

Annual Report: 2020 Work Plan and 2019 Accomplishments



2019, A YEAR IN REVIEW



342 SITES VISITED

154 DESIGNED

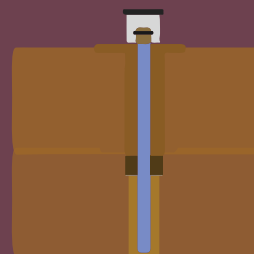
42 INSTALLED



WATER QUALITY PROJECTS

14 OBSERVATION WELLS
MONITORED

53
WELLS SEALED



846
CONSTRUCTION INSPECTIONS



21 LAKE SURVEYS - AQUATIC
BIOVOLUME, BATHYMETRY

15 WATER BODIES MONITORED
FOR AQUATIC INVASIVE SPECIES



We have survived a lot this year, with the polar vortex and record cold temperatures, a snowstorm in April and record rainfall for the year. Despite that, the Ramsey County SWCD staff worked tirelessly to complete our 2019 Work Plan.

Here are some of the highlights for 2019:

- Hosted a tour of conservation projects in Ramsey County for the 11-county Metro Conservation Districts
- Completed 506 landscape designs and site visits for mostly private landowners
- Installed 42 Clean Water Projects (rain gardens, shoreline restorations, etc.), including a number of larger restorations, such as at Lilydale Regional Parks and the Sucker Channel
- Inspected 846 sites for erosion control compliance on construction sites
- Conducted 21 point-intercept and bathymetry surveys for lake monitoring of vegetation type and abundance
- Participated in Technical Evaluation Panels for the Wetland Conservation Act
- Published our second Campus Groundwater Audit for a local school to increase groundwater awareness and conservation
- Supported pollinator puppet shows to over 1,700 K-6 students, targeting schools in underserved areas
- Provided cost share to 53 landowners to seal their unused wells
- Treated 60 acres of invasive terrestrial species plants
- Assisted with the annual Children's Water Festival, where over 1,800 fourth graders attending from the metro area to the MN State Fairgrounds for the day to learn about all things water related
- Provided oversight for 12,006 boat inspections for aquatic invasive species
- One of our Landscape Designers, Michael Schumann received "Partner of the Year" from the Ramsey-Washington Metro Watershed District

We also held three Conservation Forums this year. These are free, public events to highlight important natural resource topics, such as pollinators and climate change. Our most recent event focused on empowering the public to partner with us on the challenge to curb the spread of aquatic invasive species and brainstorm possible solutions. Over ten groups came to display their efforts at combatting aquatic invasive species. We had Brady, the zebra mussel sniffing dog, show off his talents at detecting these very small, yet destructive organisms. A PhD student from St. Anthony Falls Laboratory gave us a glimpse of the astonishing research being completed only a few miles away. A group of Girl Scouts demonstrated how they were developing a merit badge on invasive species and set-up a display to showcase their efforts.

We are looking forward to this next year. A major project in 2020 will be to move our entire division staff and stuff to the Parks & Recreation campus location. A huge thank you to all the Parks & Recreation staff that helped clear the former storage room to make room for the renovation. We are looking forward to the move, but we will miss our friends and colleagues at the Public Works building!

We will continue to follow the action items identified in our Annual and Comprehensive Plans and in our free time, the staff is looking forward to golfing at one of the county courses – looking for potential conservation projects of course!



Invasive Species - 2019 Highlights

Aquatic Invasive Species (AIS) & Terrestrial Invasive Species

- Ramsey County purchased a watercraft decontamination unit to prevent the spread of microscopic invasive species
- Tool stations at boat launches to help boaters remove plants and animals were piloted in 2019 and more will be built in 2020
- 4,168 hours of watercraft inspections performed (1,430 funded by the county, 1,176 by partners, and 1,571 by the DNR)
- Over 500 decontaminations were performed, along with 12,006 inspections. That's an average of nearly 3 inspections per hour!
- A partnership with the University of Minnesota's Genomics lab resulted in new target DNA for early detection of zebra mussels, with more tools to come.
- Two New Infestation Response Plans were initiated after a volunteer early detector and contracted survey crew found zebra mussels in Lake McCarrons and Long Lake.
- Hosted a volunteer starry stonewort search day
- Funded over 375 hours of AIS law enforcement by Ramsey County Sheriffs



Tool station at boat launch



Using decontamination unit to clean boat

Well Sealing - Clean Water Fund



- The Ramsey County Soil & Water Conservation Division utilized funding from Clean Water Fund Grants to provide cost-share assistance to landowners to seal their wells.
- Through this program, the SWCD helped to seal 53 wells in 2019. Over half of the wells sealed were in Drinking Water Supply Management Areas.
- Sealing wells, especially in Drinking Water Supply Management Areas, helps to protect groundwater resources from pollutants as unused wells provide a direct connection to groundwater.
- The SWCD will use funding from these Clean Water Fund Grants to continue sealing wells in 2020

Projects - Lake Josephine County Park Raingarden

Local Capacity 2017 Grant

Lake Josephine County Park Raingarden

- Project in partnership with Ramsey County Soil & Water Conservation Division, Rice Creek Watershed District, Ramsey County Parks & Recreation, and the Master Water Steward Program. Treats runoff from the parking lot and adjacent turf grass areas.
- Project was a great collaboration effort between multiple partners and will continue to be an example project to residents in the area
- Pollutant Reductions:
 - Total Phosphorous - 0.2483 lbs/yr
 - Total Suspended Solids - 140.43 lbs/yr
 - Volume Reduction - 11,916 cubic ft/yr
- Project Costs:
 - Total Cost - \$32,367.50
 - BWSR/SWCD Grant - \$20,000
 - RCWD Funding - \$12,367.50
 - Owner Cost - \$0.00



Josephine Park Raingarden original conditions



Completed Josephine Park Raingarden. Project collects, infiltrates, and filters stormwater from parking lot

Projects - LEAP High School

2017 State Cost-Share Fund

Raingardens and Outdoor Classroom

- Project included installation of 2 raingardens and permeable pavement for an outdoor classroom
- Funding was provided by the Ramsey County SWCD through a grant offered by BWSR and by the landowner St. Paul Public Schools.
- Pollutant Reductions:
 - Total Phosphorous - 0.1311 lbs/yr
 - Total Suspended Solids - 57.69 lbs/yr
 - Volume Reduction - 7,923 cubic ft/yr
- Project Costs:
 - Construction Cost - \$26,144.75
 - BWSR/SWCD Funding - \$10,163.00
 - Owner Cost - \$15,981.75



LEAP courtyard prior to project installation



LEAP courtyard after raingarden and permeable pavement outdoor classroom installation

Projects – Sucker Lake Channel Restoration

Shoreline Stabilization and Restoration

- Ramsey County Parks & Recreation partnered with St. Paul Regional Water Service, City of Vadnais Heights and the Vadnais Lake Area Water Management Organization to restore 550 feet of streambank along the Sucker Lake Channel located within Vadnais-Sucker Lakes Regional Park.
- This project improves the ecological functions of the channel and improves the aesthetic and programmatic experience by park guests.
- The Sucker Lake Channel is part of the Vadnais chain of lakes, which is the drinking supply for over 400,000 people, including the city of St. Paul and thirteen additional municipalities, being wholly located within a designated Drinking Water Supply Management Area (DWSMA).



Sucker Lake Channel in its original condition



Completed Sucker Lake Channel Restoration with native planting

MASWCD Area Tour

Tour of Ramsey County SWCD Projects

- The Ramsey County Soil & Water Conservation Division hosted the MASWCD Area Tour and Annual Meeting in 2019.
- Board members and staff from the metro area Soil & Water Conservation Districts attend this tour to see projects being done in other areas of the metro and share ideas, information, and initiatives.
- Annual Meeting was held at Keller Golf Course, including a brief tour of conservation and restoration projects on the course.
- The tour took place at three different projects that the SWCD worked on throughout the county, they showcased the different aspects of work that Ramsey SWCD completes each year.
- Projects Visited: Urban Roots Demonstration Project in St. Paul, Harambee Elementary School Raingardens in Roseville, and Sucker Lake Channel Restoration in Vadnais Heights.



Urban Roots Demonstration Project



Harambee Elementary School Raingardens



Sucker Lake Channel Shoreline Restoration

Community Engagement

Children's Water Festival

- The metro area hosts a Children's Waterfest each year to introduce fourth and fifth grade students to water resources. The goal of this event is for every student to understand where their water comes from and how to preserve water for future generations. This event is filled with hands-on activities for students to play and learn about water resources.

- Ramsey County Soil & Water Conservation Division staff assist with this event. One staff member also continued to serve on the Planning Committee for the event this year. With almost 2,000 students at Children's Waterfest, it is important to have knowledgeable professionals teaching students about water resources.



Staff at the Metro Children's Water Festival



Lake Phalen Waterfest

- The Ramsey-Washington Metro Watershed District hosts the Lake Phalen Waterfest each year to celebrate Minnesota's water resources. The event is filled with hands-on learning opportunities such as fishing lessons, canoe and kayak adventures, arts and crafts, and natural resource games.

- Ramsey County Soil & Water Conservation Division staff enjoys testing Waterfest participants on their native species identification skills. This is a great event to teach the next generation about natural resource preservation!



Staff at Phalen Waterfest with Smokey the Bear

Community Engagement

Public Forums

- Ramsey SWCD held three public forums in 2019 discussing topics from harmful algal blooms and water quality to pollinators, Lawns to Legumes, and Compost, to Aquatic Invasive Species
- Events were highly attended by residents of Ramsey County and featured speakers from local government agencies, the University of Minnesota, St. Anthony Falls Laboratory, and staff of the SWCD
- These events were a great opportunity for residents to learn about conservation efforts in their communities, as well as to engage in conversations on what they can do to get involved in the efforts
- We receive very positive feedback about these events and plan to continue to host them in 2020



Shahram Missaghi from the University of Minnesota discussing harmful algal blooms



Discussions at the AIS Public Forum held by the Ramsey County SWCD

Community Engagement

AIS Public Forum

- Ramsey SWCD held a public meeting on Aquatic Invasive Species and You, uniting to prevent the spread of aquatic invasive species.
- Event featured information tables by local businesses, LGUs, Girl Scouts, University of Minnesota, DNR, lead tackle drop off, and others.
- Also featured at the event was Brady the Zebra Mussel Sniffing Dog. He helps the DNR sniff out zebra mussels on boats and other items to help prevent the spread of this invasive mussel.
- Freshwater Society helped facilitate round table discussions on various AIS prevention, solutions, and the role that residents can have in these efforts.



Lead Tackle collection at the event.



Brady the zebra mussel sniffing dog attended the AIS prevention forum to share his knowledge!

Local Capacity Grant

Local Capacity Grant Initiatives

- SWCDs receive this non-competitive BWSR Clean Water Fund grant for staffing, cost-share incentives, technology/equipment and operations. In 2019 the funding allowed the Ramsey County Soil & Water Conservation Division to accomplish the following:

- Conduct Emerald Ash Borer survey of over 650 trees in Ramsey County Parks and development of a management plan.

- Attend conferences and workshops on topics such as, racial equity, lake surveys, pollinator summits, native plant identification, groundwater management, water resources, construction site oversight, new technologies and design software

- Participate in education and outreach opportunities, including the Children's Waterfest, pollinator puppet shows, newsletters, Phalen Waterfest, and host public forums on conservation topics. The photo (above right) shows staff member Brian hosting a booth at the Phalen Waterfest.

- Design and installation of a boot brush sign to inform park users on benefits of ensuring they don't contribute to spreading invasive species seeds on their boots and shoes.

- Ramsey SWCD also utilize this local capacity funding in 2019 to provide technical assistance, grant writing, and project management for prairie/woodland restoration at Tamarack Nature Center and woodland restoration at Battle Creek Regional Park.

- Find more information on these initiatives and all of our other work at www.ramseycounty.us



Staff member Brian interacting with unique characters at Phalen Waterfest



Staff member Justin with the newly installed boot brush sign.

Local Capacity Grant

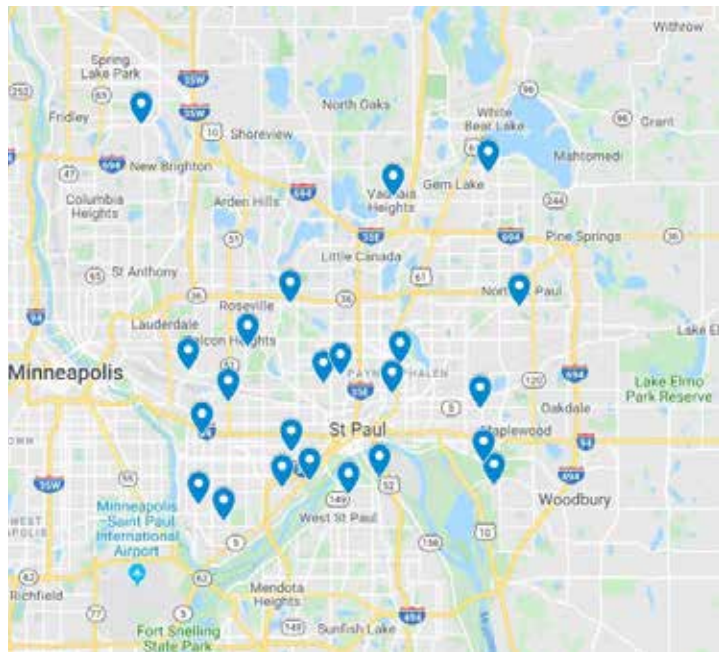
Pollinator Puppet Shows

Another great initiative Ramsey SWCD was able to fund with the Local Capacity Grant Funding was Pollinator Puppet Shows for kids at schools throughout Ramsey County. The puppet show was an interactive way for students to learn about the importance of pollinators and their habitats, and the different ways we can help to protect them. Dawn Pape put on the education puppet show for over 1,700 students (and their teachers) at 23 schools in Ramsey County.

Pollinator Education Puppet Show Schools List:




- Highwood Hills Elementary School
- Cowern Elementary School
- Four Seasons A+ Elementary
- Farnsworth PreK-4 Lower Campus
- Hamline Elementary School
- Vadnais Heights Elementary
- Chelsea Heights Elementary
- Horace Mann School
- Paul & Sheila Wellstone Elementary School
- St. Anthony Park Elementary School
- John A Johnson Elementary School
- Cherokee Heights Elementary
- Saint Paul Music Academy
- Lakeaires Elementary
- Barack and Michelle Obama Elementary
- Highland Park Elementary School
- Eastern Heights Elementary
- King's Kids Preschool
- Bridge View School
- Riverview West Side School of Excellence
- Parkview Center School
- Global Arts Plus-Upper Campus
- Battle Creek Elementary

The map to the right shows the locations of the 23 schools that this educational puppet show went to in 2019.



2020 WORK PLAN

RAMSEY COUNTY PARKS AND RECREATION SOIL & WATER CONSERVATION DIVISION

	KEY MESSAGES / CALL TO ACTION	ACTION ITEMS & COMPREHENSIVE PLAN PAGE NUMBER
 <p>CLIMATE CHANGE Reduce Impact, Adapt to Climate Variabilities, & Minimize Flooding</p>	<p>Community Resilience Impacts to climate variabilities in Ramsey County. Resilience in Ramsey County Comprehensive Plan. Reuse potential for Ramsey County.</p>	<p>1. Host a public forum on Climate Variability and Adaptation 2. Collaborate with LGUs to Conduct Stormwater Interception Potential studies in areas prone to flooding to locate strategic areas to place BMPs Reference: Comp. Plan Page 61</p>
 <p>BIODIVERSE ECOSYSTEMS Promote Biodiverse Ecosystems</p>	<p>Support Lawns to Legumes Program Plant native plants to restore habitat for pollinators. Control Invasive Species Learn what the problem plants and animals are and how to control them.</p>	<p>1. Support Ramsey County Cooperative Weed Management Area (CWMA) 2. Complete macrophyte and biovolume studies on lakes and storm ponds 3. Provide staff to inspect boats at launch sites 4. Evaluate opportunities to increase pollinator habitat on cost share projects Reference: Comp. Plan Page 63</p>
 <p>URBAN AGRICULTURE Increase Urban Agriculture & Improve Soil Health</p>	<p>Healthy Soil Sustains Us. Stop Treating Soil Like Dirt! Plant native plants for habitat and improved soil health. Reduce Food Waste Promote Composting</p>	<p>1. Provide site visits for agricultural landowners interested in the MAWQCP 2. Complete an inventory of all community gardens in Ramsey County Reference: Comp. Plan Page 65</p>

	KEY MESSAGES / CALL TO ACTION	ACTION ITEMS & COMPREHENSIVE PLAN PAGE NUMBER
 <p>GROUNDWATER Conserve and Protect Groundwater</p>	<p>Groundwater is a vital natural resource to Ramsey County</p> <p>Understanding the interaction of groundwater and surface water is essential in developing effective policy and planning efforts</p> <p>Protection efforts will be a priority</p>	<ol style="list-style-type: none"> 1. Seal an average of 20 unused private wells per year 2. Cross reference Ramsey SWCD well inventory with the Minnesota Well Index 3. Maintain an electronic inventory of all septic systems in Ramsey County 4. Assist with update to Ramsey County Geologic Atlas <p>Reference: Comp. Plan Page 48-49</p>
 <p>LAKES, RIVERS, CREEKS Protect and Restore Surface Water</p>	<p>Your Street Connects to Lakes and Rivers.</p> <p>Reduce stormwater pollution runoff.</p> <p>Salt Smarter</p> <p>80% of Ramsey County residents' drinking water comes from the Mississippi River.</p>	<ol style="list-style-type: none"> 1. Install minimum 12 BMPs per year 2. Conduct at least 250 site visits annually 3. Track and map installed BMPs 4. Increase native vegetation buffers on shorelines <p>Reference: Comp. Plan Page 51-52</p>
 <p>WETLANDS Protect and Restore Wetlands</p>	<p>Wetlands Serve Valuable Functions such as Providing Habitat, Water Filtration, and Water Storage.</p>	<ol style="list-style-type: none"> 1. Serve on Technical Evaluation Panels 2. Administer the annual WCA grant from BWSR 3. Provide delineator training to all interested staff, with at least 2 staff completing Wetland Delineator Certification Program <p>Reference: Comp. Plan Page 67</p>
 <p>PUBLIC ENGAGEMENT Increase Public Engagement Across All Communities</p>	<p>ALL MESSAGES</p>	<ol style="list-style-type: none"> 1. Support the success of cities and WMOs in their outreach efforts such as RWMWD's Waterfest and the Metro Area Children's Water Festival 2. Update outreach materials yearly to promote programs and services 3. Add two volunteer reporters to the rain gauge network 4. Provide opportunities to interact with diverse communities <p>Reference: Comp. Plan Page 57-58</p>