



2021 Annual Report



Members of the East Metro Water Resource Education Program:

Brown's Creek Watershed • Carnelian-Marine-St. Croix Watershed •
Comfort Lake-Forest Lake Watershed • Bayport • 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
2021 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 hosted by Washington Conservation District that was formed in 2006 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.

Over the past 15 years, the EMWREP program has grown from seven local government partners to 30. In 2022, five new members will join the partnership: Chisago County, Chisago Lake Improvement District, Chisago Soil and Water Conservation District, Isanti County, and Isanti Conservation District.

Partnership Structure:

In 2021, EMWREP partners included:

- 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: Bayport, Cottage Grove, Dellwood, Forest Lake, Grant, Hugo, Lake Elmo, Newport, Oakdale, Oak Park Heights, Stillwater, St. Paul Park, Willernie, and Woodbury, West Lakeland Township

Partners jointly fund the program based on a set formula, with fees determined by population (cities and counties) or taxable market value (watershed organizations). See [Appendix A](#) for more detail. A steering committee comprised of representatives from each of the partner organizations meets twice a year to provide recommendations on the program budget and activities.

EMWREP staff communicate regularly with local staff at partner organizations, council members, and board members; prepare an annual report detailing program activities; and provide data for partners' MS4 Permit reports. EMWREP plans and reports are available on-line at www.mnwcd.org/emwrep.

Coordination and collaboration: The EMWREP partnership helps to strengthen relationships between member entities and allows for better coordination and less overlap in the management of local water resources.

EMWREP staff provide leadership for several regional partnerships including Watershed Partners; St. Croix Environmental Education Partnership (SWEET); Blue Thumb – Planting for Clean Water; and Minnesota Water Stewards. In addition program staff regularly collaborate with nonprofit and citizen-led groups in the Twin Cities and Lower St. Croix regions.

Program staff:

- Angie Hong, Water Resource Education Senior Specialist, angie.hong@mnwcd.org
- Barbara Heitkamp, Water Resource Education Specialist, bheitkamp@mnwcd.org

PUBLIC EDUCATION AND ENGAGEMENT

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.
6. Support EMWREP partners in meeting MS4 Stormwater Permit public education and public engagement requirements.

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.

Remember:

Scoop the poop!

Please pick up poop in your yard and on city streets.

Dog poop can contain harmful bacteria. Protect our water and help keep our city clean.

Don't forget to bring a bag.



PUBLIC EDUCATION AND ENGAGEMENT: ACTIVITIES & ACCOMPLISHMENTS

1. MS4 Stormwater Education Support for MS4 Permit Compliance

To assist partners in meeting education requirements for the MS4 Permit, EMWREP staff:

- Created a 2pg summary for partners of new MS4 permit requirements and recommendations for completing MCM1 and MCM2
- Deliver monthly emails with print materials, videos, and social media graphics for partners to use in their communications
- Have created numerous educational materials, available through the [MPCA Stormwater Wiki – MS4 Toolkit](#) and [EMWREP Resources page](#)
- Offer training opportunities for municipal staff and stormwater professionals

The current MS4 General Permit, issued in November of 2020, requires permittees to educate the public about illicit discharge detection and elimination (IDDE), pet waste, and winter salt and deicing materials. In addition, permit holders must identify two additional stormwater education priorities within their communities. The new permit also requires at least one opportunity for public input on the stormwater program each year and one public participation activity.

Stormwater related priorities for EMWREP (partners can choose different priorities for themselves if needed):

1. Reducing stormwater runoff through landscape changes to commercial, residential, and public properties (ie. Installing raingardens or converting turf to native plantings)
 - May include public projects, completed with support from community residents, or landowner-led projects, completed with encouragement and/or support from EMWREP partners.
2. Encouraging residents to keep leaves and grass clippings out of roadways, ditches, and drainage pathways in order to reduce nutrient inputs to stormwater runoff
 - May include promotion of the Adopt a Drain program.

2021 Calendar of Public Education messaging

During 2021, EMWREP provided partners with a variety of education materials including newsletter articles, social media graphics, and videos to be used in public education activities, and shares these messages in print and social media communications.

- Jan./Feb.
 - Reminder about SMART salting practices
- March
 - Reminder to collect and dispose of pet waste safely (timed to coincide with snow melt)
- March/April/May
 - Promotion for workshops and site visits to initiate residential landscape projects
 - Promotion of Adopt a Drain (could be timed to coincide with Earth Day events)
- June/July/Aug
 - Information about lawn care best practices, including water conservation
 - Reminder to keep grass clippings out of streets and drainage pathways
 - Information about small-scale construction best practices
 - Potential IDDE messages: proper disposal of concrete washout; best practices for car washing

- Sept.
 - Potential IDDE message: proper draining of swimming pools and hot tubs
 - Reminder to collect and dispose of pet waste properly
- Oct.
 - Reminder to rake leaves out of street & not dump into ditches, ravines or wetlands
 - Promotion of Adopt a Drain
- Nov.
 - Potential IDDE messaging: waste disposal (general); proper disposal of carpet cleaning wastewater
- Dec.
 - Information about SMART salting

Public Participation and Involvement

During 2021, EMWREP helped partners to engage the public through the following programs:

- Adopt a Drain www.Adopt-a-Drain.org - 764 storm drains adopted in Washington County
- Webinars about residential landscaping – 1354 residents participated in webinars

In addition, EMWREP hosted or attended the following community events:

- SWEEP Earth Month Passport Competition: April 1-30
- Watershed Pop-up Events:
 - Stacy Lions Park (June 3)
 - Tanner’s Lake in Oakdale (June 17)
 - Lakeside Park in Forest Lake (July 27)
 - Edgewater Park in Woodbury (August 10)
 - Woodridge Park in Cottage Grove (August 25)
- Lake Demontreville-Olson Association Event in Lake Elmo (June 22)
- Washington County Fair (Aug. 4-8)
- “Nedible Gardens” Walk and Talk at the Growth for Good Community Garden in St. Paul Park (Aug. 19)
- Brown’s Creek Watershed District community celebration in Stillwater (Sept. 18)
- Cottage Grove public works open house (Sept. 23)

Outreach to Lawn Care Professionals: On April 30, we sent information to 67 lawn care providers who work with private landowners, golf course, school districts, and public parks in the East Metro area. The e-package included links to training videos - [Park Maintenance](#) & [Pesticide and Fertilizers](#) - as well as a 1pg Guidance for Lawn Care Providers handout and info about nitrates groundwater contamination in Washington County.

2. Volunteer engagement:

Minnesota Water Stewards
23 Stewards certified in Washington County 3 new stewards certified in 2021

EMWREP has participated in the Minnesota Water Stewards program since 2018 and has certified 23 volunteers over the past four years. Three new stewards were certified in 2021.

Water stewards participate in 50-hours of in-person and on-line training and 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.

MEET THE STEWARDS: Check out this virtual tour to meet the water steward volunteers in Washington County – [meet the stewards](#).

New stewards certified in 2021 include:

- **David Nuccio (SWWD)** – worked with City of Woodbury to conduct an irrigation efficiency audit at Cardinal Crossing HOA
- **Wally Wadd (SWWD)** – working with Grove United Methodist Church in Woodbury to remove buckthorn and restore oak savanna. Working with other community members to develop a climate action plan for the city.
- **Desiree Weins (CLFLWD)** – installed a raingarden at a private home in Chisago County

In addition to training the new volunteers, EMWREP also hosted an in-person gathering for stewards on Aug. 3 and attended the Water Stewards Confluence event on Oct. 16.

Adopt a Drain
764 drains adopted in Washington County 16,944 drains adopted in Minnesota

The [Adopt-a-Drain](#) program engages community residents in helping to prevent stormwater pollution by cleaning leaves, litter and other debris off of storm drains near their homes. Volunteers get reminders via text or email and are asked to report their actions on-line so that cities can track the program's impact.

The Adopt-a-Drain program was created by Hamline University's Center for Global Environmental Education on behalf of Watershed Partners, a metro area collaborative with 60+ partners.

In 2021, EMWREP continued to promote the program through a variety of means, including:

- Participating in Watershed Partners and financially supporting the Adopt-a-Drain program
- Publishing articles in local newspapers and city newsletters
- Distributing door-hangers in Forest Lake
- Volunteer promotion in Stillwater with Sustainable Stillwater
- Volunteer promotion in Woodbury with Water Stewards

- Teacher promotion in Mahtomedi
- Publishing a TikTok video on (Oct. 12)
 - 57 adoptions in the next 24hrs (compared with 8/day normally)
 - 20 new adoptions in Washington County over the next week

Adopt a Raingarden

55 raingardens adopted in Stillwater and Oak Park Heights

The Adopt-a-Raingarden program engages community volunteers to care for raingardens in Stillwater and Oak Park Heights. Volunteers commit to removing weeds, litter, and built-up sediment during the growing season and reporting larger maintenance concerns to staff at Washington Conservation District.

In 2021, EMWREP updated the adopt-a-raingarden map and continued to collaborate with Sustainable Stillwater MN to engage Adopt a Raingarden volunteers and ensure that gardens are well-maintained.

More info at: www.mnwcd.org/adoptaraingarden.

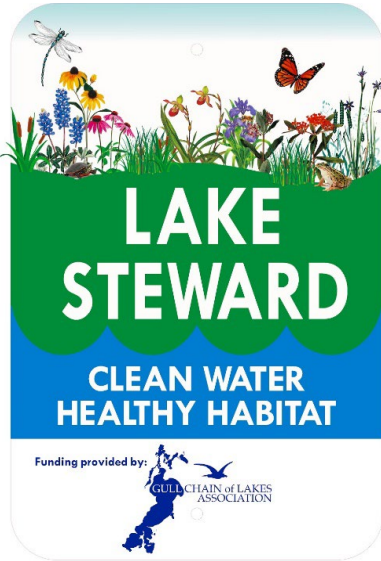
Nonprofit, citizen, and community groups

In addition to these larger volunteer programs, EMWREP works closely with nonprofit, citizen, and community groups in our area, including:

- Master Gardeners
- Lake associations
- St. Croix River Association
- Pollinator Friendly Alliance
- Wild Ones
- Sustainable Stillwater MN

Additional volunteer engagement activities in 2021 included:

- Recruited volunteers to lead storm drain stenciling and Adopt-a-Drain promotion for River Rally on Sept. 11.
- Purchased supplies for Sustainable Stillwater to conduct volunteer storm drain stenciling
- Helped to promote CMSCWD volunteer planting events on June 5, July 31, Aug 21, and Sept 11
- Attended RWMWD and Sustainable Stillwater volunteer appreciation events
- Attended the Comfort Lake Lake Association Annual Meeting on Thu., Oct. 7 and talked about shorelines and buffer management
- Attended BCWD, CMSCWD, and CLFLWD citizen advisory committee meetings to discuss educational programs and priorities



Lake Steward Program

As we explore ways to engage shoreline landowners and lake associations in our area, we've been talking with Jeff Forester from Minnesota Lakes & Rivers Advocates (MLRA) about their new [Lake Steward Program](#).

The program translates the MN DNR Score Your Shore tool into a quick online quiz that lake associations can send to their members. Lake Association representatives then follow-up to help people make changes on their land to better protect their lake. If a property meets the Lake Steward standards, they are awarded a beautiful sign designating them as a Lake Steward.

This program uses already existing programs available through the MN DNR and watershed districts, but puts Lake Associations in the driver's seat when it comes to community outreach and engagement.

EMWREP hopes to pilot this program with lake associations in our area and will also be working with MLRA to develop Shoreline Landowner guidebooks. Stay tuned for more info in the coming months.

3. Education Partnerships

One of the most important strategies utilized by the EMWREP program is to build partnerships and work collaboratively with federal, state and local government; non-profit organizations; and community groups to educate and engage the public.

Two of our key partnerships include:

Watershed Partners
70 partners in the Twin Cities

Metro Watershed Partners is a coalition of more than seventy public, private and non-profit organizations in the Twin Cities metro area. Through collaborative education and outreach, the Metro Watershed Partners promote a public understanding that inspires people to act to protect water in their watershed. Since 1996, partners have cooperated through educational projects, networking, and resource sharing.

The mission of the Metro Watershed Partners is two-fold:

- To provide and promote collaborative watershed education programs with consistent messages to the general public, local government staff and elected officials; and
- To provide WSP members a place and means to share information, generate ideas, and coordinate and support collaborative watershed education programs.

Watershed Partners holds monthly meetings with special presentations, publishes blog-style stories through its www.cleanwatermn.org website, produces content for partners to use in their educational programming, and is host to the Adopt a Drain program.

In 2021, EMWREP coordinator Angie Hong continued to serve on the Watershed Partners' steering committee and act as convener for large group meetings.

St. Croix Watershed Environmental Education Partnership (SWEEP)
78 partners in the Lower St. Croix Watershed

SWEEP (St. Croix Watershed Environmental Education Partnership) brings together staff from parks and nature centers, non-profit organizations, local government, and community groups in the Lower St. Croix watershed to inspire leadership in environmental education through networking, community engagement and collaborative events within the St. Croix River Watershed.

In 2021, SWEEP partners distributed a monthly newsletter to highlight outdoor destinations and activities in the St. Croix region, organized an Earth Day passport program, and planned a St. Croix Youth Summit. EMWREP coordinator Angie Hong continued to serve as a member of the SWEEP leadership team.

4. Youth education

Though K-12 students are not a primary audience for our education programming, EMWREP provides support for youth education initiatives that are partner-led.

In 2021, these included:

- **South Washington Watershed District (SWWD) Campus Greening projects:** EMWREP staff supported SWWD and Carpenter Nature Center staff in teaching classroom lessons for 4th and 5th grade students at Valley Crossing (Woodbury), Crestview (Cottage Grove), and Nuevas Fronteras (St. Paul Park). Each class of students participated in five hands-on, classroom lessons and one field trip to Carpenter Nature Center.
- **Support for implementation of the Washington County Groundwater Plan:** In 2021, this included promoting the Children's Water Festival and supporting school education in South Washington School District.
- **Marine Art & Nature Camp:** Angie Hong led activities on the morning of Tuesday, June 15.



South Washington – Campus Greening Program

South Washington Watershed District (SWWD) and South Washington County School District are collaborating on a unique program to renovate school campuses and provide students with hands-on, environmental education. The SWWD created its Campus Greening program to provide schools with an alternative way to meet their stormwater management rules during construction and redevelopment. Typically, when schools and businesses expand their parking lots and buildings, they build stormwater retention ponds to manage the extra runoff pollution that is generated. Instead, this program takes a more holistic approach.

So far, seven schools within SWWD have participated in the program. At Lake and Middleton Schools in Woodbury, the school district replaced 15 acres of non-active use turf with native prairie and planted 200 trees (with help from the kids). At Crestview in Cottage Grove, the school is converting 2.5 acres of turf to prairie and rehabbing 7.5 acres of low-quality woodlands. Similar projects are planned or underway at Valley Crossing (Woodbury), Nuevas Fronteras (St. Paul Park), Grey Cloud Elementary (Cottage Grove), and Cottage Grove Middle School.

In addition to replacing turf with native habitat, SWWD has also worked with the schools to construct outdoor classrooms and is contracting with Carpenter Nature Center to provide hands-on watershed education for 4th and 5th grade students. Last fall, staff from Carpenter worked with Valley Crossing, Crestview and Nuevas Fronteras to do a series of five in-school programs plus a field trip to the nature center. Abbey Kuntz from EMWREP provided additional staff support.

5. Groundwater education

EMWREP provides support for implementation of the Washington County Groundwater Plan through a separate annual contract with Washington County.

Education support provided in 2021:

- Provided education about groundwater-surface water interaction to local staff and decision-makers through webinars
- Created an inventory of local communities' progress in developing SMART irrigation programs
- Created a story map to share the Stormwater Reuse Assessment
- Delivered educational videos to lawn care providers, municipal parks departments, and golf courses on the proper use and disposal of fertilizers and lawn chemicals.
- Helped to promote Children's Water Festival.

- Create fact sheets and other print and video resources:
 - - Disposal of lawn and garden chemicals
 - - How to detect leaks inside the home
- Prepared an article about proper waste disposal in wellhead protection areas for city newsletters
- Distributed new education materials:
 - - Waste disposal fact sheet;
 - - Lawn care and illegal dumping videos

6. Aquatic Invasive Species (AIS)

EMWREP also provides support for AIS education through a separate contract with Washington County.

2021 activities included:

- Collaborating with St. Croix River Association to share AIS prevention information at community events (COVID dependent) and point-of-sale locations for bait and fishing licenses.
 - Lake Demontreville-Olson Association
Event: June 22, 5-7pm
- Delivering 4 emails to the East Metro Lakes network (160 lake association members)
- Supporting one volunteer from Square Lake to become certified as an AIS Detector and purchasing 10 AIS Identification Guides for Square Lake Lake Association members.
- Sharing info about watercraft inspections and AIS on Facebook, Instagram, and TikTok
- Publishing AIS information in print and social media.
 - [New fish barrier will keep carp out of Forest Lake](#) – Feb. 9
“This February, CLFLWD replaced an old, dilapidated fish barrier on the northwest side of Forest Lake, where the lake outlets to the Sunrise River to prevent carp and other rough fish from migrating into Forest Lake.”
 - [Breaking Eurasian watermilfoil’s stranglehold on Minnesota Lakes](#) – March 4
“Researchers and lake associations search for new ways to control this aggressive invasive species. Meanwhile, watercraft inspections remain the first line of defense in preventing the spread of AIS.”
 - [Now is the time to stop zebra mussels](#) – Sept. 7
“Aquatic invasive species — or AIS — include a wide range of animals, plants, and diseases. One species of particular concern in Minnesota is zebra mussels: small D-shaped shells that grow no bigger than a thumbnail. Zebra mussels are native to eastern Europe and western Russia—and they were first detected in Minnesota in the late 1980s. A single female can produce 100,000 to 500,000 eggs per year, resulting in explosive population growth wherever the mussels are found.”



7. Media and Communications

In 2021, EMWREP will continue to use a variety of communications platforms to share watershed and stormwater information, promote partner projects and programs, and publicize events and activities.

Print Communications

Newspaper articles: Angie Hong has published a weekly column for the Valley Life – Stillwater Gazette for 15 years. The articles are posted on-line at www.eastmetrowater.org and frequently appear in other local newspapers as well.

- **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)
- **Scandia Country Messenger** (Circulation - 1075)
- **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)

Newsletters: EMWREP will also continue to provide content for city, watershed and WCD newsletters.

Articles published in 2021:

[Frozen fish and salty toes](#) – Jan. 7

“One growing concern for urban lakes and streams is pollution from winter road salt. Currently, there are 50 lakes and streams in Minnesota that are listed as impaired due to elevated chlorides and another 75 that are “nearly” impaired.”

[Tracking the health of lakes in Washington County](#) – Feb. 4

“During 2020, Washington Conservation District monitored water quality on 71 lakes in Washington County. Here’s what recent data tell us about five local lakes.”



[New fish barrier will keep carp out of Forest Lake](#) – Feb. 9

“This February, CLFLWD replaced an old, dilapidated fish barrier on the northwest side of Forest Lake, where the lake outlets to the Sunrise River to prevent carp and other rough fish from migrating into Forest Lake.”

[South Washington Watershed District Receives Climate Adaptation Award](#) – Feb. 18

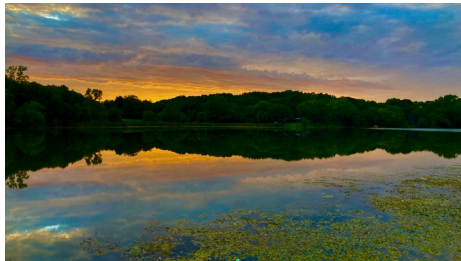
“South Washington Watershed District (SWWD) is working to build resiliency and protect local communities against climate-related threats, including flooding, aquifer draw-down, and invasive species. In recognition of its accomplishments, ongoing work, and leadership on climate adaptation and resiliency, SWWD has been awarded the Minnesota Climate Adaptation Partnership’s 2021 Organization Award.”

[Intersex fish and cocaine shrimp](#) – Feb. 25

“Scientists lay the blame for these strange phenomena on endocrine-disrupting chemicals and pharmaceutical compounds, such as pesticides, medications, and even common household products like shampoo.”

[Breaking Eurasian watermilfoil’s stranglehold on Minnesota Lakes](#) – March 4

“Researchers and lake associations search for new ways to control this aggressive invasive species. Meanwhile, watercraft inspections remain the first line of defense in preventing the spread of AIS.”



[Cleaner water ahead at Carver Lake Park in Woodbury](#) – March 11

“This summer, visitors to Carver Lake Park will discover a newly renovated parking lot, complete with a 5220 sq ft raingarden and 8000 sq ft of native plantings designed to filter and treat polluted runoff, as well as create habitat for birds and pollinators. The raingarden will capture 0.7 lb of phosphorus, which is enough to

prevent 350 pounds of algae from growing in the lake.”

[Two miles, three raingardens, and 100 feet of native buffer: Charting Perro Creek’s journey to cleaner water and better health](#) – March 18

“Local partners including City of Bayport, the Middle St. Croix Watershed Management Organization (MSCWMO), and even area Girl Scouts have worked to reduce erosion and improve water quality in Perro Creek through a series of projects including raingardens and native buffer plantings.”



[Preserving a piece of paradise in the St. Croix Valley](#) – March 25

“Paul Goodwin and his family have established a 49-acre conservation easement on land abutting Silver Creek near Stillwater, MN and are working to convert 14-acres of fallow farmland to prairie and oak savanna.”

[Students help to seed an outdoor laboratory at Crestview Elementary](#) – April 1

“The school is converting 2.5 acres of turf to prairie and rehabbing 7.5 acres of low-quality woodlands.”

[A flower’s fleeting charm](#) – April 8

“Of all the flowers that exist, spring ephemerals are the ones that I hold dearest in my heart.”

[Let the gardening begin!](#) – April 15

“Thanks to a relatively early start to spring this year, many people are already beginning to dream about gardens and planting projects. Here is a run-down of upcoming workshops and other support for eco-friendly gardening projects.”

[Mahtomedi Teacher Inspires Earth Day Action throughout the Year](#) – April 22

“Ms. Comfort, as her students know her, is a STEM specialist at Wildwood Elementary in Mahtomedi who is always looking for unique ways to teach her kids to protect the environment.”

[Transformation underway at Sunfish Lake Park](#) – April 29

“Sunfish Lake Park visitors will immediately notice the changes on site, where contractors and volunteers have been clearing buckthorn since late winter.”

[Art in the Pines](#) – May 6

“This spring, a photographer from Lake Elmo named Sarah Lilja is calling the St. Croix Watershed Research Station’s Pine Needles cabin home.”

[Marine community works to revitalize village center and protect St. Croix River](#) – May 13

“On Saturday, May 1, volunteers in Marine on St. Croix planted 1,500 native plants along a wetland to create a natural buffer that will help to hold the soil in place and guard against erosion.”

[When watershed educators go rogue](#) – May 20

“How to dispose of five common waste products without polluting our water.”

[Cheap Trick Remix \(the lawn version\)](#) – May 27

“Five cheap tricks for a beautiful, healthy lawn that is safe for your kids and pets.”

[Heat Wave Spurs Harmful Algal Blooms in Some Minnesota Lakes](#) – July 29

“Usually, algae and aquatic plants are merely a nuisance, but sometimes a form of cyanobacteria known as blue-green algae can bloom and release toxins that make humans and animals sick.”

[Bee Lawns are Green Lawns](#) – July 22

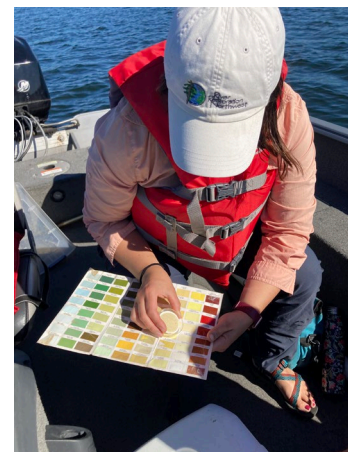
“Unlike typical lawns, bee-friendly lawns feature a mix of drought-tolerant fine fescue grasses and low-growing flowers such as Dutch white clover, creeping thyme, and self heal.”

[In the Woods and on the Water](#) – July 8

“Here is a lineup of some of the many FREE, fun, outdoor events scheduled in Washington County during the coming month.”

[A Martha Stewart Guide to Lake Water Quality](#) – July 1

“Three variables – water clarity, total phosphorus, and chlorophyll – are combined to create a metric known as a trophic state index. A few years back, Jerry Spetzman began noticing that the color of the algae samples on a white filter corresponded almost perfectly with the lakes’ overall water quality.”



[Holey Pavement](#) – June 24

“Conventional pavement is impermeable, which is a fancy way of saying that water does not soak through it when it rains. In contrast, porous pavement is holey – in a good way.”

[Feeling parched in the Land of 10,000 Lakes](#) – June 17

“According to the University of Minnesota, approximately 20% of all treated drinking water in the Twin Cities metro area is used outdoors, with a majority of this being used on lawns and landscapes.”

[Can that baby dragon fly?](#) – June 10

“Most people consider dragonflies and damselflies to be terrestrial flying insects, but in fact, they spend more than half of their lives in the water.”

[Create pockets of habitat with native plants](#) – June 3

“Minnesotans can help to restore habitat for wildlife by planting native flowers, shrubs and trees in our yards to create pocket oases and connected corridors near larger parks and natural areas.”

[Where the Land is Neither Wet nor Dry](#) – Sept. 2

“Dave Medvecky’s project in Isanti County will restore approximately 13 acres of wetlands that have been lost to farming for nearly a century.”

[Hard Fescue and SMART Controllers Allow for Green Grass with Less Water](#) – Aug. 26

“At the end of a long, hot summer with no irrigation or rain, the plot with 100% hard fescue grass was still lush and green, while the one with Kentucky bluegrass was almost entirely dead.”

[Touring Wakáŋ Tipi at Bruce Vento Nature Sanctuary – Same View, New Perspective](#) – Aug. 19

““We’ve never lost our connection to this space but it’s important to bring Native people back here and have them making decisions on how the land is managed,” says Keeli Siyaka, Environmental Justice Educator at the Lower Phalen Creek Project.”

[Tree care and woodland management](#) – Aug. 16

“If you are working to remove large areas of buckthorn, MyMinnesotaWoods staff advise that late summer and fall are the best times to cut and treat buckthorn stumps with herbicide in order to prevent regrowth.”

[Protecting Mill Stream and the St. Croix River](#) – Sept. 9

“(IBI) scores function much like grades on a report card. According to Mike Isensee, Administrator for the Carnelian-Marine-St. Croix Watershed District, Mill Stream will likely get an IBI score of “B” in 2022.”

[A River Unites](#) – Sept. 16

“Though rivers have long been used as borders to divide one group of people from another, it also strikes me that they have the power to bring us together as well.”

[Wildlife-friendly fall gardens](#) – Sept. 23

“In the coming weeks, there are several steps you can take to prep your yard and gardens for winter and continue to support pollinators, birds and other wildlife.”

[New project aims to take Lily Lake off the impaired water’s list](#) – Sept. 30

“A new regional infiltration basin will collect and filter stormwater from a large area of land that includes commercial and residential property, delivering it to Lily Lake cleaner and with less phosphorus.”

[On the forest and the trees](#) – Oct. 11

“Take a break from raking leaves and get involved in efforts to create more resilient woodlands this fall.”

[Street Sweepers to the Rescue](#) – Oct. 14

“Cities use street sweepers to maintain a tidy appearance, but these machines can also be an important and cost-effective tool for reducing stormwater pollution.”



[Channeling a life-long passion for water protection toward community change in Forest Lake](#) – Oct. 21

“Curt Sparks would love to see more people in the community get involved in lake and watershed stewardship, whether it is by joining the watershed district’s citizen advisory committee, participating in activities led by one of the local lakes associations, or merely adopting a storm drain in their neighborhood.”

[Salt a growing problem for Minnesota’s water](#) – Oct. 26

“Overall, the MPCA has determined that road salt is responsible for 42% of the chloride in groundwater, lakes and streams. Two other major sources of chloride that are less well-known include agricultural fertilizers (23% of the total chloride) and water softeners, which account for up to 65% of the chloride discharged from municipal wastewater treatment plants.”

[Rich Fen, Poor Bog](#) – Oct. 28

“Bogs are acidic and nutrient-poor for plant growth. Fens are rich in nutrients and are alkaline. The Tamarack Nature Preserve is unique because it has characteristics of both.”

[Wetland in your yard?](#) - Nov. 4, 2021

“Wetlands protect nearby homes from flooding and help to reduce shoreline erosion along the edges of rivers and lakes. If you have a wetland on or near your property, however, you may need to make some changes in your landscaping and seasonal yard care.”

[PFAS contamination works its way to the St. Croix River](#) – Nov. 11, 2021

“Six water bodies in Washington County will likely be added to the state’s impaired waters list due to perfluorinated alkylated substances (PFAS), also known as the “forever chemical.” The affected waters include Tanners Lake (Oakdale), Eagle Point wetland and H.J. Brown Pond (Lake Elmo Park Reserve), Clear Lake (City of Forest Lake) and the St. Croix River/Lake St. Croix from Taylors Falls to Prescott.”

[Fifty-three Minnesota lakes and streams to be de-listed in 2022](#) – Nov. 18, 2021

“Local lakes scheduled to be delisted next year include East Boot (May Twp), Echo (Mahtomedi), Hay and Jellums (Scandia), Lily and South Twin (Stillwater), and Plaisted (Hugo).”

[Give me a home where the bees and butterflies roam](#) – Nov. 26, 2021

“A native plant revival is underway and Lawns to Legumes grants are here to help.”

[Fossils, glaciers, and the water we drink](#) – Dec. 1 , 2021

“Groundwater provides 100 percent of the drinking water for people in Washington County and 70 percent of the drinking water in Minnesota.”

[The secret life of the St. Croix’s freshwater mussels](#) – Dec. 9, 2021

“The St. Croix River is a rare example of a complete and intact river ecosystem,” explains Marian Shaffer, an Aquatic Biologist with the National Park Service. “In fact, all of the freshwater mussel species that existed in the St. Croix Riverway before European settlement are still here today.”

[Sustainable Stillwater recognized as Washington County’s 2021 Community Conservationist](#) –

Dec. 16, 2021

“Sustainable Stillwater’s Natural Resources team has helped to recruit 45 rain garden adopters and 218 storm drain adopters. They have also engaged volunteers to stencil storm drains, weed and clean-out a native shoreline buffer at Lily Lake, and install cigarette disposal canisters in downtown Stillwater.”



[Valley Branch Watershed District named 2021 Minnesota Watershed of the Year](#) – Dec. 23, 2021

“To protect homes in land-locked basins, the district built an emergency conveyance system to pump water out, taking care not to overwhelm any other water bodies or drainage systems during the process.”

[Minnesotans asked to share ideas for climate resiliency](#) – Dec. 30, 2021

“The state has set up a website to provide information and collect ideas from the public related to: 1) Investing in clean transportation; 2) Protecting our natural and working lands; 3) Creating stronger, resilient communities; 4) Moving to clean energy and efficient buildings; and 5) Promoting health, equity, and a strong economy: <http://www.climate.state.mn.us/ideas-lead-bold-action>.”

Online Communications

EMWREP uses a variety of online communication platforms to educate and engage with the public, including websites, social media (TikTok, Facebook, Instagram, Twitter, YouTube), webinars, and story maps, and our blog.

People reached through social media accounts in 2021:

- TikTok - [@mnnature_awesome](#) 7.7 million
- Facebook - [@mnwcd](#) - 67k
- Instagram - [@wcd_mn](#) - 39k
- Twitter - [@angiehongwater](#) – 18k
- East Metro Water blog – www.eastmetrowater.org - 8500
- YouTube – [Washington Conservation District](#) – 8400

TikTok Mania!

TikTok has 65.9 million users in the United States and 689 million worldwide (1.29 billion if you include the Chinese version Douyin). In January of 2021, it was the second most downloaded app worldwide. Unlike Facebook and Instagram, TikTok is built entirely on short-form video. Users can post videos up to 59-sec long for others to like, share, and comment on. The app is highly interactive – users can respond to questions in video format or build off of videos that other people have posted – and 62% of users are ages 10-29.

We’ve been active on TikTok since last summer [@mnnature_awesome](#) and use it to share a variety of content, including partner projects, water science, nature destinations, and outdoor skills. Because the videos are short, they can be cross-posted to other social media platforms such as Facebook and Instagram, or combined to create longer videos for YouTube. This year, the account has surged in popularity and now has 63,700 followers. We’ve been featured in articles by CNET and Racket.

Racket: This Minnesota Environmental Educator is Blowing up on TikTok

Racket is a new online culture and news site, founded by former editors at City Pages. This November, editor Jay Boller interviewed Angie about her experience launching the [@mnnature_awesome](#) TikTok account. “TikTok afforded Hong the opportunity to take her IRL lessons outside the classroom and into Minnesota’s lakes, rivers, prairies, and forests.” Read the article [here](#).

CNET: “TikTok goes wild: Meet the adventurers taking you into the great outdoors”

Our [@mnnature_awesome](#) account was also featured in an article by CNET, an American media website that publishes reviews, news, articles, blogs, podcasts, and videos on technology and consumer electronics globally. Read the article [here](#).

Over the course of the year, 7.7 million people watched our videos. The table below shows statistics for the most popular videos in 2021.

	Topic	Views	Likes	Shares
1.	Poison ivy	4.6M	724.6k	23.8k
2.	Drought in Minnesota	645.6k	129.4k	3.5k
3.	How to use a compass	484.3k	69.1k	120
4.	PFOS in St. Croix River	380.1K	52.7k	7.7k
5.	Lawn to native plants in HOA, Woodbury	316.8k	39.7k	580
6.	How to use a compass	167.1k	11.9k	418
7.	Porous pavement	128k	21k	160
9.	Bee friendly lawns	102.1k	16.3k	937
10.	Poison sumac	98.6k	5289	336
11.	MN watersheds	94.4k	10.4k	302
13.	Gardening with native plants	91.2k	18.7k	329
12.	RWMWD Green Streets	91.2k	13.1k	134

Clean Water MN: Watershed Partners produces photos and articles for the www.cleanwatermn.org website, and also allows partners to use this content in their own communications. We also rely on the campaign for high quality photos to use in our web and print communications. In 2021, Clean Water MN blog posts included:

[Pollution takes a toll on trout habitat](#) – Feb. 12

“Minnesota’s lakes, rivers, and streams provide year-round recreation opportunities for outdoor enthusiasts. Many Minnesotans connect with nature through fishing, and anglers play an important role in the fight to protect wildlife habitat. The nonprofit organization Minnesota Trout Unlimited provides anglers with a unique perspective on the link between water quality and fish populations.” *Featuring photos from Cottage Grove Ravine Regional Park*

[Taking a closer look at Mississippi River plastic pollution](#) – April 8

“Presley Martin brings an artist’s perspective to cleaning up the river. He scours the riverbank near his Minneapolis home for discarded bits of styrofoam and plastic and then arranges the items he finds for photographs or reassembles them into found-object sculptures. For one of his recent projects, Floating Meditations, Presley spent 30 minutes on a dock, grabbing all the plastic that floated by within arm’s reach, and then he photographed the items. The resulting images represent a tiny sample of the vast quantity of plastic polluting the river.”

[Choose clean lakes for safer swimming](#) – July 7

“The summer of 2021 is off to a scorching start with record high temperatures and drought affecting most of Minnesota. As the temperatures soar, many have sought relief from the heat at their favorite swimming spots. In the land of 10,000 lakes, one question might be on the mind of swimmers: how do I know I’ve picked a safe place to swim? With a little bit of research, you can plan your next beach outing with confidence that you’re heading to a healthy lake or stream.”

[Planting Shorelines to Protect Water Quality](#) – Aug. 6

“The city of Blaine is home to a unique, man-made body of water: Sunrise Lake. Dug nearly 20 years ago, Sunrise Lake won’t appear on most lists of Minnesota lakes, nor is it managed by the DNR. However, when it comes to pollution, it faces many of the same challenges as other lakes around the state. Learning about those challenges offers lessons for anyone who cares about protecting water quality.”

[Now is the time to stop zebra mussels](#) – Sept. 7

“Aquatic invasive species — or AIS — include a wide range of animals, plants, and diseases. One species of particular concern in Minnesota is zebra mussels: small D-shaped shells that grow no bigger than a thumbnail. Zebra mussels are native to eastern Europe and western Russia—and they were first detected in Minnesota in the late 1980s. A single female can produce 100,000 to 500,000 eggs per year, resulting in explosive population growth wherever the mussels are found.” *Featuring photos from our Lake Demontreville-Olson event.*

[Grower of giant produce shares tips for cultivating healthy soil](#) – Oct. 28

“Six-foot long gourds, 20-foot tall sunflowers, and 1,000 lb pumpkins might sound like science fiction, but these supersize plants flourish in Chris Brown’s backyard. An avid gardener from the town of Nowthen, Minnesota, Chris took first place in this year’s Minnesota State Fair Giant Pumpkin Competition when his brilliant and beastly orange pumpkin weighed in at 1,104 lbs. “I tell kids at the Fair that I’m growing Cinderella’s Carriage,” he says with a grin.”

Websites:

In addition to individual partner websites, EMWREP uses the following websites to share education and information:

- Washington Conservation District: www.mnwcd.org
 - [/events](#) – event info and registration
 - [/emwrep](#) – annual reports and plans
 - [/planting-for-clean-water](#) – resources for planting projects
 - [/virtual-tour](#) – short videos highlighting outdoor destinations and activities
- East Metro Water: <https://eastmetrowater.org>
 - Blog posts on a variety of topics
- Blue Thumb – Planting for Clean Water: www.bluethumb.org
 - Resources for raingardens, native plants, shoreline buffers, and Lawns to Legumes
- Clean Water Minnesota: www.cleanwatermn.org
 - Watershed Partners produces high quality photos and articles for partners to use in their communications. Blog stories highlight actions that Minnesotans are taking to protect water.

OUTREACH SUPPORT FOR PROGRAM AND PLAN IMPLEMENTATION

Audience: General public, landowners and land managers

Program Goals:

1. Publicize EMWREP partner programs and projects.
2. Engage public and private land owners to complete habitat and water quality improvement projects on their land.
3. Promote partners' BMP (Best Management Practices) and cost-share incentive programs and connect landowners with state and federal grants for water quality improvement projects.
4. 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 regulatory programs.
5. Educate the public and engage community members to support implementation of the Lower St. Croix Comprehensive Watershed Management Plan.

Educational Objectives:

1. Community members will be aware of partner projects and programs happening in their communities and understand the benefits of these activities.
2. Landowners will develop the knowledge and skills to complete habitat and water quality improvement projects on their land, including: native plantings, raingardens, and native shoreline buffers.
3. Landowners will be aware of and utilize BMP, cost-share and other incentive programs to complete projects.
4. Community members will participate in public meetings, provide input for plans, and take action to support the goals outlined in local and regional plans.

OUTREACH SUPPORT: ACTIVITIES & ACCOMPLISHMENTS

1) Blue Thumb – Planting for Clean Water

The Blue Thumb – Planting for Clean Water Program is a Minnesota partnership hosted by Metro Blooms. Public, private and nonprofit partners work together to educate the public about native plants, raingardens and shoreline plantings and encourage homeowners to complete projects on their land. The program operates the www.BlueThumb.org website, hosts workshops and other events, delivers educational messaging through several media platforms, and has produced numerous print resources, including the Blue Thumb Guide to Year Round Yard Care.

Blue Thumb is affiliated with the Minnesota Lawns to Legumes program and offers web resources and workshops to help landowners develop pollinator-friendly gardens and plantings.

EMWREP helped to launch the Blue Thumb partnership in 2007 and developed many of the original education materials for the program. Currently, we use the website as a resource for the public and collaborate with Blue Thumb / Metro Blooms staff to conduct workshops in our region. Workshops help residents to connect with local resources including, incentive grants, free site visits, garden designs, plant lists, and conservation plans for larger properties.

In 2021, EMWREP held workshops via webinar on the following topics:

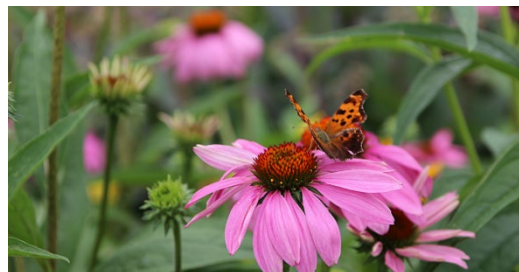
- Pollinator habitat plantings (Jan. 18) – 95 participants
- [Shorelines and buffer maintenance](#) (Feb. 25) – 92 participants (+ 303 on YouTube)
- Building climate resiliency (March 10) – 30 participants
- Shorelines and buffer maintenance (April 29) – 103 participants
- [Raingarden design and maintenance](#) (May 11) – 53 participants (+ 51 on YouTube)
- Shoreline properties for realtors (May 26) – 66 participants
- [Healthy lawns and lawn alternatives](#) (July 7) – 13 participants (+ 12 on YouTube)
- [Bee lawns & lawn alternatives](#) (Sept. 15) – 108 participants (+ 90 on YouTube)
- [Creating pockets of habitat with native plants](#) (Sept. 21) – 100 participants (+70 on YouTube)
- [Bird-friendly yards](#) (Oct. 5) – 25 participants
- [Managing woodlands for resiliency](#) (Oct. 20) – 55 participants (+17 on YouTube)
- [Wetlands habitat and management](#) (Nov. 9) – 50 participants (+21 on YouTube)

Total workshop participants = **1354**

BMP PROJECT MAINTENANCE

Two years ago, EMWREP created a project maintenance calendar for Google and Outlook to provide landowners with raingardens monthly reminders for common maintenance activities (ie. cleaning inlets or weeding):

www.mnwcd.org/maintenance-guide.

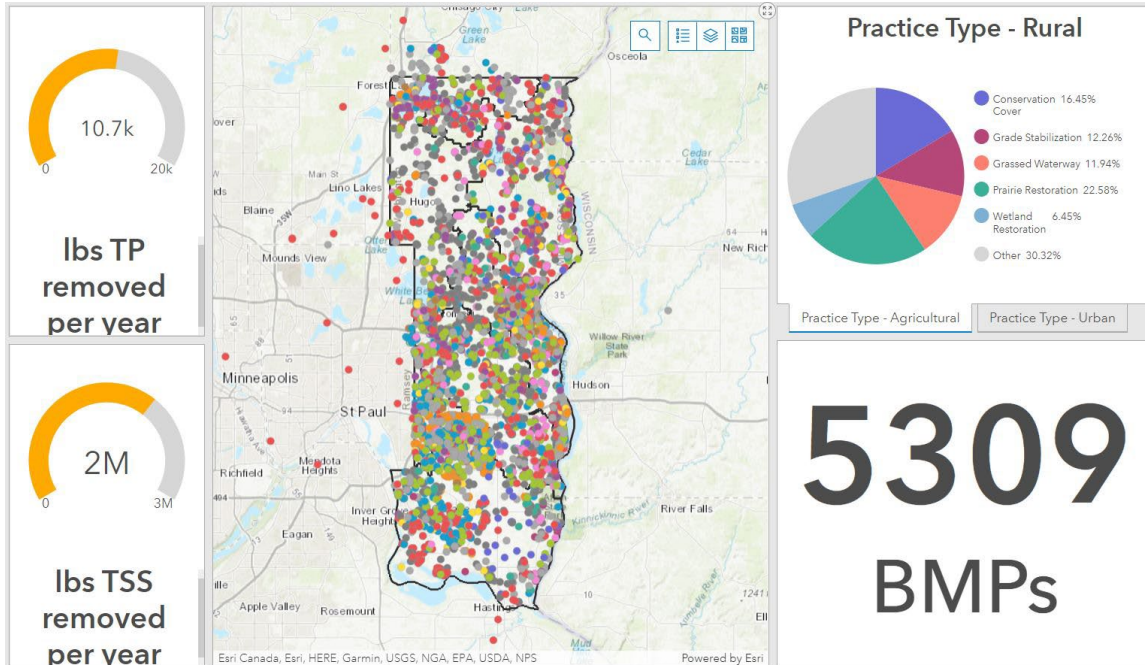


Additional resources for raingarden maintenance are also available at www.mnwcd.org/adoptaraingarden.

2) Promotion of BMP and cost-share incentive programs

During 2021, EMWREP outreach and education led to **226** site visit requests for Washington Conservation District staff. These in-person visits help people to get started on voluntary conservation projects such as raingardens and native plantings. WCD staff provide technical assistance, advice, and connect landowners with available grants.

A map showing all conservation projects completed in Washington County during the duration of the EMWREP partnership can be found at: www.mnwcd.org/project-map.



Professional Trainings for Business and Local Government

Audience: Water resource professionals, municipal staff, consultants and contractors, local elected and appointed officials, business owners, 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. This includes, but is not limited to, Minimal Impact Development Standards (MIDS) and Shoreland/Buffer rules.
4. Offer professional trainings for area business owners, 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, including MIDS and shoreland/buffer rules.
3. Area business owners, 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. Mowing higher and using fewer lawn chemicals; and
 - c. Reducing road salt application by using new technology, calibrating equipment, and adjusting anti-icing and deicing methods based on weather forecasts; and storing salt properly to reduce leaching.
 - d. Using and storing pesticides and fertilizers safely.

PROFESSIONAL TRAININGS FOR BUSINESS AND LOCAL GOVERNMENT

1) Training for Municipal Staff and Businesses

MS4 Municipal Training Resources

MS4 Permittees are required to provide training for staff on a variety of topics related to stormwater and pollution prevention. Below are links to eleven short videos developed by EMWREP that partners are encouraged to share via email or incorporate into staff meetings and training workshops.

- [Stockpile Management](#)
- [Use and Storage of Significant Materials](#)
- [Routine Street and Parking Lot Sweeping](#)
- [Pesticides and Fertilizers](#)
- [Right of Way Maintenance](#)
- [Vehicle Maintenance](#)
- [Road Maintenance](#)
- [Waste Disposal](#)
- [Emergency Response](#)
- [Cleaning of maintenance equipment, building exteriors, and dumpsters](#)
- [Illicit Discharge Detection and Elimination](#)
- [Raingarden Maintenance](#)
- [Parks Maintenance](#)

EMWREP has also developed print resources to help partners explain MS4 permit requirements to the public, and understand requirements related to stormwater inspections and maintenance.

- [Stormwater pollution and the MS4 permit program](#)
- [Stormwater systems mapping and inspections](#)

In addition to the videos listed above, EMWREP staff are able to speak at staff trainings on request.

Professional Training Opportunities

In 2021, EMWREP hosted/conducted (noted by *) or promoted these professional trainings:

Maintenance of Permanent Stormwater Treatment Systems - online April-May, \$250

- A certification course from University of Minnesota
- This course is designed for those who inspect, maintain or direct maintenance on stormwater control measures and practices, such as ponds and infiltration systems. Attendees will learn the fundamentals of BMP processes, mechanics, operations and maintenance needs, and how to create and execute a maintenance work plan.

MIDS Calculator Trainings – April 12 and 13, FREE

- Hosted by MPCA
- MIDS Calculator introduction: April 12, 1:30-3:30pm
- MIDS Calculator updates (Version 4): April 13, 10-11am

Spring Turf Care - April 15, 10-11am, FREE

- Webinar by University of Minnesota and Met Council
- Topics include: Prepping your irrigation system; Turfgrass species for Minnesota lawns; Common weeds; Demo of new education trailer for outdoor events

Economics of Soil Health on Farms - April 29, 1pm, FREE

- By Soil Health Institute and Cargill
- The Institute interviewed 100 farmers in nine states who have adopted soil health systems and used partial budget analysis to evaluate their economics.

Spring Turf Care - [watch the Zoom recording](#)

- Additional resources:
 - [Auditing home lawn irrigation systems](#) (UMN Extension)
 - [Recommended Audit Guidelines](#) (Irrigation Association)
 - [Lawn care](#) (UMN Extension)
 - [Purchasing Turfgrass Seed](#) (UMN Turfgrass Science)
 - [National Turfgrass Evaluation Program](#) (NTEP)
 - [Growing Degree Day Tracker](#) (Michigan State University)
 - [Finding the right grass seed](#) (UMN Turfgrass Science)
- Would you like to have the mobile education trailer at a community event? Please visit [Reserving our Irrigation Efficiency Educational Trailer](#) for more information.

Conservation Finance in Agricultural Projects – May 12, 2pm, FREE

- Hosted by North Central Region Water Network – [Register here](#)
- Three examples of conservation finance in practice - from incorporating conservation into ag leases to aggregating conservation drainage bids and public-private collaboration.
- Featured speakers:
 - Alejandro Plastina, Associate Professor and Extension Economist, Iowa State University
 - Keegan Kult, Executive Director, Agricultural Drainage Management Coalition
 - Ricardo Costa, Field Crops Educator and 4R Nutrient Management Specialist, Michigan State Extension

***IDDE In-Person Training for Cottage Grove public works staff** – May 13, 7-10am



Street Sweeping - May 13, 9:30-11am, FREE

- Hosted by MPCA
- Topics include: Nutrients in urban stormwater, focused on impacts of trees: Street sweeping calculator; Guidance for street sweeping; Additional research needs
- Presentations by Randy Neeprash (MCSC), Dr. Sarah Hobbie (U of MN), and Aileen Molloy and Hillary Yonce (Tetra Tech)

Salt Symposium – Aug. 3-4

- Aug. 3: New Directions in chloride – water softening, fertilizers, and more
- Aug. 4: Winter maintenance – latest research and technology

SMART Salting for Roads

- Wednesday, September 8
- Thursday, October 7
- Thursday, November 4
- Tuesday, December 14

SMART Salting for Parking Lots and Sidewalks

- Wednesday, September 15
- Tuesday, September 21
- Thursday, October 14
- Wednesday, October 20
- Friday, December 5
- Tuesday, December 9

SMART Salting for Property Managers

- Thursday, September 23, 2021
- Tuesday, October 6, 2021
- *Tuesday, November 2 (Co-hosted by Dakota and Washington Counties)
- Wednesday, December 17

SMART Salting Assessment Tool – Level 2 Certification

- Wednesday, Dec. 8

Shoreline Realtor Workshop



EMWREP partnered with Sponsored by Saint Paul Area Association of Realtors® (SPAAR) to host a workshop for realtors on May 26.

The workshop was for realtors that sell lakeshore and riverfront properties and covered the following topics:

- Lakeshore development and redevelopment rules
- St. Croix Riverway special regulations
- Building a deck, dock, stairway, or home addition? Learn what permits are required for common building projects.
- Planting for Clean Water and assistance for shoreline planting projects

Presenters included: Matt Bauman (MN DNR), Monica Zachay (St. Croix River Association), Karen Kill (Brown's Creek Watershed District), Angie Hong (East Metro Water)

Participants received 3.7 CEUs through Minnesota Department of Commerce. A total of 66 realtors attended.

2) Other education opportunities for local staff and decision-makers

During 2021, EMWREP helped to recruit speakers for Washington County Water Consortium and Watershed Partners meetings. In addition, Angie Hong conducted the following professional trainings:

- Apr 15 - Presentation for technical staff about social aspects of shoreline restoration (workshop hosted by MN DNR)
- Oct. 27 - Workshop on virtual communications at BWSR Academy
- Nov. 3 - Workshop about virtual communications at MPCA staff training
- Dec. 14 - Training about social media for MN Extension staff

3) Racial Equity

In 2021 EMWREP continued to work with staff and local leaders from EMWREP member entities to create more inclusive programming and develop racial equity goals for our work.

Specific activities included:

- Working with Washington Conservation District (WCD) to incorporate equity into the new comprehensive plan
- Compiling resources and recommendations for racial and gender equity and a list of possible consultants for WCD equity training.
- Developing a gender equity survey for WCD and facilitating a staff-level conversation.

- Participating in Watershed Partners CARE subcommittee (Culturally Aware and Relevant Education). Facilitated the group conversation in February about education for non-English speaking audiences.
- Met with consultants to discuss health and equity concerns and future programming opportunities in Oakdale and Landfall.
- Article - Touring Wakan Tipi
- TikTok video - Environmental justice
- TikTok video - native plants for container gardens

In 2022, EMWREP will submit two grant applications to support continued equity work:

- Grant request to National Association of Conservation Districts (NACD) to support a new partnership with Big River Farms in May Twp., and listening sessions with immigrant, refugee, and BIPOC farmers.
- Grant request to MN Board of Water and Soil Resources (BWSR) to create a demonstration pollinator neighborhood in Landfall, a manufactured home community near Tanner's Lake.

Recognition and awards in 2021

MN Board of Water and Soil Resources - December 2021 Snapshots

December's BWSR Snapshots highlights EMWREP as an excellent example of shared services for conservation implementation. "Over the past 15 years, EMWREP programming has led to nearly 2,000 water-quality improvement projects on public and private land; 751 storm drains adopted in Washington County; 20 volunteers trained as Minnesota Water Stewards; 14 volunteers trained as Aquatic Invasive Species Detectors; 780 articles about water in weekly newspapers; and more than 1,000 people educated at workshops each year."

Due to the success of EMWREP, Lower St. Croix partners are now using state funds to expand our shared education model with a focus on outreach to farmers, shoreline landowners, and land use decision-makers. Read BWSR's summary [here](#).

Association of Minnesota Counties – 2021 County Conservation Award

The 2021 Association of Minnesota Counties (AMC) Executive Committee awarded the Lower St. Croix Watershed Partnership with a County Conservation Award at its 2021 Annual Conference on Dec. 8. This annual award is given in partnership with Minnesota Board of Water and Soil Resources (BWSR) to recognize leadership, innovation, and excellence by counties in protecting or improving their natural resources.

The Lower St. Croix Partnership award recognizes the leadership provided by Anoka, Chisago, Isanti, Pine and Washington Counties in helping to bring together a 16-member partnership, forging relationships that cross the urban-rural divide, and working collaboratively to protect and improve the St. Croix River, groundwater, lakes, streams, rivers, wetlands, and upland habitat in the Lower St. Croix watershed.

The Lower St. Croix Partnership builds on the partnerships and success established by EMWREP over the past 15 years.

Valley Branch Watershed District: Watershed District of the Year

The Minnesota Department of Natural Resources (DNR) has named the Valley Branch Watershed District as "2021 Watershed District of the Year" in recognition of its flood mitigation efforts during 2020 and 2021. The announcement was made on December 2, during the Minnesota Association of Watershed Districts Annual Conference.

The Valley Branch Watershed District covers one square mile of Ramsey County and 70 square miles of Washington County, containing Valley Creek, Belwin Land Conservancy, Lake Elmo Regional Park, Sunfish Lake Park, the Tri-Lakes, Oakdale Nature Preserve, and Silver Lake in North St. Paul.

To protect homes in land-locked basins, the district built an emergency conveyance system to pump water out, taking care not to overwhelm any other water bodies or drainage systems during the process. As they worked, Valley Branch staff had to coordinate closely with two counties, fifteen cities and townships, and five adjacent watershed management organizations. This required intensive communication with landowners and local government partners, as well as constant monitoring of equipment, water levels, and water quality for water being pumped out to downstream locations. The district also acquired flood damage reduction grant funding from the DNR to buy-out homes in flood-prone locations.

Comfort Lake - Forest Lake Watershed District: Watershed Program of the Year

Comfort Lake - Forest Lake Watershed District (CLFLWD) covers 49 square miles of land in Chisago and Washington Counties that contain 20 named lakes, 300 drainage ditches, 1000 wetlands, and the headwaters of the Sunrise River.

The CAT program utilizes trained volunteers to take water samples at small and flashy drainage points surrounding selected lakes, then deliver those samples to the CLFLWD for analysis using inexpensive, yet accurate, digital colorimeters. The CAT program is a low-cost (about \$12 per sample) screening tool that both complements and focuses more expensive full scale diagnostic efforts. The outcome of these monitoring efforts is a refined understanding of the distribution of watershed pollutant sources that impact surface water quality.

This program acts as a piece of the bigger picture, allowing the CLFLWD to diagnose nutrient loading sources and prioritize and target where future water quality improvement projects should be located.

Open Rivers Journal – Issue 19, Fall 2021: Water? I’ve got a story about that

Open Rivers: Rethinking Water, Place & Community is an interdisciplinary online journal by University of Minnesota that “recognizes rivers in general, and the Mississippi River in particular, as space for timely and critical conversations about the intersections between biophysical systems and human systems.” This fall, Angie was invited to write about the EMWREP program and, specifically, how her weekly blog and news column helps us to build relationships with the public for the watershed protection and restoration work that we do. Read the article [here](#).

Racket: This Minnesota Environmental Educator is Blowing up on TikTok

Racket is a new online culture and news site, founded by former editors at City Pages. This November, editor Jay Boller interviewed Angie about her experience launching the [@mnnature_awesome](#) TikTok account. “TikTok afforded Hong the opportunity to take her IRL lessons outside the classroom and into Minnesota’s lakes, rivers, prairies, and forests.” Read the article [here](#).

CNET: “TikTok goes wild: Meet the adventurers taking you into the great outdoors”

Our [@mnnature_awesome](#) account was also featured in an article by CNET, an American media website that publishes reviews, news, articles, blogs, podcasts, and videos on technology and consumer electronics globally. Read the article [here](#).

Appendix A: 2019-2021 Annual Budget

Staff Support and Overhead Expenses	Materials	Total
\$144,200	\$10,000	\$154,200.00

MEMBERSHIP STRUCTURE AND FUNDING CONTRIBUTIONS*

PARTNER	Annual Contribution
SWWD	\$25,000
VBWD	\$19,300
BCWD	\$19,300
CLFLWD	\$19,300
CMSCWD	\$12,700
RWMWD	\$12,700
RCWD	\$3,000
Washington County	\$12,800
MSCWMO	\$6,300
Bayport	\$700
Cottage Grove	\$2,700
Forest Lake	\$2,700
Lake Elmo	\$2,700
Hugo	\$2,700
Oakdale	\$2,700
Stillwater	\$2,700
Woodbury	\$2,700
Dellwood	\$700
Grant	\$700
Newport	\$700
Oak Park Heights	\$700
St. Paul Park	\$700
West Lakeland	\$700
Willernie	\$700
TOTAL	\$154,900.00