigation Controller program
- Wyoming
 - Spring - Spring Reminders and Cleaning Tips

Minnesota Water – Let’s Keep it Clean: Through our participation in Watershed Partners, EMWREP partners get access to additional stormwater education resources, including a blog-style website with monthly articles about local water heroes (www.cleanwatermn.org), photography and print materials, professional trainings and networking meetings, and a large exhibit space at the Minnesota State Fair, Eco Experience.

EMWREP and its partners provide funding support for the Minnesota Water – Let’s Keep it Clean campaign and Angie Hong serves on the partnership’s steering committee.

Articles for 2018 included:

- Jan. – [Road Salt – Less is More](#)
- Feb. – [Monarch Mile: Pollinators Plant Seeds of Change](#)
- March – [EcoFaith Network puts Creation Care into Action](#)
- April – [Middle School Students Solve for Runoff](#)
- May – [Minneapolis Couple Tackles Litter One Day at a Time](#)
- June – [Residents and Rangers Protect the St. Croix River](#)
- July – [A New Generation of Water Stewards Adopts Storm Drains](#)
- Aug. – [Roots Return Farm Turns Rainwater into Pollinator Paradise](#)
- Sept. – [Maintaining Raingardens Through the Changing Seasons](#)
- Oct. – [Community Gardens Plant Seeds of Peace in Rondo](#)
- Nov. – [Artful Environmental Education at Highpoint Center for Printmaking](#)

Websites and Social Media: EMWREP uses the following websites and social media accounts to share information and promote programs and events.

Websites:

- East Metro Water: <https://eastmetrowater.org>
- Washington Conservation District: www.mnwcd.org
- Blue Thumb – Planting for Clean Water: www.bluethumb.org
- Clean Water Minnesota: www.cleanwatermn.org

Social Media:

- Twitter
 - @angiehongwater
 - @EMWREP
- Facebook
 - @mnwcd
 - @BlueThumbMN
 - @ browncreekwatersheddistrict
 - @cmscd
 - @CLFLWD
 - @ricecreekwd
 - @RWMWD
 - @SoWashWD
- Instagram:
 - @wcd_mn



Outreach Support for Project Implementation

Minimum Control Measure Addressed

<input checked="" type="checkbox"/> Public education & outreach	<input type="checkbox"/> Construction site runoff controls
<input checked="" type="checkbox"/> Public participation & involvement	<input checked="" type="checkbox"/> Post-construction storm water management
<input type="checkbox"/> Illicit discharge detection and elimination	<input type="checkbox"/> Municipal pollution prevention & good housekeeping

Program Goals:

1. Publicize EMWREP partner programs and projects.
2. Promote BMP (Best Management Practices) and cost-share incentive programs.
3. Engage community members and other stakeholders to help meet water quality goals identified through local water plans, TMDL (Total Maximum Daily Load) studies, WRAP (Water Restoration and Protection) strategies, and other regulatory programs.
4. Engage public and private land owners to complete activities funded through state and federal grants.

Educational Objectives:

1. Citizens will be aware of water-quality improvement projects and programs happening in their communities and understand the benefits of these activities.
2. Citizens will be aware of and utilize BMP and cost-share incentive programs to complete water protection projects on their land.
3. EMWREP will help partners to identify, reach out to, and engage public and private landowners and managers in targeted locations in order to complete water resource improvement and protection projects.

OUTREACH AND PROJECT SUPPORT IN 2018

1) Promotion of watershed BMP and cost-share incentive programs

BMP program outreach: EMWREP promotes partner BMP cost-share programs through workshops, presentations, and media communications. Last year's outreach helped to support:

- 208 landowner site visits with Washington Conservation District staff
- 41 projects installed through watershed BMP programs
- 190 lbs/yr of phosphorus kept out of surface waters

2) Special grants

Outreach for Lower St. Croix “One Watershed, One Plan”: Local government partners in the Lower St. Croix, many of whom are also EMWREP partners, are working together to create a shared watershed plan. Angie Hong has coordinated outreach and stakeholder engagement for this project. Activities in 2018 included:

- Three (3) workshops in Hudson, Taylors Falls, and North Branch
- Public survey (86 responses)
- Articles in local newspapers and partner newsletters
- Interviews with farmers in the Lower St. Croix watershed (12) and a survey to rural and agricultural landowners in Chisago and Washington County (61 responses)

Professional Trainings for Business and Local Government

Minimum Control Measure Addressed

<input type="checkbox"/> Public education & outreach	<input checked="" type="checkbox"/> Construction site runoff controls
<input type="checkbox"/> Public participation & involvement	<input checked="" type="checkbox"/> Post-construction storm water management
<input checked="" type="checkbox"/> Illicit discharge detection and elimination	<input checked="" type="checkbox"/> Municipal pollution prevention & good housekeeping

Audience: Water resource professionals, municipal staff, consultants and contractors, local elected and appointed officials, business owners, realtors, lawn care providers, winter maintenance providers

Program Goals:

1. Provide technical training to help EMWREP partners meet MS4 Permit requirements and reduce stormwater pollution.
2. Work in partnership with University of Minnesota to provide high-quality professional education at a local level.
3. Provide local decision makers (city councils, planning commissions, watershed boards, county commissioners, etc.) with information and training needed to implement policies, programs, and practices that protect and restore water resources.
4. Offer professional trainings for area business owners, realtors, lawn care providers, and winter maintenance contractors to share information about local water issues and encourage business practices that protect surface and groundwater resources.

Educational Objectives:

1. Municipal employees will understand that stormwater runoff, erosion, and illicit discharge contaminate surface and groundwater resources and, also, that there are best management practices to reduce these causes of water pollution.
2. Local decision makers will understand that land use impacts water quality and that there are a variety of policies, programs and practices cities, counties, and watershed management organizations can implement to protect their water resources.
3. Area business owners, realtors, lawn care providers, and winter maintenance contractors will learn how to conserve groundwater resources and reduce surface and groundwater pollution through a variety of practices, including:
 - a. Completing water efficiency audits;
 - b. Talking with home buyers and sellers about shoreline landscaping, remodeling, and septic system maintenance;
 - c. Mowing higher and using fewer lawn chemicals; and
 - d. Reducing road salt application by using new technology, calibrating equipment, and adjusting anti-icing and deicing methods based on weather forecasts.

PROFESSIONAL TRAININGS FOR BUSINESS AND LOCAL GOVERNMENT IN 2018

1) Training for local government staff and consultants

EMWREP helps to conduct professional trainings for businesses and local government, as well as connect partners with other training opportunities. Training partners include: U of MN Extension, U of MN Erosion and Stormwater Management Program, MN Erosion Control Association (MECA), Fortin Consulting, St. Croix River Association, and MN Department of Natural Resources (DNR).

Winter salt workshop for public works staff and winter maintenance contractors

- March 29 - Blaine
- April 11 - Shoreview
- Sept. 25 - Hugo
- Oct. 11 – Woodbury

Certified contractors listed at: www.pca.state.mn.us/water/salt-application-training

Find a model contract here: <https://www.edinamn.gov/422/Pollution-Prevention>

Turf maintenance workshop for parks staff and lawn care contractors

- Sept. 25 – Vadnais Heights

Highlights from 2018 included:

- Two (2) workshops for realtors:
 - Training topics included: groundwater and wells; septic systems; shoreline and riverway rules; watershed district programs
 - 60 attendees total

2) Training for local decision makers

St. Croix River Workshop on the Water

- July 11 – 115 participants
- Topics:
 - Collaborating across jurisdictional boundaries: Understanding “One Watershed, One Plan” and moving toward implementation in the Lower St. Croix watershed
 - Educate for action! Putting new stormwater education programs and tools to work
 - Into the wild - A View from the River: Celebrating the 50th Anniversary of the Wild and Scenic Rivers Act
- Partners: Metro Watershed Partners, MN Department of Natural Resources, St. Croix River Association, University of Minnesota Extension, Minnesota Sea Grant

Forest Lake Stormwater Tour and Workshop

- Sept 11 - 40 participants
- Topics:
 - Forest Lake enhanced street sweeping program to prevent and minimize water pollution
 - Innovative stormwater harvest and reuse systems at the Forest Lake Area High School and Forest Hills Golf Club
- Partners: University of Minnesota Extension, Minnesota Sea Grant

3) Training and outreach to local businesses

Shoreline realtor workshops – offered in partnership with MN DNR, St. Croix River Association, Washington County, and University of MN Realtors received CEUs for attending.

- April 5 – Stillwater (30 attendees)
 - Topics: Shoreland and riverway rules; Best practices for shoreline landscaping
- Nov. 28 – Forest Lake (30 attendees)
 - Topics: Groundwater and wells; Septic Systems; Healthy Homes; Shoreland landscaping and rules

4) Professional partnerships, meetings, and conferences

Watershed Partners – EMWREP and its partners contribute financial and staff support to Metro Watershed Partners, a partnership of 60+ public and non-profit organizations in the Twin Cities area. In addition to the public education campaign, Watershed Partners provides learning opportunities for water resource professionals through its monthly meetings.

Presentation topics in 2018 included:

- Jan – Smart salting
- Feb. – Legislative update
- March – Strategic framing for climate change communication
- April – Working with niche audiences
- May – Equity and environmental justice in outreach and education
- Aug. - Tour: Water reuse at the Walker Art Center
- Sept – Clean Streets, Clean Water: Key findings & recommendations from a focus group-based evaluation of the Neighborhood Cleanup Toolkit
- Oct. – MS4 Toolkit; MS4 General Permit
- Nov. – Watershed Partners future planning
- Dec. – Adopt-a-Drain

Water Consortium – EMWREP staff help to plan topics and presenters for Washington County water consortium meetings.

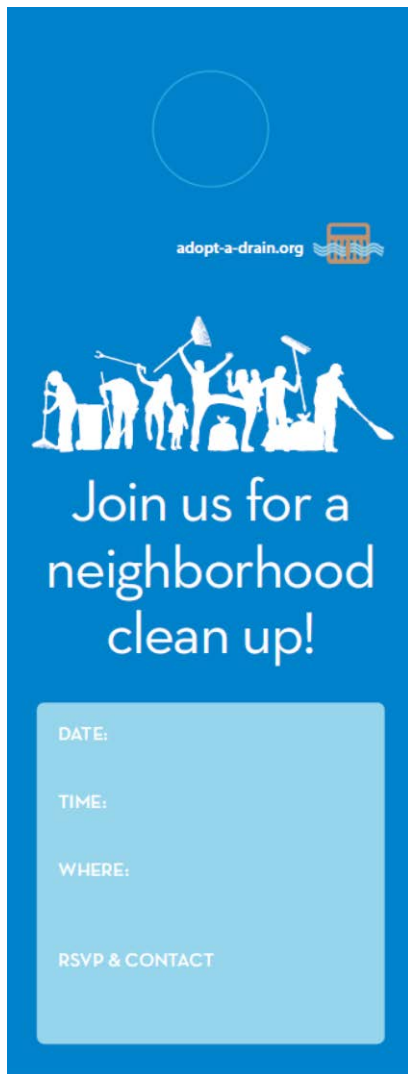
St. Croix Summit – EMWREP staff helped to plan the annual conference in River Falls on April 24.

MATERIALS AND RESOURCES

- **Neighborhood Clean-up Engagement Kit**

This kit, developed in partnership with Metro Watershed Partners includes doorhangers, sign-up forms, step-by-step instructions and other materials to help local residents and community groups organize neighborhood “storm drain” clean-up events.

Contact Angie Hong to access materials for an event in your area.



Hey neighbors!

Join us for this event to clean up our streets and sidewalks. Its a great way to get to know your neighbors, keep things looking nice, and protect our local lakes and rivers by sweeping up trash, leaves, and dirt so it doesn't wash down the storm drains.

What to bring (if you have it):

- Gloves
- Water bottle
- Rake/broom/snow shovel
- Trash picker-upper
- Dust pan

RSVP if you think you can make it (contact info on the other side).

See you there!



- **Yard Signs**

“This yard is part of the solution” - These signs come in four different colors and feature designs by local artist Vera Wong. Signs cost \$3 each or two for \$5.



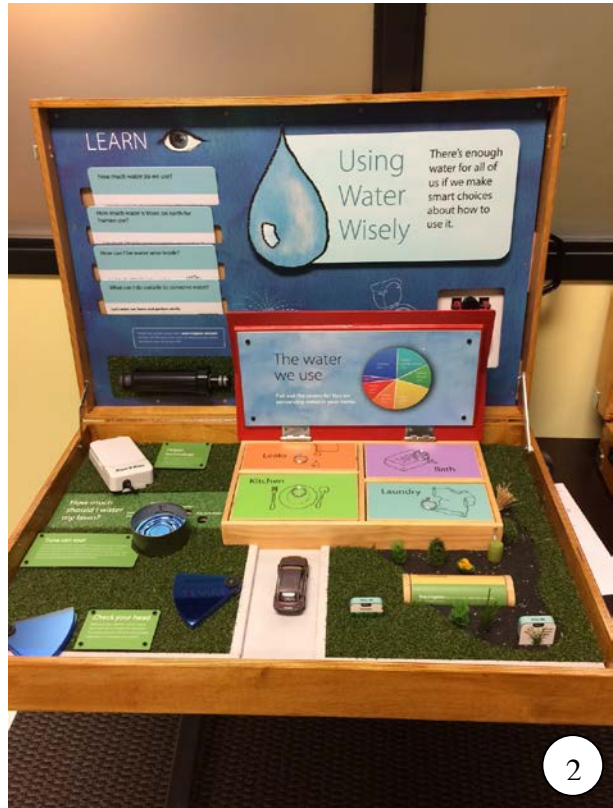
- **Raingarden maintenance**

Raingarden maintenance guidance materials include:

- [Raingarden maintenance check-list](#)
- [Maintenance guide book - detailed](#)
- [Raingarden maintenance brochure](#)
- [Most common raingarden weeds](#)

We also have a variety of planning and promotional materials available for the Adopt-a-Raingarden program. Contact Angie Hong to access these resources.

- **Interactive groundwater displays:** Two groundwater displays are available for partners to borrow. Contact Angie Hong to reserve.



APPENDIX A: EDUCATION PROGRAM BUDGET FOR 2018

Staff Support and Overhead Expenses (1.5 FTE)	Materials	Total
\$136,800	\$10,000	\$146,800

PARTNER	Annual Contribution
SWWD	\$24,000
VBWD	\$18,500
BCWD	\$18,500
CLFLWD	\$18,500
CMSCWD	\$12,250
RWMWD	\$12,250
RCWD	\$2,500
Washington County	\$12,250
MSCWMO	\$6,000
Cottage Grove	\$2,500
Forest Lake	\$2,500
Lake Elmo	\$2,500
Hugo	\$2,500
Oakdale	\$2,500
Stillwater	\$2,500
Woodbury	\$2,500
Dellwood	\$650
Grant	\$650
Newport	\$650
Oak Park Heights	\$650
St. Paul Park	\$650
West Lakeland	\$650
Willernie	\$650
TOTAL	\$146,800

Appendix C Local Articles

South Washington Watershed District celebrates 25 years of flood prevention and habitat restoration
Volunteer event scheduled for Oct. 11 in Woodbury

Three years ago, volunteers gathered in a wind-swept field on a rainy spring day to plant 3000 young oak trees for a future oak savanna. The site – located on the border between Woodbury and Cottage Grove – is part of a conservation corridor created by South Washington Watershed District to infiltrate stormwater runoff and protect neighborhoods against flooding. This year, the district will celebrate its 25th Anniversary and the many flood-prevention, habitat restoration, and water-quality improvement projects accomplished over the years. True to form, watershed district staff and board members will gather with community partners and volunteers, once again in the prairie.

South Washington is the largest watershed management organization in Washington County, covering portions of Oakdale, Lake Elmo, Woodbury, Cottage Grove, Newport, St. Paul Park, Grey Cloud Twp, Afton and Denmark Twp. The conservation corridor runs through the heart of the watershed district and is the result of two-decades of work to protect land-locked portions of Woodbury and Cottage Grove against flooding. The oak-savanna prairie on the Woodbury-Cottage Grove border also functions as a regional infiltration basin that collects stormwater runoff during spring snow melt and very heavy rains. It is capable of holding 1500 acre feet of water (enough to fill 740 Olympic sized swimming pools), most of which soaks into the ground to recharge groundwater aquifers. Eventually, the site will include a city park with an interpretive center and a hub for a regional trail from Lake Elmo Park Reserve to Cottage Grove Ravine Park.

Further south in Cottage Grove, the watershed district recently helped the county to complete a large reconstruction project at Cottage Grove Ravine Park that included new visitor facilities, protection against future flooding and erosion, and woodland habitat restoration. The park is an important part of South Washington Watershed District's strategy to provide a safe pathway for floodwater from Woodbury and Cottage Grove to reach the Mississippi River during 100-year storm events. Other components of the multi-phase project have included installing large pipes beneath neighborhoods in northern Cottage Grove and stabilizing an intermittent stream that runs south across 3M land from Ravine Park to the Mississippi River.

In addition to its many projects within the conservation corridor, South Washington Watershed District has completed dozens of smaller habitat and water-quality improvement projects over the years. In northern Woodbury, the watershed district has worked with residents living near Colby and Powers Lakes to install raingardens and native shoreline plantings to capture stormwater runoff and keep nutrients from feeding algae in the lakes. In all its communities, the district has partnered with homeowners through its cost-share program to fund raingardens and native habitat plantings.

Last year, South Washington Watershed District worked with Washington County to build a new bridge over Grey Cloud Slough, which has allowed water to flow freely through the channel for the first time in 50 years. The project will help to reduce algae blooms, create better habitat for fish and wildlife, and provide new recreational opportunities in the area. The watershed district also plans to work with Great River Greening and riverfront landowners to restore two miles of shoreline and 100 acres of aquatic habitat in

Together we are SoWashCo

Cottage Grove • Newport • St. Paul Park • Woodbury

Cottage Grove Middle School receives Character Recognition Award

Cottage Grove Middle School was recently honored as a 2018 Emerging Minnesota School of Character at the Character Recognition Awards ceremony, held at the Science Museum of Minnesota. The school was one of only six schools and four community programs honored by Synergy & Leadership Exchange for excellence in character and ethical leadership development.

The celebration coincided with Governor Dayton's proclamation of May 10 as Character Recognition Day. Minnesota Secretary of State Steve Simon presented the proclamation at the ceremony. Representatives Tony Jurgens and Keith Franke congratulated Cottage Grove Middle School at the event, and Senator Karla Bigham provided a letter of commendation, which was presented at the ceremony, offering thanks and gratitude for the foundation of character the school is building in young students.



L to R: Lori Munson, Chris Foss, Asst. Principal Josh Eidem, Jennifer Strong, Principal Elise Block, Mary Brandvold, Michelle Goar, and Asst. Principal Tim Hofmann.

This award recognizes schools and/or districts that excel in exemplifying the 11 Principles of Effective Character Education and demonstrate outstanding initiatives yielding positive results in student behavior, school climate and academic performance.

Ten students named MN Department of Education Scholars of Distinction

Ten District 833 students were named 2018 Scholars of Distinction by the MN Department of Education. The program recognizes distinguished achievement by highly motivated and self-directed students in leadership, mathematics, science, social studies, STEM (Science, Technology, Engineering, Math) and theater arts.

To earn recognition, a student must complete required work in Minnesota's academic standards, demonstrate mastery of complex subject matter, and apply their knowledge and skills on challenging projects.

2018 Scholars of Distinction:

- » **Eesha Bharti** (ERHS) earned the Science Scholars of Distinction Award;
- » **Arsema Belai, Alex Bretoi, Tre' Edgerton** and **Sophie Pfluger** (ERHS) were awarded the Theater Arts Scholars of Distinction Award;
- » **McCrossen Schiller** and **Anya Steffel** (ERHS) earned the Theater Arts Meritorious Performance Award;
- » **Esperanza Lee** (WHS) earned the Social Studies Meritorious Performance Award;
- » **Neha Jain** and **Manashree Padiyath** (WHS) were awarded the Science Scholars of Distinction Award.

Campus greening project at Lake and Middleton

District 833 is partnering with the South Washington Watershed District for the Campus Greening project, which calls for the conversion of 15 acres of non-active use turf grass to prairie grass and for more than 200 trees to be planted on the campuses of Lake Middle and Middleton Elementary schools. It will also create two outdoor classrooms and coincides with the addition of a pedestrian trail along Lake Road.

This project creates a unique, hands-on opportunity for the students and staff, which started with a tree planting program by local non-profit, Tree Trust. Once completed, outdoor classrooms will be used as a living laboratory supporting many learning experiences and as space for students to read or work outdoors on good weather days.

U.S. Academic Triathlon State Tournament

Six teams from District 833 finished in the top 10 at the state tournament for U.S. Academic Triathlon which took place at Woodbury Middle School.

During the tournament, each team completed in three events. The first required teams to write, produce and perform a skit in 40 minutes. The second event asked students a series of questions on topics ranging from history and literature, to math and consumer issues. In the third event, students were tested on their verbal, critical and creative problem-solving skills through a series of oral and written questions.

Congratulations to students at all four middle schools, as well as Liberty Ridge and Cottage Grove elementary schools.

Visit www.sowashco.org/news for more success stories!

Posted on: April 11, 2018

Save the date! Washington County celebrating reopening of Cottage Grove park June 22-24

Washington County Parks is planning a number of events to celebrate the reopening of Cottage Grove Ravine Regional Park, which has been closed for renovations during the past year.

Visitors to the newly-renovated Cottage Grove Ravine Regional Park will be able to enjoy the park for free until July 1 after the park reopens in early summer.

A reopening celebration is planned for June 22-24, which will include programs and events, including a Run the Ravine Family Fun Run, with a children's run at 10 a.m. and a 5K at 10:30 a.m. Sunday, June 24. Registration can be found on Washington County website under Parks Programs and Events. The re-opening celebration will include free rental gear for fishing.

Cottage Grove Ravine Regional Park was closed March 1 of last year for improvements that include:

- a new park entrance;
- a new park circulation road, parking lots, associated pedestrian improvements and trails;
- updated and improved Ravine Lake outlet;
- ravine stabilization project done by the South Washington Watershed District;
- new trails within the park in accordance with the park's master plan;
- vegetation management and invasive species control; and
- a new playground.

The park is at 9653 Keats Ave. S. For more information, see the Washington County website at www.co.washington.mn.us and search "Cottage Grove Ravine Regional Park" or call the park office at 651-430-8240

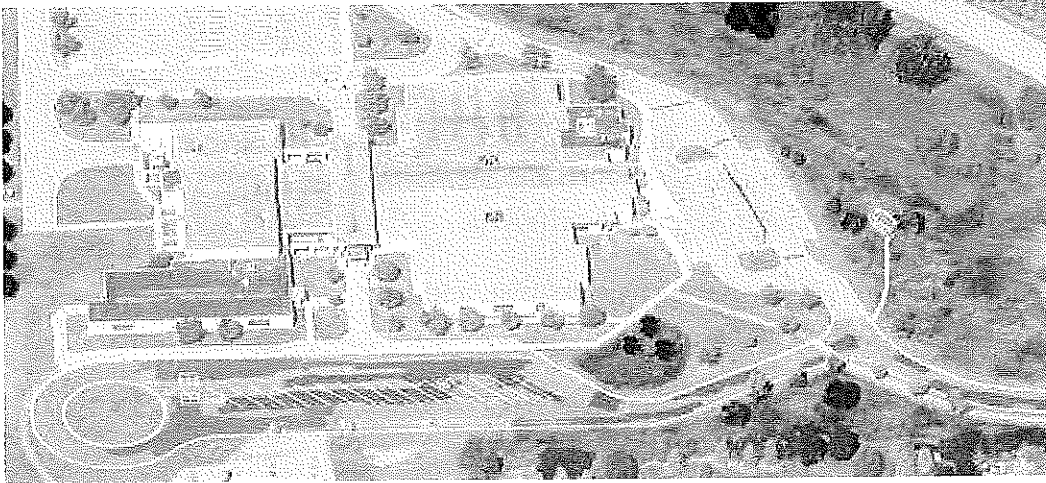
The park renovation including moving the entrance to the park. New roadways will take people to the park.

- When accessing from Highway 10/61, take the Innovation Road exit and go north. The new entrance will be marked with a monument on the right side of the road.
- When accessing from County Road 19, take County Road 19 south; once past the Washington County South Service Center, the new entrance to the park will be on the left side.

Washington County project aims to improve habitats by introducing more pollinators

A focus in Woodbury is a milelong stretch of buried pipeline land along Ojibway Park Road.

By Kelly Busche Star Tribune | APRIL 28, 2018 — 3:58PM



Pollinator plans at Woodbury schools Land near Middleton Elementary School (A) and Lake Middle School is part of the project, which will turn turf into prairie areas (1) and create outdoor classrooms (2).

The continued shrinking of pollinator-friendly land and resources has prompted several new initiatives in Washington County to combat a loss of habitat for butterflies, bees, beetles and songbirds.

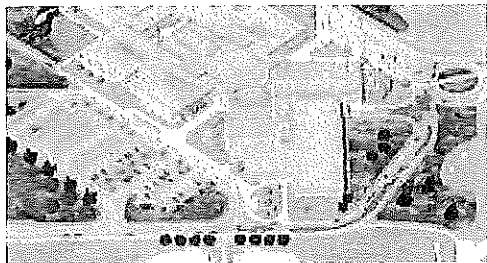
This summer, the South Washington Watershed District is seeking to improve habitats by expanding areas conducive to pollinator-friendly plants through partnerships with South Washington County Schools, a nonprofit and the city of Woodbury.

One project in Woodbury will convert a mile-long stretch of buried pipeline land along Ojibway Park Road into a pollinator corridor, defined as a large swath of land devoted solely to pollinator plants.

Project partners — which include the watershed district, the environmental nonprofit Great River Greening and Woodbury — hope it provides more much-needed habitat for pollinators in Washington County, said Andy Schilling, watershed restoration specialist with the South Washington Watershed District.

Becca Tucker, Woodbury Pollinator Corridor project manager and an ecologist with Great River Greening, said the corridor also will provide seeds for future corridors.

“We think it’s pretty important because not only will neighborhood residents see the native plants ... but [it] will also provide seeds,” she said.



e Middle School campus

Great River Greening is looking for 50 volunteers to help plant 5,000 pollinator-friendly plants on the new corridor on May 30.

The other Washington County initiative is a “campus greening project” on the grounds of Lake Middle School and Middleton Elementary School in Woodbury.

The South Washington County Schools, partnering with the watershed district, plans to convert 15 of the schools’ 90 acres into pollinator-friendly prairie area.

Two outdoor classrooms will be built for students to use during nice weather, and students will have the chance to plant over 200 trees across school grounds.

The number of pollinators, which typically use prairie lands as habitats, has declined along the St. Croix River in recent years, researchers say.

“They’re all critical to pollinating not only our flowers, but some of our ... crops or fruiting trees that are really an important piece to have out there and have habitat for,” Schilling said.

Dan MacSwain, natural resource coordinator for the county’s Public Works Department, said prairies are home to certain plants that are critical for pollinators — such as milkweed, which monarch butterflies need to survive.

It’s especially important to have pollinator corridors in urban areas, Schilling said. Land in developed areas is fragmented and often can’t naturally support pollinator plants.

And with a decline in pollinator habitats since the early 2000s, he said, the watershed district is trying to do its part to help pollinators thrive.

Schilling said both students and pollinators will benefit from the school project.

“It’s going to dramatically change the look of the site and really increase the educational value of the sites for students and staff ... [by] creating an outdoor laboratory for students and also creating real habitat for pollinators on the property itself,” he said.

MacSwain said a variety of changes are needed to increase pollinator habitats in Washington County. In addition to creating new prairie lands, increasing pollinating plants at roadsides or parks and cutting herbicide use can make a difference.

“There’s a lot of different initiatives happening because there is a need to increase the habitat and floral resources” for pollinators, MacSwain said.

“You can’t just think about one space, you’ve got to think about practices and how the land is used, maintained [and] conserved.”

Kelly Busche is a University of Minnesota student on assignment for the Star Tribune.

Students at Lake Middle and Middleton Elementary schools to benefit from campus greening project

Wednesday, April 11, 2018 - 3:31pm

A campus greening project will create new educational opportunities for students at Lake Middle and Middleton Elementary schools while complying with local stormwater management regulations.

South Washington County Schools is partnering with the South Washington Watershed District for the project, which calls for the conversion of 15 acres of non-active use turf grass to prairie grass and for more than 200 trees to be planted on the campus. The project will also create two outdoor classrooms. It coincides with the addition of a pedestrian trail along Lake Road, led by the City of Woodbury.

This project creates a unique opportunity to engage the students and staff at Middleton and Lake through hands-on learning opportunities, which will start with a tree planting program by local non-profit, Tree Trust. Once completed, outdoor classrooms will be used as a living laboratory supporting many learning experiences and as space for students to read or work outdoors on good weather days.

The schedule for work will begin as soon as the weather warms up with the planting of a seeded prairie. In May, classes at Lake Middle and Middleton Elementary will plant trees. Outdoor classrooms will be installed by Kraus Anderson in the summer and the last tree boulevard plantings installed in the fall around the new pedestrian trail.

The Campus Greening Project meets specific goals of all partners as the site is identified in the watershed district's Greenway Plan, and fulfills a city permit requirement for recent and future site improvements at each school.

The project was discussed in detail at the [February 1, 2018 School Board Meeting](#).

Learn more about the Lake Middle School and Middleton Elementary School Campus Greening Project at www.swwdmn.org.

Students at Lake Middle and Middleton Elementary schools plant trees for campus greening project



Thursday, May 24, 2018 - 4:04pm

Students at Lake Middle and Middleton Elementary schools helped plant new trees on their shared campus this week. It is part of a campus greening project that will create new educational opportunities for students while complying with local stormwater management regulations.

Each class, from kindergarten to fifth grade, at Middleton Elementary School planted a tree for the project on Tuesday, May 22. The plantings are a part of the Learning with Trees program which is led by Tree Trust, a local non-profit. The program coordinates with teachers to provide lesson plans teaching students about the science behind tree plantings. Parent volunteers also helped classrooms with the project.

On Thursday, May 24, many science classes at Lake Middle School also planted trees with the help of Tree Trust's program and parent volunteers.

The campus greening project is a partnership between South Washington County Schools and the South Washington Watershed District. Over the summer, 15 acres of non-active use turf grass will be converted to prairie grass and more than 100 additional trees will be planted on the campus. The project will also create two outdoor classrooms. It coincides with the addition of a pedestrian trail along Lake Road, led by the City of Woodbury.

The Campus Greening Project meets specific goals of all partners as the site is identified in the watershed district's Greenway Plan and fulfills a city permit requirement for recent and future site improvements at each school.

The project was discussed in detail at the [February 1, 2018 School Board Meeting](#).

Learn more about the Lake Middle School and Middleton Elementary School Campus Greening Project at www.swwdmn.org.

Appendix D Biennial Solicitation for Professional Services



SOUTH WASHINGTON WATERSHED DISTRICT

October 12, 2017

RE: South Washington Watershed District Request for Professional Services.

The South Washington Watershed District (SWWD) is required to biannually solicit for professional services. The SWWD is requesting letters of interest for Engineering, Legal, and Financial consulting services. This request was published in the Woodbury Bulletin and South Washington County Bulletin newspapers for two consecutive weeks beginning October 4, 2017. Enclosed is a copy of the request for HDR Engineering, Inc. If your firm is interested in providing services, please submit **3 copies** of the requested information by November 9, 2017. If you have any questions or need additional information, please contact me at 651.714.3729 or matt.moore@woodburymn.gov

Thank you.

Sincerely,
South Washington Watershed District

A handwritten signature in black ink, appearing to read "Matt Moore", with a long horizontal flourish extending to the right.

Matt Moore
Administrator

c: SWWD Board of Mangers



Memo

To: SWWD Board of Managers
From: Matt Moore. SWWD Administrator
CC:
Date: December 1, 2017
Re: 2018-2019 Professional Services

***** Please note in an interest of saving paper we are not providing copies of the consultant information, if you would like this information please contact the SWWD office *****

The SWWD received 15 responses for engineering services, 1 legal response and 2 financial responses. Currently, there are 10 firms in the engineering pool that are returning responses. There is 1 new firm that responded.

Engineering

- 1) Barr Engineering
- 2) Bridge & Stream Engineering, Inc.
- 3) Emmons & Olivier Resources, Inc.
- 4) Geosyntec Consultants
- 5) HDR Engineering Inc.
- 6) Houston Engineering Inc.
- 7) HR Green, Inc.
- 8) Inter-Fluve
- 9) Kimley-Horn and Associates, Inc.
- 10) MSA Professional Services, Inc.
- 11) RESPEC
- 12) SRF Consulting Group
- 13) Stantec Consulting Services
- 14) Wenck
- 15) Limnopro Aquatic Science, Inc.

Other

Sunde Land Surveying

Legal

- 1) Jack W. Clinton P.A.

Financial

- 1) Abdo, Eick & Meyers, LLP
- 2) Redpath and Company

The Board could choose one of the following processes to establish engineering services for the 2018-2019 calendar years.

- 1) Place all responders in the pool and delegate work on a project by project basis.
- 2) Select a preferred vendor list using the information we have or request additional information.
- 3) Generate a short list from the twelve responders and conduct interviews to select one or multiple firms.
- 4) Other options

Each engineering firm has ample qualifications, personnel and experience in the types of watershed projects the SWWD is completing. Billing rates average \$185/hour for Principals, \$160/hour for Professional Engineers, \$130/hour for Scientists and \$100/hour for Technicians.

Requested Board Action

- The Board Sub-Committee recommendations:
 - Approval of 2018-2019 engineering services pool to include all respondents, providing a wide range of capabilities to address upcoming SWWD projects.
 - Approval of 2018-2019 legal services with Mr. Jack Clinton, Jack W. Clinton Law.
 - Approval of 2018-2019 financial services with Redpath and Company.
 - Approval of the 2018 and 2019 financial audits with Abdo, Eick, & Meyers, LLC.



SOUTH WASHINGTON WATERSHED DISTRICT

December 13, 2017

RE: South Washington Watershed District 2018-2019 Professional Services.

The South Washington Watershed District (SWWD) Board established the 2018-2019 Consulting Engineer Pool at their regular meeting on December 12, 2017. The SWWD received a total of fifteen responses for engineering services. All fifteen responding firms were placed in the 2018-2019 consulting pool and will be considered for engineering services on a project by project basis. If the annual work plan includes projects best suited for your firm, the SWWD staff will contact you. Thank you for your time to respond to the request.

If you have any questions or need additional information, please contact me at 651.714.3729 or matt.moore@woodburymn.gov

Thank you.

Sincerely,
South Washington Watershed District

Matt Moore
Administrator

c: SWWD Board of Managers