



FRESHWATER

WATER CONSERVATION ADVISOR TRAINING

Phase 4: Ongoing Implementation and Evaluation Year 4: July, 2020–June, 2021

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Project Goal

The goal of this project is to create a Water Conservation Advisor education and training program to train a corps of Minnesota Water Stewards and other master-level volunteers who specialize in water conservation best practices. Trained Water Conservation Advisors will be equipped to educate and engage both individuals and local community groups—including neighbors, homeowner associations, schools, churches, businesses, and others—in water conservation practices and complete projects that enhance groundwater protection.



Project Update and Final Report

June 30, 2021

BACKGROUND

The Minnesota Water Steward Program (MWS) was originally designed to address Minnesota Pollution Control Municipal Stormwater (MS4) requirements with a focus on reducing the amount of sediment and other pollutants entering state waters from stormwater systems. Water Steward volunteers were trained to address water quality issues linked to stormwater by enhancing infiltration and mitigating runoff, with most projects centering on rain garden installation and education. The program quickly expanded to include water issues in rural areas, providing training in habitat restoration for shorelines, prairies, and woodlands.

With the generous support of the Metropolitan Council, the Water Conservation Advisor program was established, further broadening Water Steward training to include groundwater education and water efficiency. Water Conservation Advisor curriculum explores groundwater and water treatment, answering questions like, “Where does my tap water come from, how is it treated and delivered, and where does it go?” In addition, this coursework promotes an understanding of groundwater/surface water interaction and issues of groundwater shortages and/or contamination in various parts of the state. Adding water quantity to quality in the Steward equation amplifies the impact of Water Stewards in their communities.

What we created.

Who we are reaching. How we are adapting.

CURRICULUM DEVELOPMENT

In the first year of the project, based on content and feedback generated from subject matter experts, four online modules and one in-person workshop were developed. The online curriculum delivers basic water system science, information on water availability and use, a guide to exploring specific local water conservation issues, and an array of best water efficiency practices. The final module helps Water Conservation Advisors understand, communicate, and implement best practices for both indoor and outdoor water efficiency and directs them to the WCA Resource Hub, a library of resources and teaching tools to use when planning and carrying out water efficiency activities and education in communities. A set of prepared activities available in the WCA Resource Hub serve as templates to guide participants in developing projects of their own. The resource hub is also where participants can go to dig deeper into areas of interest or concern.

An in-person workshop was also designed to check understanding, provide guided practice, and create space where WCAs plan and launch activities.

PILOT & REVISION

Piloting and revision of the Water Conservation Advisor curriculum occurred in fall 2018–spring 2019. Thirty highly active Stewards and two curious Master Naturalists responded to the invitation to complete and evaluate the WCA online course and workshop. In lieu of a specific capstone project, we asked these participants to provide detailed, constructive feedback on the program, which they did. In addition to their invaluable insights, we have seen some great ongoing water efficiency work emerge from this group of early participants, confirming our belief that insights gained into water efficiency issues and action persist, informing their Steward work going forward.

The leadership exhibited by this group is notable. WCAs serve on Watershed District Advisory Councils, Minnesota Water Steward leadership teams, and various environmental committees in their communities. They freely share their insights with both the Minnesota Water Steward community through Facebook and email postings as well as the broader community in letters to the editor and other forums.



Paul's rain barrel/pump setup

Paul Gardner is one example of a MWS-WCA who leads in a variety of capacities. Paul was certified as a Minnesota Water Steward in 2017, participated in the 2018 fall pilot of the Water Conservation Advisor program, and shortly after was appointed as administrator of the Clean Water Council in 2019, a position he still holds. In addition to his statewide leadership on the council, Paul has taken the lead in his community, performing irrigation system audits for neighbors. He also experimented with turf replacement in his yard, posting step-by-step how-to coverage to the MWS community. His most recent endeavor involves innovating with his rain barrels to pump water to a sprinkler system in his yard.

Rachel Hanks, Trudy Dunham, and Carolyn Brooks were inspired by the 2019 WCA workshop

presentation delivered by Carmen Carruthers, outreach director with Citizens Utility Board of Minnesota. In innovative collaboration, they designed a water bill assessment form (right) and process which they offered at CUB workshops, providing water bill consultation to complement the board's utility bill consults. The forms are available in the WCA Resource Hub, and CUB remains open to continued collaboration with interested WCAs.

In addition to previously certified Stewards, a group of eight Steward candidates in the 2019 cohort followed the WCA track in their certification, exploring local water efficiency issues and applying conservation best practices in their capstone projects.

PROGRAM ADAPTATION

We ascertained from the start of this project the impact and value in providing all Stewards with an understanding of the connection between surface

Water bill assessment form

FOR INTERNAL USE ONLY: WCA REP:	
Home	
Rent/Own (circle one)	# of occupants:
Age of Home:	Size of Home:
Water System	
Water Softener (Y/N)	Reverse Osmosis (Y/N)
In-ground irrigation (Y/N)	Pool/ spa? (Y/N)
If yes, is it manual, on a timer, or a smart timer?	
Water Bill	
Statement Date:	Amount: \$
# of units:	# of gallons:
Current Water Saving Techniques	
Participating in municipal water saving programs (Y/N)	Current at-home water conservation practices:
If yes, list programs:	
Recommendations from WCA:	

Home Water Bill Assessment

First Name: _____

Last Name: _____

Email: _____

Phone: _____

Street: _____

City: _____ State _____

Zip: _____

How did you hear about us?

What water related topics are you interested in discussing?

Interested in an at-home visit? Y/N

and groundwater and the varied supply and health of groundwater throughout Minnesota. Therefore, with WCA coursework developed and tested, we began infusing this vital information into the 2020 and subsequent general Water Steward online curriculum. All Stewards now gain an understanding of groundwater science, Minnesota's particular groundwater concerns, and efficiency practices. Those following the WCA track receive, in addition, focused exploration of local water efficiency issues and best practices in their capstone projects. This continues to be the format for WCA certification.

While our group of eight MSW/WCAs candidates in the 2020 cohort had their project plans challenged and delayed by the pandemic, several have now completed their initial work and others are on their way. Several of these are highlighted in this report.

WHERE WE ARE TODAY: 2018–2021

Overall, to this point in the project, we have trained and certified 51 Water Conservation Advisors. Three of these have since moved away from the region, disseminating their curiosity, knowledge, and action for water to new regions. Here in the metro area, we are seeing more Water Stewards as well as Conservation Advisors involved in water efficiency projects. While the lines may seem to blur a bit between stormwater management and efficiency measures, the message is clear—rain gardens, turf management, rain barrels, etc., all reduce reliance on groundwater and/or potable water. Water efficiency is important, even in our land of 10,000+ lakes. Leadership and education that encourages behavior change—indoors, but particularly outdoors where irrigation systems are used—really comes into focus in areas facing decreasing groundwater supplies. Each of these volunteer leaders is building bridges of understanding and action for clean, sustainable water in unique ways within their own communities and networks.

NEIGHBORHOOD CHAMPION

Lori Shannon turned her yard into a working example of what people in her neighborhood can do to protect water. She showcases rain barrels, a bee lawn, and a grass permeable walkway, and a native plant rain garden built in collaboration with the people next door. On June 15, 2021, Lori threw an “open backyard” event to show off her efforts and educate and inspire her neighbors to the possibilities in their own yards. Lori shared, “This has been such a fun learning experience! I’ve lived in condos/apartments my whole life, so this is my first foray into gardening /landscaping. It’s scary but I really enjoy it!”

BUSINESS COLLABORATION

Town Hall Tap

Kristin Winchek refers to the owners of Town Hall Tap as her “chosen family,” based on a relationship that reaches back to her college days. While considering ways to encourage people to capture and use rainwater—instead of tap water—for garden irrigation, the whisky barrels Town Hall uses in their brewing process caught her attention. Repurposing these beautiful wooden barrels seemed like the perfect way for the company to support work for water efficiency and give back to the community. Town Hall Tap was happy to oblige! Through the generous donation of barrels by Town Hall Tap, Kristin has already held two rain barrel building workshops in south Minneapolis. For her second workshop she enlisted another business, Hard Shell Fitness, as the location. Now she is working with Hard Shell Fitness to capture rain water on their property—and she’s got her eye on other breweries throughout the state for future rain barrel events. [Watch Kristin’s workshop video.](#)



Town Hall Tap rain barrel event



Future site of native planting patio space at Roundtable

Roundtable Coffee Works

A team of Minnesota Water Steward/Water Conservation Advisors certified in 2019 is finally in position to complete their capstone project. Theresa Friendshuh and Travis Moe are excited to be partnering with Shawn Person, owner of Roundtable Coffee Works, to design and install a native planting patio space for Roundtable this summer. Water for the gardens will be captured on site, eliminating the need for irrigation from a potable water source. Educational signage will share water friendly tips with coffee shop clientele. Theresa explains, “This space will collect runoff from the building and parking lot and provide pollinators with forage and habitat. It

will also give the public an opportunity to connect with a little pocket of nature in an industrial area lacking green spaces.”

WATERSHED DISTRICT PARTNERS

VLAWMO

With the support of a Vadnais Lake Area Water Management (VLAWMO) Community Blue grant, Katherine Doll Kanne hosted a free, public webinar last summer to share the water conservation and stormwater management benefits of rain barrels, as well as how to install and maintain them. The first 15 eligible households registering for the webinar within the VLAWMO area received a free 45-gallon rain barrel, scheduling a pick-up at Katherine’s home. At the time of pickup, if these households desired, Katherine offered a tour of some of the watershed BMPs projects in her yard—a couple types of rain barrel setups, rain gardens, and swale. Katherine has provided support at Kristin Winchek’s whisky barrel workshops, and plans annual reprisals of her own VLAWMO workshop.

[Watch Katherine’s VLAMO workshop video, Rainbarrel Workshop: Install and Use](#)

Nine Mile Creek Watershed District

In the spring of 2020, Kate Karl and Ed Mallam intended to complete their WCA capstone project with the city of Minnetonka. They set out to provide a community education program to encourage efficient, sustainable outdoor water consumption. The city of Minnetonka was exploring distribution of smart irrigation meters under Met Council’s Water Efficiency Grant Program, so Kate and Ed planned a community engagement effort focused on funding, installation, and maintenance (or yearly check-ins) with homeowners to see how the product is performing. Unfortunately, the pandemic prevented in-person community education events, and the city of Minnetonka proved unable to support volunteer leadership in their efficiency programming.

Kate and Ed are now partnering with Nine Mile Creek Watershed District and an active group of previously certified Stewards in the development of groundwater educational materials that can support municipalities and others in their water efficiency efforts. As Kate describes, “Our contribution to this project includes producing educational video clips related to water conservation. My topic was on [the intersection between water and energy conservation](#). I focused on the history of water as an energy source in Minneapolis with the milling industry and how water and energy conservation are surprisingly very connected! It was very fun to research this project and learn more from our local history with hydropower and how it has shifted and improved over the years. We have also been assisting outreach

staff at Nine Mile Creek Watershed District in editing, fact-checking, and unifying the clips to appear as pieces of a common project. We began releasing the videos on the [NMCWD social media platforms](#) with the hashtag #groundwaterwednesdays. This is my first time producing educational media in water conservation, and once you work out the technical ups and downs, I have found it to be a very rewarding experience and incredibly accessible for our audience!”

MUNICIPAL CONSULTATION

David Nuccio is a Minnesota Water Steward/Water Conservation Advisor candidate. He will complete his capstone project this summer and receive his certification in October 2021. David is consulting with Kristin Seaman, a 2016 MWS and environmental resources specialist with the city of Woodbury, on irrigation system efficiency in his homeowners association (HOA). David was dismayed to discover that the irrigation system installed in his newly constructed HOA was misaligned and mistimed. As this is a newly built HOA with a new irrigation system, the inefficiencies appear to be the result of disconnect between HOA management and the company on the ground providing irrigation services. With the guidance of the city of Woodbury, David is running a system audit and assessing the efficiency of the system. He intends to work with his HOA management and grounds crew to increase irrigation efficiency and then offer what he has learned to other HOAs around the metro area. He reports, “(As) I did some adjustments to the sprinkler heads ... someone from another HOA stopped and wondered if I could speak to their HOA.”



Sprinkler heads before and after



Impact

NEXT STEPS

Current Water Conservation Advisor projects indicate several compelling growing edges for water efficiency volunteer leadership:

- Lack of capacity and/or interest in engaging and supporting volunteer leadership at the municipal level has been the persistent challenge to expanding the Water Conservation Advisor program in support of the Metropolitan Council's Water Efficiency Grant Program. However, Water Conservation Advisors Kate Karl and Ed Mallam's experience with the city of Minnetonka suggests that, rather than engaging with MWS/WCAs independently, municipalities may be more interested in working through watershed district partners to leverage MWS/WCA time and resources in developing resource materials that municipalities can brand then brand as their own. The success of the short videos produced with Nine Mile Creek Watershed District and released with hashtag #groundwaterwednesdays invites further work in this area.
- David Nuccio's work with the city of Woodbury may open a door to further collaboration between homeowners associations and municipalities on irrigation efficiency, as well as promotion of irrigation efficiency training/certification for irrigation system providers/maintenance crews.
- Exploration of possible legislation specifying use of WaterSense certified smart controllers on new irrigation systems may be on the horizon.

CONCLUSION

As stated in the project goals, we set out to inspire and empower community leaders in water conservation best practices. We are grateful for the generous support of the Metropolitan Council in this work. As we designed the Water Conservation Advisor curriculum, it became clear that this information can have a broader, deeper, and more sustainable impact as part of general Water Steward training.

Understanding the connection between surface and groundwater and the varied supply and health of groundwater throughout Minnesota is integral to the work of all Stewards. This is the most powerful outcome of this project. With the addition of groundwater education and water efficiency practices, the Minnesota Water Steward program is a more responsive and adaptable tool for public education—delivering the appropriate level of sound science background, building awareness of pertinent local water issues, and guiding practice in conversation around these issues.