



LOWER MINNESOTA RIVER WATERSHED DISTRICT

November 2018 Administrator report

From: Linda Loomis, Administrator

To: LMRWD Board of Managers

In addition to items on the meeting agenda, work continues on the following District projects and issues:

Heron Lake Letter to MAWD Board

MAWD has shared the letter from the Heron Lake Watershed District with speakers from the LMRWD MN River boat tour. I have spoken with Mary Texar, a MAWD Board member. She would like to come to a future meeting of the LMRWD Board, with Emily Javens, MAWD's Executive Director.

The email from Emily Javens to the speakers was forwarded to the Board.

Minnesota River Greenway Cedar Nicols Trailhead Project

The [Minnesota River Greenway Master Plan](#) (MnRGW) identifies the trailhead at the Cedar Avenue Bridge as a priority improvement project. Recently Dakota County opened the four-mile MnRGW – Black Dog Trail between I-35W and Trunk Highway 77 (Cedar Ave Bridge) along the Minnesota River. The completion of the trail has increased demand for parking and trail support facilities along the [Minnesota River Greenway](#).

The trailhead location is adjacent to the existing Minnesota Department of Natural Resources boat launch facility between Fort Snelling State Park and the Minnesota River National Wildlife Refuge on Minnesota Department of Transportation (MnDOT) property.

The trailhead will provide access for regional greenway users connecting south along the river and west across the river to the recently restored Old Cedar Avenue Bridge – Long Meadow Lake pedestrian crossing.

The project will be developed in partnership with the Minnesota Valley National Wildlife Refuge, Fort Snelling State Park, MnDOT, and the Cities of Burnsville and Eagan. Elements of the trailhead will include parking, restroom facilities, picnic area, natural area restoration, and water quality enhancements (Attachment). In addition, the project will incorporate interpretive elements as envisioned by the recently adopted [Minnesota River Greenway Cultural Resources Interpretative Plan](#).

The project is anticipated to be completed between August 15, 2019 and November 30, 2020.

As part of the project kick-off and advancement, information meetings are being held. At the meetings we will give a brief overview of the project, provide opportunities for input, listen to your ideas and concerns, and update you on progress to date with regard to the project design. We welcome your input at the December 6 open house.

**Minnesota River Greenway
Cedar Nicols Trailhead Project
Community Open House
Project Information Meeting**

December 6th

5-7 PM

Dakota County

Western Service Center - Atrium

14955 Galaxie Ave, Apple Valley, MN 55124

2018 Metro Children's Water Festival

The final report for the 2018 Metro Children's Water Festival is attached.

Minnesota River Congress #11

On Thursday, November 8, 2018, the 11th MN River Congress was held in New Ulm. Attendance seems to be dwindling, but I am not sure the reason - because the meeting was in New Ulm, or because the weather kept people away (snow was predicted and it snowed more in southwestern MN than in the Metro area that evening)

The Congress is focusing its efforts on identifying activities/projects that would improve the river and helping agencies in attendance implement those activities/projects. The Congress broke out into small groups to discuss projects participants thought would be beneficial to the river and impediments facing implementation of those projects. Each group was facilitated by an SWCD staff person or Supervisor.

Attendance ranged from individual people who want to make a difference to Soil & Water Conservation District Supervisors and staff, State Agencies, Non-governmental Organizations like Coalition for a Clean MN River to water management organizations like GBERBA (Greater Blue Earth River Basin Alliance) and the LeSueur River Watershed Alliance.

Scott County 2019 Conservation Practice Financial Assistance Policy Manual

On Thursday, November 8th, the Scott County held a meeting to discuss its 2019 Financial Assistance Program. This program is in the Cost Share Program for Scott County.

Dakota County Landscaping for Clean Water

On Tuesday, November 13th, I attended a meeting at the Dakota SWCD to evaluate the 2018 LCW program and plan for 2019. The final report for Dakota County's program is attached. The LMRWD is planning to participate in this program in 2019, as the SWCD will provide technical assistance to Dakota County residents that live in the LMRWD. This service will be included in the agreement the LMRWD has with Dakota SWCD to monitor fens.

LMRWD Data Management

On Thursday, November 15th, staff met to discuss options for data storage for the LMRWD. Currently, old files are stored in hard copy at the LMRWD office Chaska. This limits the accessibility of the data by staff. New documents are stored electronically on computers, basically a laptop owned by the District that is backed-up onto a portable drive and does not readily allow sharing.

Staff is researching options so that all LMRWD documents will be stored in one location that can be accessed and shared with staff. The providers staff met with use a system called SharePoint, that is being used by Minneapolis Park Board and Hennepin County. It is Microsoft based and will interface with MS products like Word and Excel.

Metropolitan Council Environmental Services (MCES)

Staff met with MCES to discuss ways that we can partner to address water issues. We discussed MCES challenges and ways that we can work together to meet those challenges. Some of the topics discussed were re-using waste water from Seneca and Blue Lake Waste Water Treatment Plants. Conserving groundwater, especially in areas that have impacts to fens, cooperative monitoring, Chloride in waste water and MCES participation with LMRWD in Dakota County Fen Study.

Upcoming meetings/events

- [MAWD 2018 Annual Conference](#) - November 29 to December 1, 2018; Arrowwood Resort and Conference Center, Alexandria, MN
- USACE River Resource Forum - December 4, 2018 10:00am - 4:00pm & December 5, 2018, 9:00am-12:00pm, US Fish & Wildlife Refuge Visitor Center, 3815 American Boulevard East, Bloomington, MN (agenda is attached to Administrators report). No registration is required for this meeting.
- Upper Mississippi River Waterway Association - Thursday, December 20, 2018, 11:30am Lilydale Pool & Yacht Club

PROUD SPONSOR OF THE 2018
METRO AREA CHILDREN'S WATER FESTIVAL

AWARDED TO

Lower Minnesota River Watershed District



"Water Connects Everyone
and Everything on Earth!"



www.metrocwf.org

2018 METRO CHILDREN'S WATER FESTIVAL

September 26th, 2018
Minnesota State Fair Grounds

November 2018

Dear Linda Lumis & the Lower Minnesota River Watershed District,

On behalf of the Metropolitan Conservation Districts and the Children's Water Festival Planning Committee, I would like to thank you for your generous contribution to the 2018 Children's Water Festival. The festival would not have been possible without your support.

The festival was a huge success. The 1700 students had a great experience outdoors interacting with water resource specialists and learning much about how Water Connects Everyone and Everything on Earth! We were very lucky to have squeaked in an outdoor festival between storms during this rainy fall.

This year was our 21st festival and we continued to improve upon the many changes we made last year. We increased the number of students attending by 300 again and added 10 new presenters.

Enclosed is the 2018 Children's Water Festival booklet, listing sponsors, participating schools and presenters. Sponsors are recognized on the website, booklets, and signs throughout the festival. Also included are the 2018 Program Summary, the Composting Summary, and a Sponsor Certificate.

Plans for the 2019 Children's Water Festival have begun. The date is currently set for September 25th, 2019 at the State Fair Grounds.

Thank you for your commitment to educating Minnesota's students in the metro area, and your commitment to protecting water as one of Minnesota's most valuable resources.

Madeline Seveland
Festival Coordinator
Carver County Water Management Organization
600 East 4th St. Chaska, MN 55318
952-361-1026 mseveland@co.carver.mn.us

www.metrocwf.org

Project: 2018 Children's Water Festival (CWF) Recycling and Organics Recovery

Results:

63.3% of waste (347 pounds) was recycled or composted, down from the 67.7% diversion rate from 2017. An additional 45 pounds of unopened food/drink was collected and reused.

Trash increased by 77 pounds (79.3%), recycling increased by 57 pounds (90%) and organics by 40 pounds (28%) compared with 2017.

Indicator: Measurements (weights) were taken after the lunches

Target: Manage waste sorting areas during lunch to direct students where to place items and reinforce sorting behaviors students demonstrate at school.

Partners: CWF organizers, Counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Washington

Background: Each September, 4th Graders attend the CWF to learn about water through hands-on activities, demonstrations, and performances. This year, the number of students increased by 19% to 1,709 which tested the sorting system we have used since 2013. The increased number of students maxed out the capacity of the five waste sorting stations and back-ups occurred so six will be needed in 2019 if the number of students stays the same or increases.



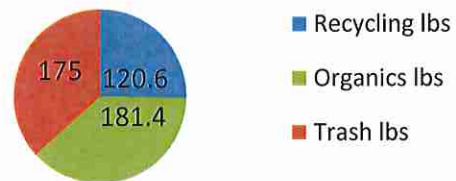
How was it done?

Five sorting stations comprised of a recycling, compost, and trash container were placed in the lunch area. An additional container was used to collect unopened food and a container for plastic film. Paper towels were also collected from the bathrooms and added to the organics. Stations were overseen by county staff or volunteers who helped students sort their trash and answered questions.

Unopened Food/Drink Collected



2018 CWF Lunch Waste



Recommendations for 2019:

- Use backboard posters on ClearStreams showing which items go in each container. (see photo to the right)
- Continue to have sorting stations placed closer to the students.
- Remind classroom guides that students must sort as soon as they are finished with their lunch
- Continue to collect unopened food items as it is a significant amount of waste and some students are still hungry after eating their lunch
- Continue to collect clean and dry plastic bags
- Add one more sorting station (+two additional volunteers) or consider adding another lunch period if the same number or more students will attend in 2019
- Work with food vendor to reduce or eliminate plastic packaging as it is not recyclable





Program Summary for the 2018 Metro Area Children's Water Festival

September 26th, 2018
MN State Fair Grounds.

Participation: 23 schools, 71 classes, 1709 students, 73 teachers plus 2-3 chaperones per class.

- Crooked Lake Elementary in Andover (Anoka Co.) with 3 classes.
- Jefferson Elementary in Blaine (Anoka Co.) with 4 classes.
- St. Stephen's Catholic School in Anoka (Anoka Co.) with 2 classes.
- Valley View Elementary in Columbia Heights (Anoka Co.) with 3 classes.
- Central Elementary in Cologne (Carver Co.) with 3 classes.
- Victoria Elementary in Victoria (Carver Co.) with 4 classes.
- Highland Elementary in Apple Valley (Dakota Co.) with 4 classes.
- Diamond Path Elementary in Apple Valley (Dakota Co.) with 5 classes.
- Oak Ridge Elementary in Eagan (Dakota Co.) with 4 classes.
- Sky Oaks Elementary in Burnsville (Dakota Co.) with 3 classes.
- St. John the Baptist in Vermillion (Dakota Co.) with 1 class.
- Folwell Performing Arts Magnet School in Minneapolis (Hennepin Co.) with 4 classes.
- Kenny Elementary in Minneapolis (Hennepin Co.) with 3 classes.
- Sonnesyn Elementary in New Hope (Hennepin Co.) with 3 classes.
- St. Jude of the Lake Catholic School in Minneapolis (Hennepin Co.) with 1 class.
- Brimhall Elementary in Roseville (Ramsey Co.) with 3 classes.
- Higher Ground Academy in St. Paul (Ramsey Co.) with 3 classes.
- Eastern Heights Elementary in St. Paul (Ramsey Co.) with 2 classes.
- Little Canada Elementary in Little Canada (Ramsey Co.) with 4 classes.
- Afton-Lakeland Elementary in Lakeland (Washington Co.) with 3 classes.
- Woodbury Elementary in Woodbury (Washington Co.) with 4 classes.
- Pine Hill Elementary in Cottage Grove (Washington Co.) with 3 classes.
- St. Wenceslaus School in New Prague (Scott Co.) with 2 classes.

Program Booklet: Access a copy of the program booklet online at <http://metrocwf.org/pastfestivals/>

Making a Difference: The program provides effective, interactive education and supports goals for water literacy from teachers, schools, and organizations proven through the comprehensive evaluations. Highlights include:

- ✚ We followed up with students after the festival. Among the things they learned at the festival many talked about conserving water, keeping water clean and protected, water is important to plants, bugs, and fish, the water cycle, and to protect drinking water. Their favorite water arcade exhibit was bubbleology and they found the Science Museum show "amazing."



- ✦ The Metro CWF follows the best practices for effective outdoor environmental education. Teachers, classroom guides, and presenters all agree, the learning stations that provided exceptional learning had the following components:
 - Hands-on, interactive, & demonstrations
 - Fun and enjoyed by students while learning
 - Knowledgeable presenters all had the ability to connect, to talk, & to present to students
 - Content was interesting
 - Level of material was appropriate

- ✦ The Metro CWF included 47 specific learning stations with more than 90 presenters including water and natural resource professionals and educators. See the complete list and descriptions under “Resources” on the website found at www.metrocwf.org.

Staff and Volunteers:

- ✦ **We had over 200 professionals and volunteers participated in the Metro CWF this year.** Staff and volunteers represent water resource professionals from many state and local agencies and from a number of groups this year including MN Master Naturalists, Master Water Stewards, Wells Fargo and more. The Metro CWF would not be possible without their support!

- ✦ Our festival works at promoting zero waste lunches and having composting and recycling during the lunch periods creating another teachable moment. 63.3% of the waste at the CWF was composted or recycled! An additional 45 pounds of unopened food/drink was collected and reused.

Presenters: Over 90 presenters participated, including staff from the following organizations and agencies; The Science Museum of Minnesota, MN Geological Survey, US Dept. of Agriculture, KARE 11, Metropolitan Council, MN Dept. of Natural Resources, Minnesota Pollution Control Agency, Friends of the Mississippi River, Trout Unlimited, and Metropolitan Mosquito Control District.

Curriculum: Presentations focused on water conservation, water quality, stormwater and runoff, groundwater and wells, native plants benefits to water, aquatic species (fish, macro-invertebrates and invasive species), mercury, and more.

Format: CWF is a one-day Program. Each class attends three 25 minute learning stations, 1 hour long Science Museum presentation, one Water Arcade session and lunch time.

Costs: The 2018 final budget will not be reconciled until January 201 when all expenses are in. Anticipated costs are around \$14000.

Collaboration: The Metro CWF Planning Committee consists of representatives from each of the following organizations; Carver County, Washington County, Hennepin County, Dakota County, Anoka County, Ramsey County, Metropolitan Council, Mississippi Watershed Management Organization, Minnesota Dept. of Natural Resources, Rice Creek Watershed District, and US Forest Service. In addition there are many partnerships that take place in order to make this program possible. See CWF booklet for complete list of partners.



Festival Contact: Madeline Seveland mseveland@co.carver.mn.us 952-361-1026

Children's Water Festival

Water Connects Everyone and Everything on Earth

Celebrating 21 years!



September 26, 2018

La Festival del Agua de los niños
El agua conecta todo el mundo (Spanish)

Koob tsheej txog tib neeg li dej
Dej rub neeg thiab txhua yam hauv ntiav teb los ua (Hmong)

Carwada Ciyaaraha Biyaha ee Caruurta
Qof kasta iyo wax kasta oo Dhulka laga kor helo Waxaad isku Xira Biyo (Somali)

Introduction

The Metro Children's Water Festival *celebrates 21 years* on September 26th. This annual event teaches fourth graders about all aspects of water. Held at the MN State Fair Grounds, this year's festival will expand to serve 1,800; an increase of 300 students from 2017. Over the past 20 years, the festival has reached over 24,500 area students

The festival is designed to provide students with hands-on opportunities to learn about such things as where water goes when the toilet gets flushed, how tiny bugs can serve as an indicator of water quality, the importance of wetlands, and basic water science.

This booklet has been printed to assist teacher and others in contacting key people associated with the Festival. Included in the packet are the schedule of events, a brief description of each learning station, the agency hosting the learning station, and a teacher's evaluation form.

A Word of Acknowledgement

This festival would not have been possible without the dedication of the Festival Planning Committee. Their devotion to the education of children is the backbone of this Festival. The Metro Conservation Districts wish to recognize and extend their thanks to:

Bart Biernat, Anoka County Environmental Services

Beth Carreno, Rice Creek Watershed District

Bill Olsen & Paula Liepold, Dakota County Environmental Resources Dept.

Brian Olsen, Ramsey County Parks & Recreation

Gael Zembal, Nine Mile Creek Watershed District.

Janine Kohn, Minnesota Department of Natural Resources (Project WET)

Jean Buckley; Ramsey County Public Health

Jessica Collin Pilarski & Stephanie Souter, Washington County

John Bilotta, University of Minnesota Extension

Madeline Seveland & Andy Edgcumbe; Carver County Water Management

Michaela Neu, Mississippi Watershed Management Organization

Nanette Geroux, Metropolitan Council Environmental Services

Stacey Lijewski, Hennepin County Department of Environmental Services

Teri Heyer, United States Forest Service

Visit our website for more information www.metrocwf.org.

Sponsors & Partners

The Children's Water Festival would not have been possible without generous financial donations from sponsors and volunteer time from many partners. Their interest in protecting our valuable water resources is evident.

Financial Sponsors

\$2000 - \$5000

Metropolitan Council
MN Groundwater Association

\$1000 - \$1999

Capitol Region Watershed District
Dakota County
Hennepin County
Lower Minnesota River Watershed District
Ramsey County
Shakopee Mdewakanton Sioux Community
Washington County

\$500 - \$999

Anoka County
Carver County Water Management Organization
MN Well Water Association
Rice Creek Watershed District
Vermillion River Water Management Organization

\$200 - \$499

Basset Creek Watershed Management Organization
WENCK & Associates
Minnesota Pollution Control Agency

Supply and Presenter Donations

Afton Apple Orchard (*apples*)
US Forestry Service (*Science Museum show*)
Carver County Water Management Organization

Busing Reimbursements

Ramsey Washington Metro Watershed District
Mississippi Watershed Management Organization

Partners

Academy for Sciences & Agriculture
Anoka County
Capitol Region Watershed District
Carver County Water Management Organization
Cedar Creek Ecosystem Science Reserve
Central States Water Environment Association
City of Lakeville;
Coalition for a Clean Minnesota River
Dakota County
Daughters of the American Revolution
Dragons Wynd
Ecolab
Emmons & Oliver Resources
Frestyl Fitness
Friends of the Mississippi River
Hennepin County
H2O for Life
KARE 11
Lower Minnesota River Watershed District
Mantyla Well Drilling
Metropolitan Council
Metropolitan Mosquito Control District
Minnesota Master Naturalists
Mississippi Watershed Management Organization
MN Association of Floodplain Managers
MN Conservation Corps
MN Department of Agriculture
MN Department of Health
MN Department of Natural Resources
MN Pollution Control Agency
MN Rural Water Association;
MN Wetland Health Evaluation Program
National Park Service
Nine Mile Creek Watershed District
Project WET
Ramsey County
Ramsey Washington Metro Watershed District
Rice Creek Watershed District
Riley Lake Engineering
Riley Purgatory Bluff Creek Watershed District
Scott County
Springbrook Nature Center
T.U.N.E Camp MN
University of Minnesota
USDA Forest Service
USDA - Natural Resources Conservation Service
Washington Conservation District
Washington County
Water Bar
Wells Fargo

Learning Stations

Each learning station aligns with one of the following core components:

Water: Chemical & Physical

Hydrology

Impacts

Arts

A

Minnesota 's Salty Water Problem – Salt concentrations are increasing in lakes, streams and groundwater. Measure salt concentrations using a conductivity meter, graph your results, and discuss the impacts of salt on Minnesota's water resources and its plants and animals. *Brooke Aselson, Britt Gangeness, MN Pollution Control Agency; <https://www.pca.state.mn.us/water/salt-and-water-quality>*

B

Exploring macroinvertebrates and water quality – In the land of 10,000 lakes, clean water is a big part of Minnesota's culture. What IS clean water though? Scientists measure all sorts of things about water to figure out whether an aquatic system is healthy or not, and what sorts of plant and animal life it should be able to support. We will use the same tools, microscopes, hand lenses, dichotomous keys and others, to investigate macroinvertebrates - the little swimmers that call our lakes and rivers home. We'll learn how to identify macroinvertebrates and compare the organisms found in a variety of water sources to figure out which is the cleanest! *Caitlin Potter, Megan Lauzon, Holle Despen, Cedar Creek Ecosystem Science Reserve - UMN; www.cedarcreek.umn.edu/ed*

C

Watersheds, Rivers, and Landforms – How does water move through the land? How does water impact the land as it cycles and flows? Using several physical models, we will begin with the big picture- the water cycle and watersheds- and then focus in on rivers and streams, considering how water movement changes the land and impacts people as it flows. *Caitlin Potter, Megan Lauzon, Holle Despen, Cedar Creek Ecosystem Science Reserve - UMN; www.cedarcreek.umn.edu/ed*

D

Farmers: Stewards of Land and Water – Investigate the connection between water and agriculture! Hands-on activities will illustrate the many factors that impact water quality and how farmers are working to protect the land and water. *Sue Knott, Agriculture in the Classroom, MN Department of Agriculture; <https://mn.agclassroom.org>*

E

How to keep your drinking water safe – Learn where your drinking water comes from and what is being done to protect it. What can you do to protect our drinking water? *Scott Hanson, MN Rural Water Association; www.mrwa.com*

F

Rainwater Simulator – Land/ground cover and soil have a significant effect on rainwater run off; how much, if any, soil erosion (sediment is the number one source of water quality contamination nationwide); and how much rainwater infiltrates (soaks) into groundwater. Using a rainfall simulator to mimic a rainfall event, we will demonstrate how changes in land/soil cover effect soil erosion, sediment in stormwater runoff, and groundwater recharge. *Tom Petersen, John Crellin, Rodney Aaron and Jason Roth, USDA-Natural Resources Conservation Service; www.MN.NRCS.USDA.gov*

G

Minnesota Fish and their Habitats – Learn why fish are shaped and colored the way they are and how that relates to the habitats where they live. *Mark Nemeth, MN Department of Natural Resources, Fisheries and Wildlife; www.mndnr.state.mn.us*

H

The Incredible Journey – Assume the role of a water molecule as it travels through many adventures and forms of water! Learn how it travels and where we find water in our environment. Create a fun map to take as a reminder of how important water is in all its forms! *Mary Morris, Springbrook Nature Center; www.springbrooknaturecenter.org*

I

Watersheds, Runoff and the Enviroscape – Use the Enviroscape model to demonstrate what a watershed is, what is in stormwater and where it goes. See how your everyday actions at home, work or school can protect or harm water quality. *Lindsay Schwantes, Jessica Bromelkamp, Capitol Region Watershed District; www.capitolregionwd.org; Tim Olson, Bolton & Menk; www.bolton-menk.com*

J

Blue Planet – Why do we call our planet “Earth” when its surface is mostly water? Estimate the percentage of Earth’s surface that is covered by water through a fun, interactive session. *Lisa Maloney-Vinz and Alexa Hoekstra, Ecolab; www.projectwet.org/cleanandconserve*

K

What fish is that? – “Unlearn” what you know about fish identification and gain skills needed to use a dichotomous key to find the common name of the fish. *Mario Travaline, MN Department of Natural Resources; www.dnr.state.mn.us/fishing/fin*

L

A Model Stream – Learn how streams determine their path. See how changes in stream water flow and stream bank condition can quickly alter how a stream behaves. *Kim Laing and Eileen Campbell, Minnesota Pollution Control Agency; www.pca.state.mn.us*

M

Sniff Out Zebra Mussels – See how DNR Enforcement K9 dogs detect zebra mussels which are detrimental to our lakes, rivers, and streams. Learn background on K9 dogs and how they are trained; background on zebra mussels and how they found their way to Minnesota; and other ways K9 dogs are beneficial. *Julie Siems and Brent Grewe, MN Department of Natural Resources K-9 Enforcement Division; <http://dnr.state.mn.us/enforcement/k9/index.html>*

N

H2Olympics – Compete in Water Olympics to investigate two properties of water: adhesion and cohesion. *Dana Raines, Rice Creek Watershed District; www.ricecreek.org*

O

Blue River – Simulate movement of water through a river and its watershed to understand how water flows through a watershed and how that flow differs each season or as a result of weather. *Krista Jensen, MN Department of Natural Resources-Fort Snelling State Park; www.mndnr.gov/fortsnelling*

P

How Do Fish Get Mercury? – Learn the sources of mercury and how it gets into our lakes and rivers, then play a game on how mercury bioaccumulates and biomagnifies. *Carol Hubbard and Bruce Wilson, retired Minnesota Pollution Control Agency; www.pca.state.mn.us*

Q

Flush the Kids! – Residents in areas without access to public sewer systems maintain their own septic systems. Learn about the basic components of a septic system and how to take care of it, including what you can and cannot flush. Students will get “flushed” (crawl) through a mock septic system! *Septic tanks can be very dangerous, no one should ever enter a septic tank in real life! *Kristi Kalk, Sadie Wunder, Minnesota Pollution Control Agency; <https://www.pca.state.mn.us/living-green/healthy-septic-systems>*

R

Water Transport – Learn how sediment is carried by rivers and how drinking water and pollutants move underground through aquifers. *Jack Barland, Dan Henely, Tyler Winter, John Clark, Lanya Ross, Metropolitan Council Environmental Services; www.metrocouncil.org*

S

The Watershed! – Do you live in a watershed? Learn what a watershed is, your “watershed address,” and what we can do in our watershed communities to protect water quality. *Terrie O’Dea, Erik Herberg, Jen Kostrzewski, and Emily Resseger, Metropolitan Council Environmental Services; www.metrocouncil.org*

T

Stream Creatures and Water Quality – There is an amazing variety of life in our streams, lakes, and wetlands. Aquatic insects respond to changes on the land and in the water. Learn what they can tell us about water quality. *Cassie Champion and Scott Haire, Metropolitan Council Environmental Services; www.metrocouncil.org*

U

The Incredible Journey – Assume the role of a water molecule as it travels through many adventures and forms of water! Learn how it travels and where we find water in our environment. Create a story bracelet to take as a reminder of how important water is in all its forms! *Beth Carreno, Rice Creek Watershed District; www.ricecreek.org*

V

FLUSH! The Wastewater Story – Where does the water go when the toilet is flushed? Learn how wastewater is treated when it goes down the drain. *Patti Craddock, Central States Water Environment Association; www.cswea.org*

W

Macro Madness – Learn about aquatic insects and what they tell us about the health of a stream or wetland. *Maggie Karschnia, MN Wetland Health Evaluation Program, Dakota County; www.mnwhep.org*

X

Who polluted? – Use a model to represent a local water body – lake, river or stream, and participate in an interactive story dramatizing how a water body becomes polluted. This graphic example demonstrates how we are all part of the pollution problem, and that we all must be part of the solution. Students will discuss how we can conserve water and other resources and how each of us can reduce pollution, trash, and waste. *Meagan Keefe and Laura Lefebvre, Dakota County Parks; www.co.dakota.mn.us/parks*

Y

The House that Jack Built – Where does our drinking water come from? How does it get to our tap? Learn about wells and water systems. *Richard Thron, Mantyla Well Drilling, Inc.; www.mantylawelldrilling.com*

Z

World Water Monitoring Challenge – Perform experiments to discover some of the ways scientists assess water quality. *Amy Patterson and Trevor Prater, Central States Water Environment Association, Young Professionals*

AA

Just Passing Through – How does vegetation keep rainwater clean as it runs off into lakes and streams? Act out plants and raindrops to find out! *Linda Radimecky, MN Department of Natural Resources-Afton State Park, and Diane Harvey, MN Department of Natural Resources-William O'Brien State Park; www.mndnr.gov/*

BB

Clean In, Clean Out: Prevent the Spread of Invasive Species – Learn about aquatic invasive species, the problems they cause, and the actions you can take to prevent the spread and protect Minnesota's lakes and rivers. *Tina Wolbers and Keegan Lund, MN Department of Natural Resources; www.mndnr.gov/AIS*

CC

Mystery of the Disappearing Waterfall – Discover how a great waterfall moved from Saint Paul to Minneapolis and set the stage for two cities to be born. *Abby Olson and Forest Eidbo, Mississippi National River and Recreation Area (National Park Service); www.nps.gov/miss*

DD

Water Quality - Is Your Understanding Crystal Clear? – Test water clarity of water samples collected from nearby rivers. Compare results, figure out why water clarity changes from one watershed to another, and what it tells us about the health of our rivers. *Laurie Sovell, Josh Stock, MN Pollution Control Agency, <http://www.pca.state.mn.us/cmp>*

EE

Watch It Rain! – Dial up a different rainstorms and examine the affect of a soil's slope, residue cover and plant cover on water run-off and erosion *Jen Schaust, MN Department of Agriculture; www.mda.state.mn.us*

FF

Our Water Rocks Superstar Show! – Join Looney Loon at the Our Water Rocks Superstar Show where contestants share their knowledge of water resources through songs and other talents. Topics include water conservation, watershed, drinking water and more. *Students from Academy for Sciences & Agriculture, Vadnais Heights directed by Matthey Hertz; www.afsahighschool.com*

GG

Stormwater Floodplain Model – See the critical role of floodplains, retention ponds, and wetlands in flood management – and the impact that unplanned development and human activity has on stormwater runoff and flooding. *Joe Waln, Matt Bauman, Kelsey Forward, Jen Oknich and Mike Welvaert, MN Association of Floodplain Managers; www.mnafpm.org*

HH

Water Pollution on Trial – In this court, the rights of water are protected! Students serve as the jury and decide the outcome of a Minnesota water pollution court case. *Joshua Burman, MN Pollution Control Agency; www.pca.state.mn.us*

II

The Water Beneath Our Feet – Investigate how water moves through and below a watershed and learn how individual decisions affect the health of that watershed. *Angie Hong and Lauren Haydon, Washington Conservation District; www.mnwcd.org/emwrep*

JJ

Singing Rivers – Listen, sing and learn about the health of Minnesota's great rivers! *Scott Sparlin, The Coalition for a Clean Minnesota River; ccmnriver.org*

KK

Down the Dirty Drain – Why don't our streets become rivers when it rains? Learn where stormwater goes and what it might carry with it if we are not careful. *Kate Clayton, Daurius Mikrobarts, Friends of the Mississippi River; www.fmr.org*

LL

Cleaning Dirty Water: How Easy is it? – Pollutants enter our water in a variety of ways, but there are only so many methods we have to remove them. Learn about ways we try to remove pollutants from water and perform your own experiment to try to make dirty water clean again. *Kelly Perrine, City of Lakeville; <http://www.lakevillemn.gov/196/Environmental-Resources>*

MM

Buzz...Mosquitoes! – Learn about the mosquito's life cycle and how human activity contributes to the mosquito impact. *Mike McLean, Monica Wickelgren, Scott Grant and Brian Feldhake, Metropolitan Mosquito Control District; www.mmcd.org*

NN

A Cloud in a Jar? Weather in MN – Learn how water and weather are related. *Jeff Edmondson, KARE 11; www.kare11.com*

OO

What's in that water? – Learn about macroinvertebrates (small bugs that live in the water), what they can tell us about water quality, and what you can do to protect water for them and ourselves. *Alisa Reckinger, Mary Karius; Hennepin County; www.hennepin.us/environmentaleducation*

PP

Clean water comes from trees. Really? Really. – Learn how leaves are filters that stop dust, dirt, and air pollution from getting into our water. Figure out and design a tree to be the best filter. Learn how roots keep our water clean. *Teri Heyer, Cassie Kurtz and Jill Poknory, USDA Forest Service; www.fs.usda.gov/urban-connections*

QQ

Water around the world is in serious trouble! – Your actions can become part of the solution. Explore the water cycle, how cultures around the world use their water resources especially where water is scarce, and share ideas to help change the world, one drop at a time. Learn how H2O for Life can partner with your students in a service-learning experience that can change attitudes and behaviors while changing lives for students in a developing country. Save water, save life! *Judy Onufer, Danielle Kruger, H2O for Life; www.h2oforlifeschools.org*

RR

Water Jeopardy – Team up with classmates to test knowledge about water facts in this game-show style session where "Who Wants to be a Millionaire" meets "Jeopardy." *Liz Kaufenberg, Jeanne Giernet and Mary Robinson, Minnesota Pollution Control Agency; www.seek.state.mn.us*

SS

Catch a Wave! – Learn how energy can move through water without having the water move and what determines how big and fast a wave will be. *John Bushey, Riley Lake Engineering, Inc.*

Water!

North
Stage

WATER! – Discover water's history as it moves and cycles around our planet. Water is an essential resource for life and is in fixed supply. Humans use fresh water for many purposes, but pollution can render it unavailable and unsuitable. Become stewards of water by learning ways to preserve this key element. *Science Museum of Minnesota; www.smm.org*

Water
South
StageArc-N
(North)

Water Arcade – Explore interactive games and activities at your own pace. See games and activities in separate list.

Arc-S
(South)

MetroCWF.org

2018 WATER ARCADE

AIS Junior Inspector – Earn your Junior Aquatic Invasive Species Inspector certification by learning how to inspect a watercraft, identifying aquatic invasive species and removing any attached animals or vegetation.

Activity Leads – Zach Dickhausen, Riley Purgatory Creek Watershed District and Drew Dickhart, Carver County Water Management Organization

Aquatic Insects – View the amazing collection of bugs and learn about the vital role water quality plays on aquatic insects.

Activity Lead – Jessica Wyn Miller, Dragon Wynd

Bubble-ology – Learn about the surface tension of bubbles as you disappear into one!

Contact – Nanette Geroux, Metropolitan Council Environmental Services

Fishing for Trash Game – Learn about what is in your favorite fishing hole (besides fish) and what actions you can take to help clean things up.

Activity Lead – Tara Roffler, Ramsey County

Fly Fishing – Try your hand at fly fishing with Trout Unlimited volunteers.

Activity Lead – Benji Kohn, MN Trout Unlimited Education Coordinator & Dean Campbell, Twin Cities Trout Unlimited, and Bruce Gockowski, T.U.N.E. Camp MN.

Paddling & PDFs – Learn about water safety, canoeing and kayaking.

Activity Lead – Micah Ostergard, Carver County Parks

University of MN Scientific Demos & Activities – Come learn about Minnesota's Water conservation and protection efforts.

Activity Lead – Jovan Popovic, University of Minnesota

UnMixing Colors – Experiment with paper chromatography to separate mixtures.

Contact – Nanette Geroux, Metropolitan Council Environmental Services

Water Festival EnviroMagnets – Create your own environmental masterpiece through this arts and crafts hands-on activity.

Contact – Nanette Geroux, Metropolitan Council Environmental Services

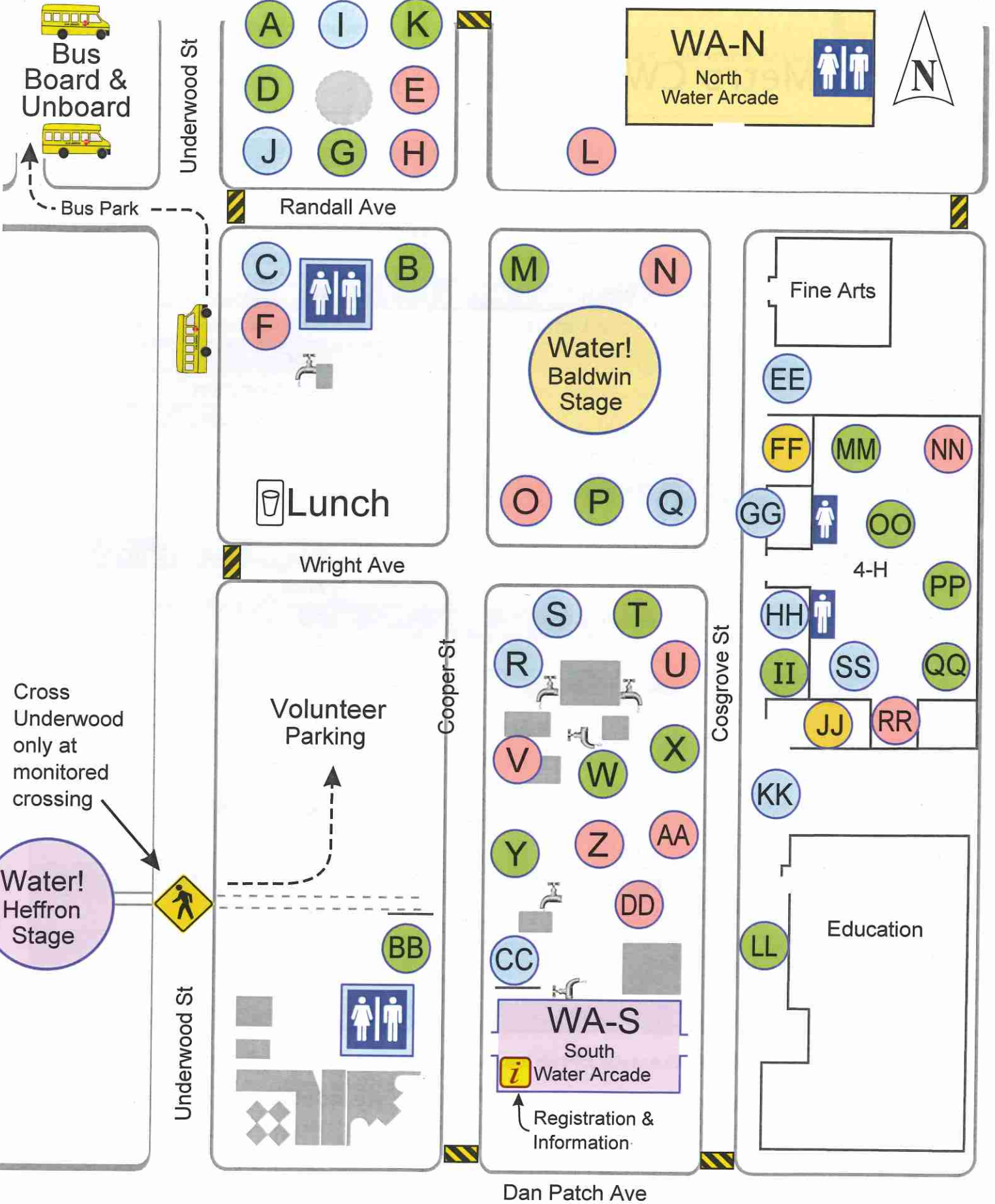
Water Footprint – Learn about water conservation and then write your own personal pledge to reduce your water footprint.

Activity Lead – Michaela Neu, Mississippi Watershed Management Organization

Watershed Sandbox – Learn about watersheds with this virtual reality and interactive sand sculpting display. Virtual reality technology project elevations and water movements in real time on the sand below as students sculpt landscapes.

Activity Lead – Erica Sniegowski, Nine Mile Creek Watershed District

Outdoor Map -- 2018 Metro Children's Water Festival



Bus Board & Unboard

Underwood St

A I K
D [] E
J G H

WA-N
North Water Arcade



L

Randall Ave

C [] B
F []
Lunch

M N
Water!
Baldwin
Stage
O P Q

Fine Arts

EE
FF MM NN
GG [] OO

Wright Ave

Volunteer
Parking
BB
[]
[]

Cooper St

S T
R [] U
V [] W X
Y Z AA
[] DD
CC []

Cosgrove St

4-H
HH [] PP
II SS QQ
JJ RR

Cross Underwood only at monitored crossing

Water!
Heffron
Stage

Underwood St

WA-S
South Water Arcade

Registration & Information

KK
LL
Education

Dan Patch Ave



Metro CWF Dictionary

English	Spanish	Swahili
Algae	Algas	Mwani or Ugozi
Aquifer	Acuifero	Chemichemi
Atmosphere	Ambiente	Anga
Clean Water	El Agua Limpia	Maji safi
Cloud	Nube	Wingu
Condensation	Condensación	Condensation
Erosion	Erosión	Mmomonyoko
Fish	Pescado	Samaki
Evaporation	Evaporación	Mvuke
Freshwater	De agua dulce	Maji Safi
Groundwater	Las aguas subterráneas	Maji ya Chini ya ardhi
Lake	Lago	Ziwa
Ocean	Océano	Bahari
Oxygen	Oxígeno	Oksijeni
Pollution	Polución	Uchafuzi wa mazingira
Rain	Lluvia	Mvua
River	Río	Mto
Snow	Nieve	Theluji
Storm	Tormenta	Dhoruba
Tree	Árbol	Mti
Wastewater	Aguas residuales	Maji machafu
Water	Agua	Maji
Waterfall	Cascada	Maporomoko ya maji
Well	Pozo	Kisima
Wetland	Humedales	Ardhi oevu

*Are there other vocab words or languages you'd like to see included on this page? Let us know!! www.metrocwf.org.

Water Connects Everyone and Everything on Earth



MetroCWF.org

postage

Hennepin County
Environment and Energy Department
Attention: Stacey L Lijewski
701 fourth Ave South, Suite 700
Minneapolis, MN 55415-1600

2018 LANDSCAPING FOR CLEAN WATER PROGRAM SUMMARY

DAKOTA COUNTY



SOIL & WATER
CONSERVATION DISTRICT

ENGAGING LANDOWNERS TO PROVIDE THEM THE SKILL AND RESOURCES
NEEDED TO IMPROVE WATER QUALITY IN THEIR COMMUNITIES BY:

LANDSCAPING FOR CLEAN WATER



10 INTRODUCTORY WORKSHOPS



10 DESIGN COURSES



82 PROJECT LAYOUTS



68 PROJECTS INSTALLED

2018 BY THE NUMBERS

- 302 INDIVIDUALS PARTICIPATED IN INTRODUCTORY WORKSHOPS
- 172 DAKOTA COUNTY RESIDENTS PARTICIPATED IN DESIGN COURSES
- 68 RAINGARDENS & NATIVE GARDENS INSTALLED
- 73% THOUGHT THE DESIGN COURSES WERE *EXCELLENT*
- 81% INTERESTED IN PUTTING IN ANOTHER PROJECT

2018 FINANCIAL CONTRIBUTORS



I loved the attention to detail, the excitement from the experts, and the confidence they gave me to help me create a beautiful garden!

-2018 Participant

2018 LANDSCAPING FOR CLEAN WATER PROGRAM SUMMARY

PROGRAM SUMMARY BY CITY

The Landscaping for Clean Water program includes educational workshops, design courses where residents plan their project, and grants that include both cost-share incentives and on-site technical assistance. This process makes it possible for participants to design and install native gardens, raingardens, or shoreline restorations that make an impact on local water quality and provide pollinator habitat!

Below is a summary of the 2018 participants by City.

Apple Valley

Intro workshop participants	37
Projects designed in class	22
Installed raingardens	2
Installed native gardens	3

Burnsville

Intro workshop participants	68
Projects designed in class	36
Installed raingardens	10
Installed native gardens	10

Eagan

Intro workshop participants	48
Projects designed in class	27
Installed raingardens	9
Installed native gardens	2

Farmington

Intro workshop participants	16
Projects designed in class	7
Installed raingardens	2

Hastings

Projects designed in class	1
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Inver Grove Heights

Intro workshop participants	30
Projects designed in class	22
Installed raingardens	1
Installed native gardens	6

Lakeville

Intro workshop participants	42
Projects designed in class	29
Installed raingardens	5
Installed native gardens	2

Mendota Heights

Intro workshop participants	4
Projects designed in class	3
Installed raingardens	2
Installed native gardens	1

Rosemount

Intro workshop participants	12
Projects designed in class	10
Installed raingardens	3
Installed native gardens	2

South Saint Paul

Intro workshop participants	11
Projects designed in class	12
Installed raingardens	5
Installed native gardens	2

West Saint Paul

Intro workshop participants	2
Projects designed in class	1
Installed raingardens	1



Check out our new video at :
Dakotaswcd.org/raingardens.html

2018 PARTNERS

Cities

- Apple Valley
- Burnsville
- Eagan
- Farmington
- Hastings
- Inver Grove Heights
- Lakeville
- Mendota Heights
- Rosemount
- South St. Paul
- West St. Paul

Dakota County

- Dakota County
- Farmington Library
- Dakota County Parks Department
- Robert Trail Library

Special Thank You

- Master Gardeners of Dakota County

TWELVE YEARS OF CLEAN WATER ACCOMPLISHMENTS

Workshop Participants
 2007-2018 **4194**

Projects Completed
 2007-2018 **498**