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
- 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](http://www.eastmetrowater.org)

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

3. **Youth education**:
   1. School programming:
      - Groundwater lessons for 4th grade classes at Royal Oaks Elementary (Woodbury) and River Grove Elementary (May Twp.)
      - Outdoor field programs with students from Royal Oaks, Grey Cloud (Cottage Grove), and Middleton (Woodbury) Elementary Schools
      - 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

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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)
  o Don Pereira, MN DNR State Fisheries Chief, talked about fisheries management
- June 26 workshop in White Bear Lake (6 attendees)
  o 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
  o Scandia – Feb. 13
  o Afton – Feb. 21
- (3) Buckthorn and bittersweet workshops
  o Cottage Grove – June 24
  o May Twp. – Sept. 18
  o Lake Elmo – Sept. 22
- (4) Brown’s Creek Open Yards events - hosted by members of the BCWD citizen advisory committee
  o June 18 – Stillwater (raingardens)
  o June 27 – Stillwater (suburban yard)
  o July 18 – Stillwater (urban bee-keeping)
  o 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](http://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](http://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
  o Spring – Clean Spring Runoff
  o Summer – Only Rain in the Drain
• Oak Park Heights (pop. 4724) - newsletter
  o March – Prairie Restoration at City Hall
  o Sep – MSCWMO cost share promotion
• Stillwater (pop. 18,000) - newsletter
  o Fall – Leaves + Streets = Scummy Lakes and Wetlands
• Stillwater Twp. (pop. 3000) - newsletter
• St. Paul Park
  o Spring – Illicit Discharge
  o 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
  o Illicit Discharge
  o Rain barrels available for purchase
• Woodbury
  o Feb – SMART Irrigation Controller program
  o Jun – Water Efficiency programs
  o Sept – SMART Irrigation Controller program
• Wyoming
  o 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](https://eastmetrowater.org)
- Washington Conservation District: [www.mnwcd.org](http://www.mnwcd.org)
- Blue Thumb – Planting for Clean Water: [www.bluethumb.org](http://www.bluethumb.org)
- Clean Water Minnesota: [www.cleanwatermn.org](http://www.cleanwatermn.org)

Social Media:
- Twitter
  - @angiehongwater
  - @EMWREP
- Facebook
  - @mnwcd
  - @BlueThumbMN
  - @brownscrekwatersheddistrict
  - @cmscwd
  - @CLFLWD
  - @ricecreekwd
  - @RWMWD
  - @SoWashWD
- Instagram:
  - @wcd_mn
Outreach Support for Project Implementation

Minimum Control Measure Addressed

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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.
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

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.

Minimum Control Measure Addressed

| ☐ Public education & outreach | ✓ Construction site runoff controls |
| ☐ Public participation & involvement | ✓ Post-construction storm water management |
| ✓ Illicit discharge detection and elimination | ✓ Municipal pollution prevention & good housekeeping |
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](http://www.pca.state.mn.us/water/salt-application-training)
Find a model contract here: [https://www.edinamn.gov/422/Pollution-Prevention](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.
• **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.
EMWREP has table-top pop-up banners available for partners to borrow: AIS, Pollinators, Lawn Care, and Ag Practices for Soil Health. The banners are light-weight and retract to fit in small carrying bags.

**Table-top banners**

EMWREP has table-top pop-up banners available for partners to borrow: AIS, Pollinators, Lawn Care, and Ag Practices for Soil Health. The banners are light-weight and retract to fit in small carrying bags.

**Check in with YOUR growers about healthy, productive soils.**

Soil Health Management Systems can help America’s growers feed the nation and the world through sustainable conservation practices. The guide below provides an at-a-glance view of specific sustainability benefits associated with soil health improving practices. It is important to note that not all practices are applicable to all crops. Some operations will benefit from just one soil health practice, while others may require additional practices for maximum benefit.

**How does it help environmentally and economically?**

- Keep the soil covered as much as possible
- Disturb the soil as little as possible
- Keep plants growing throughout the years to feed the soil
- Grow a variety of plants to diversify soil

**Soil Health Management Systems include:**

- **Conservation Crop Rotation**
  - Grains, alfalfa, and grass mixtures reduce soil erosion and organic matter and improve soil health.
- **Cover Crop**
  - A mix of crops that provides a consistent supply of plant material to the soil.
- **No Till**
  - Tilling the soil without disturbing the soil through tillage.
- **Mulch Tillage**
  - Plants spread mulches and/or compost to the soil.
- **Nutrient Management**
  - Managing soil nutrients to meet crop needs while minimizing the impact on the environment or the soil.
- **Pest Management**
  - Managing pests and promoting the health of plants and crops.

**By following four basic soil health principles, producers can improve their soil health and sustainability:**

- **Healthy Soil**
  - Improving soil biology, organic matter, and nutrition.
- **Cultivated Soil**
  - Improving soil structure and water-holding capacity.
- **Soil Health**
  - Improving soil fertility and crop production.
- **Soil Quality**
  - Improving soil health and sustainability.

**Learn more at: www.mnwc.org**
• **Interactive groundwater displays**: Two groundwater displays are available for partners to borrow. Contact Angie Hong to reserve.
## APPENDIX A: EDUCATION PROGRAM BUDGET FOR 2018

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<th>Staff Support and Overhead Expenses (1.5 FTE)</th>
<th>Materials</th>
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### PARTNER

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