

# Advancing Watershed Health Through Watershed Champions

## Final report for ENC18-169

Project Type: Professional Development Program

Funds awarded in 2018: \$74,993.00

Projected End Date: 04/03/2021

Grant Recipient: National Wildlife Federation

Region: North Central

State: Michigan

Project Coordinator:

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National Wildlife Federation

## Project Information

### Abstract:

Modeled on the National Wildlife Federation's successful Cover Crops Champion program, our new Watershed Champions initiative seeks to improve source water quality for rural Iowa water utilities by 1.) engaging local producers and 2.) increasing conservation practice adoption in the watershed.

Water contamination from nitrates is often linked to the over application of fertilizers and animal manures on private lands, and mitigation can be prohibitively expensive for water utilities (our target audience). Source Water Protection (SWP) plans are an affordable alternative, but utilities often lack the knowledge, capacity, and partnerships to be successful. To address this challenge, National Wildlife Federation (NWF), in partnership with the Conservation Districts of Iowa (CDI) and Practical Farmers of Iowa (PFI), will convene water utilities and Source Water Protection teams in northwestern Iowa to implement Source Water Protection plans. Through the proposed professional development opportunity, water utility operators will receive in-depth training on coordinating SWP outreach and educating stakeholders, as well as ongoing support from project partners in watershed planning, community engagement, and farmer communication. They will become "Watershed Champions." Additional tools, such as a communications manual, infographics, and a final report will help ensure Champion success and facilitate transferability to other communities. Following the training, each Champion will launch a two-year pilot project under the guidance of NWF and CDI staff. With the ultimate goal of improved watershed health, this professional development intervention will give Champions new communication and collaboration development skills, which they will apply in SWP implementation and new farmer partnerships.

### Project Objectives:

OUTCOMES

The purpose of this project is to improve source water quality for rural water utilities in Iowa by engaging local producers and increasing conservation practice adoption in the watershed. Outcomes include:

Short-term Outcome:

Champions demonstrate new communication knowledge and improved partnership development skills as evidenced by participant survey. Key success indicators include: number of individuals who received training; number of participants who gain or increase knowledge, awareness, and skills about sustainable agriculture topics, practices, strategies, approaches; number of participants who intend to use knowledge in existing or new programming.

Intermediate Outcome:

Champions apply new knowledge through SWP implementation and develop new partnerships with farmers as evidenced by participant survey. Key success indicators include: percentage increase in the number of partnerships pre- and post-training; number of participants who incorporate information from project into new education programs; number of farmers reached through project programs.

Long-term outcome:

Watershed conditions are improved as evidenced by farmer implementation of conservation practices listed in the SWP plans. Key success indicator includes: number of producers who adopt sustainable systems, approaches, and practices; number of acres, animals, or other production units affected by adoption.

Introduction:

Advancing Watershed Health through Watershed Champions

Progress Report

October 2018—December 2019

We have made significant progress toward completing the goals and objectives of this project. We have successfully formed working relationships with three communities in western Iowa to serve as Watershed Champions. These Champions have begun working on outreach efforts aimed at engaging farmers in source water protection efforts through conservation practice adoption. We have continued to support these outreach efforts with the assistance of the Conservation Districts of Iowa (CDI), a statewide conservation organization. This ongoing support has involved periodic check-in's with Champions and in-person trainings.

We held an in-person training with representatives from our Watershed Champions in January 2019. This training workshop focused on building skills to conduct outreach to farmers on conservation practices (agenda for this workshop is attached). In this workshop, participants learned the basics of decision making and behavior change, communication strategies for reaching new audiences, outreach event planning, and presentation skills. We held a farmer panel as part of this workshop to expose the Champions to farmer perspectives on conservation. Following this workshop, we produced a blog post to share through the Practical Farmers of Iowa, which explained our training approach and the main takeaways from the workshop (attached). We have a second in-person workshop planned for March 2020 to discuss lessons learned and brainstorm resources and tools needed to support future outreach efforts. This workshop will be important for continuing to support Watershed Champion pilot outreach projects through the remainder of 2020.

We are currently working toward building a communications manual to support future outreach efforts by municipal water systems. These resources will include, including: basic descriptions of conservation agriculture practices; outreach planning tools (such as the Logic Model planning rubric) and communication planning work sheets; and outreach event ideas and templates. As part of this communications manual, we worked with a graphic designer to produce an infographic that Watershed Champions can use in their outreach efforts (attached in Information Products). We plan to continue to develop this communications manual with input from CDI and our Watershed Champions to produce a useful product for future outreach efforts.

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## Education

### Educational approach:

This project sought to support water quality improvements in agricultural landscapes by increasing the capacity of water utilities to encourage local farmers to adopt conservation practices. The primary method for building this outreach capacity was through in-person training workshops, supplemented with supporting materials. Water utility professionals were invited to a 2-day workshop in January 2018, at which they were provided with information about the basics of decision making and behavior change, communications strategies to engage farmers, and outreach event planning. To bolster the lessons provided by experienced outreach professionals from NWF and Conservation Districts of Iowa, we also hosted a farmer panel to share producer perspectives on how to provide support for conservation practices. Following the workshop, utility professionals were provided with supplementary materials to support their outreach efforts. These included a communications guide with strategies for different approaches for target audiences, a partnership development guide, and infographics to use in outreach activities. In addition, we provided regular feedback and strategic advice to these water utilities “champions” through semi-annual check-in calls.

## Education & Outreach Initiatives

### **Advancing Watershed Health through Watershed Champions Progress Report**

#### Objective:

Provide training and ongoing support for water utilities champions to engage local farmers in conservation outreach.

#### Description:

The original intention of this project was to provide a second in-person training in early 2020, but due to COVID-19 pandemic restrictions on in-person travel and meetings, this was not possible. We pursued a potential virtual meeting to provide supplementary guidance, but after consulting with the water utilities champions and partner organizations, we determined this would not be productive given the constraints faced by our champions in managing work responsibilities during the pandemic. We continued to provide strategic advice through regular check-in calls with champions. These check-ins allowed NWF to provide guidance on specific challenges or opportunities conducting outreach with local farmers, including messaging advice and methods. This outreach support was particularly important given the significant challenges the champions were facing given health restrictions

and workload challenges due to the pandemic.

#### Outcomes and impacts:

Qualitative assessment through conversations with our water utilities champions indicated that the training and support materials provided valuable information and increased their knowledge on key concepts. In particular, they indicated they had learned communication strategies and approaches that appealed to different types of farmers and how to plan and host outreach events.

While this increase in knowledge and skills reflects favorably on this project, not all skills were actively used by champions. Due to individual and organizational capacity limitations (time and financial resources), the water utilities champions are not fully able to conduct outreach events. Their primary outreach activities were 1-on-1 conversations with farmers, mostly based on established relationships with these producers. The communications skills developed through the project trainings contributed to these individual interactions (at least one utility operator indicated they used messaging strategies learned through the in-person training). Other guidance provided was more useful for group-based outreach approaches (field days, workshops, etc.), which were not heavily utilized by champions during the grant period. Despite their organizational limitations, the utilities champions did make progress with their outreach activities, including getting several new practices adopted by local farmers, such as multiple physical control structures to reduce erosion and cover crop adoption in key locations.

## **Advancing Watershed Health through Watershed Champions Progress Report**

#### Objective:

Outreach and process materials that ensure project success and transferability

#### Description:

In consultation with project partners, we developed a number of outreach support resources. These were primarily based in our experiences gained through this project, including interactions with water utility champions and the insights from the utilities survey. These resources included a series of infographics in two primary categories: 1) graphics that reinforce key lessons from trainings and support (particularly differences among segments of the farming community and how to message to them); and 2) resources to be used in outreach efforts. These include graphic representations of the role of agriculture in protecting drinking water resources. In addition to infographics, we published a communications and partnership development guide designed to support outreach by water utilities. This guide walks water utilities professionals through the process of developing a communications and outreach strategy, including how to development partnerships with key stakeholders.

#### Outcomes and impacts:

These resources were developed based on our experiences and were developed with input from multiple resource professionals. These resources will be shared through the NWF sustainable agriculture website and the SARE resources website. NWF will continue to use these resources in outreach support efforts with water utilities,

resource professionals, and other key stakeholders promoting agricultural conservation efforts.

## **Water utilities survey**

Objective:

Identify knowledge and capacity barriers faced by water utilities to engage in agricultural conservation outreach.

Description:

The water utilities actively participating in this project represent only one subset of water utilities in Iowa or the Midwest. To broaden our understanding of the opportunities and barriers faced by water utilities across the state, we commissioned a small research study. This survey, conducted in May 2020, provided key insights from mostly-qualitative interviews with 11 utility operators. Among these important insights were:

1. Nearly all have a good understanding of agricultural runoff: The participants – water utility staff and municipal leaders from small, mid-size, and larger cities in Iowa – understand that runoff from farms is contributing to excess nitrates in surface water. They are also largely aware of at least some potential changes farmers could make to reduce the problem, such as buffer strips next to streams. Fewer have the impacts of livestock farming top of mind, but when prompted most are aware of this issue as well.
2. Most say runoff has an impact on utilities: Many say that runoff has a clear impact on utilities who draw from surface water by increasing the cost of water treatment. Those whose drinking water comes from bedrock wells say their own utilities are less directly affected, but they understand that those downstream from them have to deal with the impacts.
3. They range in their willingness to engage with farmers directly: Some have already had conversations with farmers about runoff and farm practices and/or see communicating with farmers and the general public as part of their job. Others see it as a lower priority, particularly when their utility's water comes from bedrock wells and is not as directly affected.

Concern about engaging in political conflict is a key barrier to engagement: Several of the participants say they hesitate to speak out too strongly about these issues because of the political strength of the agricultural industry in Iowa. They worry about negative repercussions of being critical of farm practices. Other barriers to engagement include limited time and resources.

Outcomes and impacts:

This research study resulted in recommendations for utilities engaging in conservation communications with agricultural audiences. We recommend that utility professionals do the following:

- Use local leaders and public officials in their outreach efforts as influential gatekeepers;
- Present ways such leaders can engage with their communities that are

collaborative rather than confrontational;

- Share information about the science and economics of the range of solutions NWF is promoting (beyond buffer strips, which are well understood by this group) may be helpful for any outreach they are conducting; and
- Consider communicating on examples of success, such as farmers who have implemented some of these practices and the impact their changes have made.

## **Informational webinar**

Objective:

Further disseminate project findings and outreach tactics with a broad, state-wide audience.

Description:

In March 2021, NWF hosted a 1.5-hour webinar to share project insights, findings from the survey of Iowa utilities, and feature watershed-level outreach efforts of Cedar Rapids, Iowa. This webinar included presentations by NWF staff, the researcher who conducted the utilities survey, and the watersheds and source water coordinator for the city of Cedar Rapids. We also included significant time for Q&A with the speakers and open discussion in the last 20 minutes of the webinar.

We made the determination to feature the efforts of Cedar Rapids rather than our utilities champions for multiple reasons. While our champions made significant effort to engage farmers in conservation outreach, these were mostly through 1-on-1 interactions and these efforts were also hampered significantly due to COVID-related restrictions. While individual-level outreach is an important lever for promotion conservation practices, we do not see as much potential for scaling this type of outreach to achieve landscape and regional scale water quality protection goals. Our interactions with these champions through 2020 and 2021 also revealed their significant time and workload challenges. These factors together led us to approach a new partner, the city of Cedar Rapids, which has made significant efforts to expand agricultural outreach. We believe this example provided a more scalable outreach approach with wider appeal to stakeholders engaging or supporting conservation outreach.

Outcomes and impacts:

This webinar was promoted widely with multiple organizations in Iowa, including Conservation Districts of Iowa, the Iowa League of Cities, the Iowa Rural Water Association, the Sand County Foundation, and NWF's Cover Crop Champions network. We had 36 individuals register for the webinar, representing at least 30 different organizations, including municipal governments, state and federal conservation agencies (NRCS, SWCDs), non-profit conservation organizations, and agricultural service providers. The webinar was attended by 14 individuals, with an additional 5 reaching out after the event for recordings. Following the webinar, we conducted a short evaluation survey with participants (10/18 responded). This evaluation indicated that 60% of participants had increased knowledge of farmer communication strategies, 90% had increased knowledge of outreach barriers faced by water utilities, and 100% learned about a new program or initiative. The webinar was well-rated by participants, with an average rating of 4.3/5 when asked to rate the quality of the webinar [scale: excellent (5), good (4), average (3), fair (2), poor

(1)].

## Educational & Outreach Activities

- 25** Consultations
- 9** Curricula, factsheets or educational tools
- 1** Published press articles, newsletters
- 1** Webinars / talks / presentations
- 1** Workshop field days

### **PARTICIPATION SUMMARY:**

- 2** Extension
- 2** NRCS
- 1** Researchers
- 8** Nonprofit
- 8** Agency
- 7** Ag service providers (other or unspecified)
- 8** Farmers/ranchers

## Learning Outcomes

- 25** Participants gained or increased knowledge, skills and/or attitudes about sustainable agriculture topics, practices, strategies, approaches
- 3** Ag professionals intend to use knowledge, attitudes, skills and/or awareness learned

## Project Outcomes

- 6** New working collaborations

Project outcomes:

Communities throughout the Midwest face water quality challenges stemming from agricultural activities, including crop production systems using extensive soil tillage and synthetic inputs. The support and training provided through this project were designed to supplement source water protection for communities in agricultural landscapes by improving outreach to farmers and land managers in the watershed. This project focused on supporting communities with the highest need: small

communities in heavily agricultural regions facing significant water quality impairment. Educational activities, including a multi-day training workshop, communications and outreach materials, and ongoing support through check-ins, increased the knowledge and skills of project participants, though these skills were not always translated into changed outreach behaviors. Much of the training materials were aimed at conducting outreach to groups of agricultural stakeholders. The water utilities champions we supported in this project most often conduct one-on-one outreach with farmers, typically based on existing personal relationships or connections. While the communications strategies and approaches we provided are valuable for these types of outreach activities, many of the outreach supports given are not relevant for this audience. One-on-one outreach activities did result in successes for our utilities champions, including adoption of cover crops and installation of structural erosion control measures by several producers. These changes were typically the result of engagement efforts conducted over multiple years.

While small communities need support for source water protection efforts, these communities face significant constraints in capacity and ability to conduct active outreach with farmers. Water management professionals in these communities typically serve multiple roles simultaneously and are limited in their ability to devote time and expense to outreach. Some communities also experienced staff turnover that resulted in significant disruptions to outreach activities as internal roles are reassigned and workloads rebalanced. Staff turnover also represents a loss of institutional knowledge, as source water protection efforts are typically only conducted by a small number of municipal staff.

Through this project, we developed outreach materials that can support ongoing outreach in source water protection efforts. These materials included infographics and communications guides that provide key messaging approaches and support development of local partnerships to enhance ongoing agricultural conservation. Based on experience gained through conducting trainings in this project and similar capacity-building efforts, these materials aim to match communication methods with farmer motivations. We plan to continue to provide these materials to outreach professionals, including those engaged in source water protection efforts as well as general agricultural conservation efforts. We also developed relationships with several new communities toward the end of the project who have more capacity for farmer engagement. Cedar Rapids and Dubuque are potential future collaborators. We are also working with the Sand County Foundation to support agricultural outreach efforts through agreements with municipalities in Iowa and Illinois.

**3** Agricultural service provider participants who used knowledge and skills learned through this project (or incorporated project materials) in their educational activities, services, information products and/or tools for farmers

**8** Farmers reached through participant's programs

#### Additional Outcomes:

This project faced a number of challenges, including capacity limitations of water utility champions, staff changes at partner organizations, and disruptions in partner outreach activities and outreach support from NWF posed by COVID-19. Bridget Durst, Source Water Community Facilitator for the Conservation Districts of Iowa, had initially served as a key collaborator for this project, providing key local support

for ongoing outreach efforts. When she left the project in 2019 her position was not replaced. This local support for outreach had been a critical component of this project; as the utilities champions have limited capacity and require significant support on-the-ground.

#### Recommendations:

Water utilities can be powerful advocates for agricultural conservation efforts. The results of this project indicate that local outreach from water utilities can result in meaningful changes in farmer conservation behaviors. While small communities in agricultural regions are a key stakeholder, due to capacity limitations and local political considerations, they may not be the most effective outreach leaders. These community professionals can be important messengers for conservation, but are likely to be most effective in efforts coordinated by local soil and water districts or non-profit conservation organizations. These water utilities may also be key messengers not only with farmers, but also for other important gatekeepers, including farming organizations, agricultural retailers and service providers. Future efforts should focus on providing messaging and outreach support for these conservation professionals to incorporate water utilities as part of their engagement programming. The resources developed through this project can serve as useful templates and guides for resource professionals to incorporate water quality protection efforts in conservation outreach.

Through this project, we also established connections with larger communities in Iowa with more capacity to conduct outreach. Cities including Cedar Rapids and Dubuque are able to support staff dedicated to coordinating watershed-scale water quality protection efforts. The training and outreach resources developed through this project are likely to be most effective when supporting the efforts of these types of communities, who have the capacity to be the most effective outreach partners. National and regional organizations such as NWF can also continue to provide training and support to improve the effectiveness of these outreach efforts, including ongoing evaluation of outreach impacts.

## Information Products

- [SWP Infographic](#) (Fact Sheet)
- [Developing Partnerships with Agricultural Stakeholders](#) (Manual/Guide)
- [Agricultural Practices Brochure](#) (Fact Sheet)
- [Agricultural water quality impacts infographic](#) (Fact Sheet)
- [Mississippi River basin agricultural impacts](#) (Fact Sheet)
- [Messaging to different audiences infographic](#) (Fact Sheet)
- [Early adopters vs middle adopter infographic](#) (Fact Sheet)
- [Tipping points infographic](#) (Fact Sheet)

- [Driving farmer culture change infographic \(Fact Sheet\)](#)

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This site is maintained by SARE Outreach for the SARE program and is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award No. 2019-38640-29881. SARE Outreach operates under cooperative agreements with the University of Maryland to develop and disseminate information about sustainable agriculture. [USDA is an equal opportunity provider and employer.](#)

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