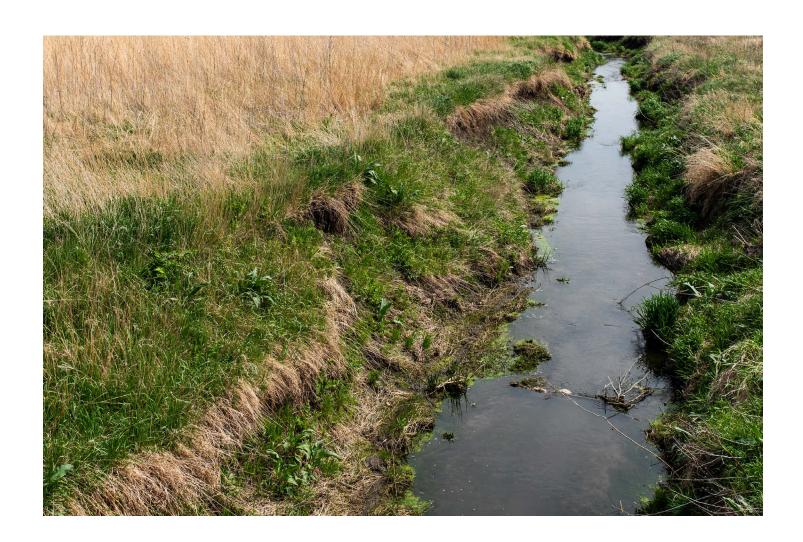
From the Source: A Look at Iowa's Watershed Management Authorities



A report by Kate Hansen, Center for Rural Affairs



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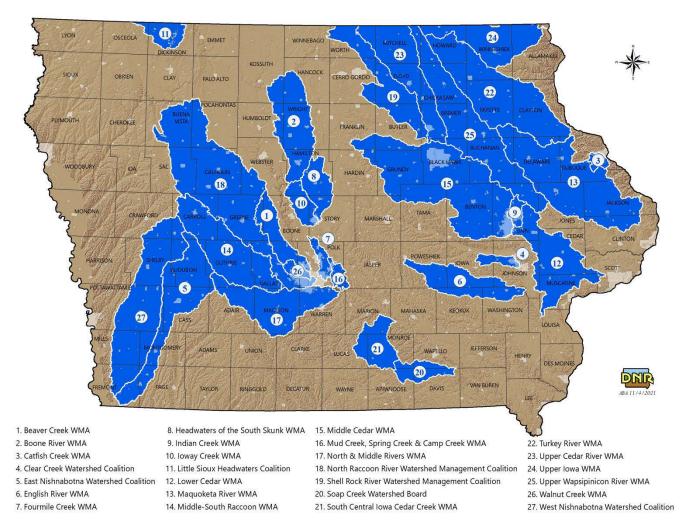
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Figure 1. WMAs in Iowa



I. Executive summary

This report examines the efficacy and current standing of Iowa's Watershed Management Authorities (WMAs), intergovernmental entities formed to advance goals related to flood resiliency and water quality. Findings are based on two surveys conducted by the Center for Rural Affairs and collaborators in 2022 and 2023, and are supplemented by historical and other information collected.

Survey results show WMAs have had a demonstrable impact. Combined, WMAs have implemented more than 2,600 conservation practices across the state and invested tens of millions of dollars in federal, state, local, and other funding. Results show investments and buy-in from local landowners and demonstrate need for future projects.

Our findings also point to a widely shared need: sustainable funding for staff. The WMAs that are most successful are those with a watershed coordinator, a staff person responsible for managing and implementing projects and administrative tasks. More than 70% of respondents indicated stable coordinator funding was the one change that could best support their efforts. This presents a timely opportunity for state lawmakers and decision makers to support these important entities.

II. Introduction

For more than a decade, Iowa's WMAs have advanced water quality goals, reduced flooding, and contributed to their local communities. WMAs are cooperative agreements between local leaders within a watershed, specifically cities,

counties, and soil and water conservation districts (SWCDs). Their unique model is organized along watershed boundaries, not political boundaries, and puts local leaders in the driver's seat to advance priorities related to water quality and flood resiliency.

At the time of publication of this report, 27 established WMAs cover 40% of Iowa. Additional communities have expressed interest in forming WMAs, indicating that number could increase in the near future. The current map of WMAs is shown in Figure 1 on page 1.1

The Iowa Department of Natural Resources highlights many of the benefits of forming a WMA. They include the ability to:²

- Conduct planning on a watershed scale, which has greater benefits for water quality improvement and flood damage reduction;
- Foster multi-jurisdictional partnership and cooperation;
- Leverage resources such as funding and technical expertise; and
- Facilitate stakeholder involvement in watershed management.

The Center for Rural Affairs works alongside WMAs in a variety of capacities and sees these benefits in action. We also see their successes—from cover crops, to wetlands, to urban stormwater projects—and their positive impact on rural Iowa and our natural resources.

With the help of partners, the Center administered two surveys of the state's WMAs. The first was an inventory of WMA activities, conducted in January and February 2022. The second was a status update collected in January 2023.

This report provides background on the WMAs, comments on their current condition, and the results and discussion of the surveys' findings. Just as water can be traced back to its source, these results come straight from the source—WMA leaders themselves.

- 1 "Iowa's Watershed Management Authorities." Iowa Department of Natural Resources, Nov. 4, 2021, iowadnr. gov/Portals/idnr/uploads/water/watershed/maps/WMA_Watershed_Areas20211104.pdf. Accessed January 2023.
- 2 "Watershed Management Authorities." Iowa Department of Natural Resources, iowadnr.gov/Portals/idnr/uploads/water/watershed/files/publications/WMA_Handout_v2.pdf. Accessed January 2023.

III. Background on Iowa's Watershed Management Authorities

In 2008, historic flooding devastated much of eastern Iowa, causing extreme impacts to rural and urban communities, agricultural land, infrastructure, and more.³

In response, the Iowa Legislature authorized WMAs in 2010 to address watershed concerns including flooding and water quality.⁴ In chapter 466B of Iowa Code, lawmakers outlined the following duties of a WMA as follows.

- 1. Assess the flood risks in the watershed.
- 2. Assess the water quality in the watershed.
- 3. Assess options for reducing flood risk and improving water quality in the watershed.
- 4. Monitor federal flood risk planning and activities.
- 5. Educate residents of the watershed area regarding water quality and flood risks.
- 6. Allocate moneys made available to the authority for purposes of water quality and flood mitigation.
- 7. Make and enter into contracts and agreements and execute all instruments necessary or incidental to the performance of the duties of the authority. A watershed management authority shall not acquire property by eminent domain.

WMAs could be formed by two or more jurisdictions within a hydrologic unit code (HUC)-8 watershed signing an intergovernmental 28-E agreement. Eligible jurisdictions included cities, counties, and SWCDs.

While established by the Iowa Legislature, WMAs received no specific funding from the state. The earliest WMAs were formed when the Iowa Flood Center at the University of Iowa was awarded \$4.5 million from the U.S. Department of Housing and Urban Development (HUD) for the Iowa Watersheds Project.

^{3 &}quot;Review of the 2008 Flood." National Weather Service, National Oceanic and Atmospheric Administration, weather.gov/dvn/flood2008. Accessed January 2023.

^{4 &}quot;Chapter 1116: Watershed Management and Planning, H.F. 2459." Iowa Legislature, April 7, 2010, legis. iowa.gov/docs/publications/iactc/83.2/CH1116.pdf. Accessed January 2023.

The project helped local leaders in five watersheds establish a WMA, undergo a hydrologic assessment, establish a watershed plan, and implement practices. The project ran between 2010 and 2016 and led to the completion of more than 150 structures including ponds, terraces, wetlands, water and sediment control basins, and on-road structures.5

While efforts were underway, flooding persisted. Between 2011 and 2013, eight Presidential Disaster Declarations were made for Iowa, spanning 73 counties and more than 70% of the state.6

In 2016, HUD announced a nearly \$97 million grant to create a statewide watershed improvement program, the Iowa Watershed Approach (IWA). Built on the strategy of the Iowa Watersheds Project, IWA was a multi-year project that targeted watersheds affected by the floods from 2011 to 2013 and was designed to address flooding and water quality concerns.7

In practice, the project provided stable funding, support to develop a watershed plan, administrative assistance, a watershed project coordinator, and technical support through various state and federal partners to nine WMAs: Bee Branch Creek, Upper Iowa River, Upper Wapsipinicon River, Middle Cedar River, Clear Creek, English River, North Raccoon River, West Nishnabotna River, and East Nishnabotna River.

Together, the nine WMAs built nearly 700 structures with significant flood resiliency and water quality benefits.8 Executed projects include terraces, ponds, grassed waterways, buffer strips, prairie strips, sediment control basins, channel bank stabilizations, stormwater detention basins, oxbow restorations, floodplain restorations, and more.

- "Iowa Watersheds Project." Iowa College of Engineering, Iowa Flood Center, University of Iowa, iowafloodcenter, org/projects/iowa-watershed-approach-hydrologicnetwork-4-2. Accessed January 2023.
- "Iowa Watershed Approach." Iowa Watershed Approach, State of Iowa, 2017, iowawatershedapproach. iowa.gov. Accessed January 2023.
- "IFC Helps Bring \$96.9M HUD Grant to Iowa." Iowa Watershed Approach, Sept. 2, 2016, iowawatershed approach.org/2016/09/ifc-helps-bring-96-9m-hud-grantto-iowa. Accessed January 2023.
- Personal communication, Kate Giannini, Program Manager, IIHR-Hydroscience & Engineering, Iowa Flood Center, University of Iowa, Dec. 16, 2022.

Over the years, the state has worked its way up to 27 total WMAs. While many were supported by the Iowa Watersheds Project and IWA, even more have been started independently by local leaders who have been successful in securing funding from an array of additional sources, including federal agencies, state-level grant opportunities, and even private foundations and businesses.

Combined, WMAs have spent more than a decade building relationships, securing funding, and implementing important projects across the state.

IV. lowa's Watershed Management **Authorities today**

In 2022, many of Iowa's WMAs found themselves undergoing significant changes, and as we begin 2023, many remain uncertain about the future.

In summer 2022, federal funding for the IWA ended. It had provided stable funding and support for onethird of Iowa's WMAs. In addition, more WMAs faced a similarly uncertain future with looming end dates for other sources of funding.

Both of these factors led to watershed coordinators and other staff being laid off. By the end of 2022, most of the WMAs once supported by IWA funds had lost their coordinators, or significantly decreased their staffing capacity. In many instances, they transitioned from a full-time staff person to modest administrative support—enough to "keep the lights on," but not sufficient to manage the projects or true potential of the WMA.

Another WMA entirely lost its coordinator due to expiring state funds. Two more WMAs find themselves at risk of a similar fate by the end of 2023.

Losing coordinators puts these WMAs in vulnerable positions. A coordinator is a boots-on-the-ground staff person managing and implementing projects and actively seeking funding to continue the WMAs' work. The most successful WMAs are those with full-time coordinators. Those without support face a very real possibility of becoming inactive.

This uncertainty is not due to a lack of trying on behalf of the WMAs. Their potential funding opportunities span federal, state, local, and other sources. However, the IWA was unique in that it provided

Table 1. WMA survey respondents

| Respondent organization | Responded to 2022 survey | Responded to 2023 survey |
|----------------------------------------------------|--------------------------|--------------------------|
| Beaver Creek WMA | X | Х |
| Boone River WMA | | X |
| Catfish Creek WMA | | X |
| Clear Creek Watershed Coalition | X | X |
| East Nishnabotna Watershed Coalition | X | X |
| English River WMA | X | Х |
| Fourmile Creek WMA | X | X |
| Headwaters of the South Skunk WMA | × | Х |
| Indian Creek WMA | X | X |
| loway Creek WMA | | Х |
| Little Sioux Headwaters Coalition | X | Х |
| Lower Cedar WMA | X | Х |
| Maquoketa River WMA | X | X |
| Middle-South Raccoon WMA | | X |
| Middle Cedar WMA | X | Х |
| Mud Creek, Spring Creek & Camp Creek WMA | X | Х |
| North & Middle Rivers WMA | X | X |
| North Raccoon River Watershed Management Coalition | X | X |
| Shell Rock River Watershed Management Coalition | X | X |
| Soap Creek Watershed Board | × | |
| South Central Iowa Cedar Creek WMA | | Х |
| Turkey River WMA | × | X |
| Upper Cedar River WMA | Х | Х |
| Upper Iowa WMA | Х | X |
| Upper Wapsipinicon River WMA | Х | Х |
| Walnut Creek WMA | Х | Х |
| West Nishnabotna Watershed Coalition | Х | X |

funding for watershed coordinator staffing. Many other grant opportunities allow funding for projects only. This means while there is ample opportunity to get projects on the ground, there is not adequate support for the person who would apply for or manage them.

Facing these realities, and with limited budgets, local leaders did what they could to support the work of their WMAs. Some counties were able to dedicate local American Rescue Plan Act (ARPA) funds to WMA staffing. In eastern Iowa, local ARPA funds allowed the Maquoketa River WMA to sustain its coordinator for another six months, and the Lower Cedar WMA to hire part-time administrative support. However, these funding solutions are temporary, and do not result in a steady solution.

Concurrently in 2022, new interest in WMAs rose across the state as communities felt the need to address flooding and water quality concerns. In northeast Iowa, the state's newest WMA, the Shell Rock River Watershed Management Coalition, took steps to begin the comprehensive watershed management planning process. In central Iowa, a group came together to begin formation of a new WMA around the boundaries of the Middle Iowa Watershed. This enthusiasm should be capitalized on to maximize impact, but contrasts with the uncertain future of the WMAs.

The following survey results capture a snapshot of WMAs in this dynamic time, and as they look ahead in 2023 toward significant challenges.

V. Results

Alongside partners, the Center for Rural Affairs conducted two surveys of Iowa's WMAs. The first survey was an in-depth inventory of WMA activities since their inception, conducted in January and February 2022. The second was a status update collected in January 2023.

Questions were designed to evaluate each entity's membership, projects, funding, planning, staffing, and current needs.

We received 22 responses for the first survey, and 26 responses for the second survey. Participating WMAs are exhibited in Table 1 on page 4, and accounted for in the sections to follow.

Survey respondents provided valuable feedback and data illustrating the successes and needs of their entities. In this section, unless otherwise stated, "WMAs" refers to those that responded to the 2022 and 2023 surveys.

A. Structure and involvement

More than 300 jurisdictions across the state belong to a WMA. We asked how many member entities belonged to each WMA, added them together and corrected for duplicates. We found that hundreds of cities, counties, and SWCDs belong to at least one WMA, and many belong to multiple.

92% of WMA respondents have comprehensive watershed management plans on file or in development. A comprehensive watershed management plan acts as a long-term roadmap for priorities, conditions, and project implementation. At the start of 2023, 21 surveyed WMAs had comprehensive watershed management plans on file. An additional 3 were in some stage of developing or publishing a plan.

The average attendance at WMA meetings is 20 participants. A successful WMA requires buy-in and participation from members of the community. We asked WMA leaders their average attendance at their regular board meetings. Those who replied numerically reported an average of 20 participants. In addition, respondents shared things like:

"Our meetings are very well participated by all communities."

"50 people typically attend our field days and other events."

B. Practices

WMAs have implemented more than 2,600 conservation practices statewide. When asked about their completed projects, WMA leaders accounted for an impressive impact across the state. Most practices were conducted alongside voluntary landowners, such as wetlands and edge of field practices. Others told us about flood control projects, as well as stormwater projects in urban areas.

There is a demonstrated need from farmers and landowners to install additional conservation practices. We asked if there was local demand for more practices, should funding be made available to the WMAs. Responses included:

"Yes, there is a need. Thirty-four landowners had applied for cost share before it ran out, another dozen have inquired after funds ran out."

"Yes, we have a substantial wait list. We have \$1 million in 'shovel ready' projects."

"There is an ongoing need for coordination and practice implementation by both private landowners, communities, etc. It is hard to gauge the number as we are always receiving calls inquiring about assistance."

"Yes, we have over 20 applications for conservation projects."

"Yes. In just one sub-watershed assessed in 2021, we identified over 30 projects with willing landowners. A similar number is probably easily attainable in each of the 52 HUC-12s in the watershed."

"Based on other field days and talking to farmers there is an interest."

C. Funding

More than \$50 million in federal funding has been invested in Iowa. Respondents shared that between local, state, and federal funds, WMAs brought in federal funding at the highest rate. WMAs have captured and invested funding from sources such as HUD, the Natural Resources Conservation Service, and the Environmental Protection Agency.

More than \$21 million has been invested by **local communities.** Local jurisdictions see the benefits of WMAs, and have invested accordingly. Among respondents who reported receiving local funding, the median of total local contributions was \$177,300.

More than \$14 million in state funding has been invested. Respondents cited funding opportunities, such as the Iowa Department of Agriculture and Land Stewardship's Water Quality Initiative, the Iowa Finance Authority's Watershed Protection Projects, and watershed planning grants from the Iowa Department of Natural Resources.

In addition, WMAs have received more than \$1.9 million in funding from other sources. Respondents indicated that WMAs have brought funding to their local communities from sources such as private foundations, companies, and nonprofit organizations.

WMAs keep funding in Iowa by hiring local contractors. From planning to engineering, WMA leaders report at least 56 instances of local contractors hired to execute WMA-initiated projects. Hiring local contractors supports Iowa businesses and keeps funding in nearby communities.

D. Coordinators

Last year, seven WMAs lost significant staffing capacity. Two more are at risk to follow suit in 2023. Due to sunsetting grant funding, WMAs across the state saw significant staffing capacity loss, to the detriment of their efforts. Most report transitioning from a full-time coordinator to a level of "keeping the lights on" administrative support, often by scraping together local contributions. One WMA in south central Iowa lost its coordinator entirely, and the vast majority of its administrative capacity. Two more WMAs indicated they will face a similar fate by the end of 2023.

The number of WMAs with full-time watershed coordinators has shrunk from 13 to 7. At the beginning of 2022, 13 WMAs had full-time watershed coordinators dedicated to seeking funding. developing relationships with landowners, and implementing projects. At the beginning of 2023, that number had dropped to 7 WMAs.

WMAs leaders are clear: Decision makers could help them the most with support for staffing.

We asked respondents, "What is one opportunity, improvement, or change from the state Legislature or a state agency that would significantly benefit your WMA?" Upward of 70% said having a stable funding source for a coordinator was the one change that would most significantly support their efforts. An additional 20% said they needed consistent funding in general.

From the WMA leaders:

"An allocation for a full-time coordinator to spend more time in the watershed working directly with landowners. Good people backed with project funding can get a lot accomplished."

"Ongoing boots-on-the-ground coordination between landowners, other agencies, communities, the funding, etc., is essential on a regional watershed wide basis."

"Non-competitive funding to assist with staffing to allow our projects and community engagement to continue without the limited term of our current grant."

"Stable funding for a coordinator or administrator to maintain WMA organization and partnerships to leverage funding and programs."

"Consistent funding that supports a full-time watershed/project coordinator in each WMA."

"The infusion of ARPA funding is very helpful in providing the resources to move watershed activities forward, but it will run out [...] Without stable funding, the expertise and connections made with short-term ARPA funding will be lost."

"We need a coordinator to do everyday business, interact with government agencies, and seek funding opportunities."

"Without a coordinator, [our WMA] would not continue more than likely. Similar to other WMAs across the state."

"Not having a coordinator makes it nearly impossible to seek funding available for water quality improvement and flood mitigation projects."

"[A coordinator is] incredibly important and having full-time staff directly attributes to fundraising and practice implementation."

VI. Discussion

The results of these surveys clearly demonstrate WMAs are collaborative entities with established track records and local connections. As such, they have an important role to play in implementing more conservation statewide—and there is plenty of work to be done.

Released in 2013 and adopted by the Iowa Legislature in 2018, the Iowa Nutrient Reduction Strategy (NRS) is a statewide framework designed to reduce nutrient loads in surface water. Specifically, its goal is to achieve a 45% reduction in nitrogen and phosphorus losses. Annual progress reports on the strategy are published by Iowa State University in collaboration with the Iowa Department of Agriculture and Land Stewardship and Iowa Department of Natural Resources.

These reports indicate that, while progress has been made, there is still much work to be done. For example, NCS1—one of the eight scenarios laid out by the NRS to achieve its goals—calls for 60% of acres in cover crops (or approximately 12.6 million of the roughly 21 million acres of corn-corn and corn-soybean rotation). Yet, even the highest estimates of current progress are well under 2.5 million total acres in cover crops statewide.

Success of the NRS will be dependent on an all-hands-on-deck approach, in which collaborators from all corners of the state play their part. WMAs report unmet demand for future projects in their watersheds—tangible opportunities for new projects and next steps. In addition, while the NRS is primarily focused on water quality, WMAs are also uniquely positioned to tackle flooding concerns that have long burdened the state. These efforts can be both collaborative and complementary.

9 2018 Iowa Acts, ch. 1001, §20, Iowa Legislature.

"Iowa Nutrient Reduction Strategy." Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, Iowa State University College of Agriculture and Life Sciences, December 2017, nutrientstrategy.iastate.edu/sites/default/files/documents/2017%20INRS%20Complete_Revised%20 2017_12_11.pdf. Accessed January 2023.

11 Ibid.

12 "Iowa Nutrient Reduction Strategy - Land Use and In-Field Practices." Iowa State University, Aug. 6, 2021, arcgis.com/apps/dashboards/04f03ece0691466dbe9e335 51fdbe0f3. Accessed January 2023.

To date, WMAs have installed more than 2,600 conservation practices statewide—such as wetlands, edge of field practices, and stormwater projects. Practices were conducted alongside voluntary landowners who were enthusiastic about the opportunity to implement conservation on their properties, as well as cities and other public entities. In 2022 alone, a single WMA coordinator, supported by adequate staffing funding, was responsible for approximately 7,300 new acres of cover crops.

These efforts demonstrate WMAs' capacity to be team players in advancing the goals of the NRS. In another example, bioreactors and saturated buffers are edge of field practices that can reduce nutrient losses from farm fields. They are called for in numerous scenarios of the NRS. According to NRS reporting, the Lake Red Rock Watershed in central Iowa had two bioreactors and saturated buffers in 2019. ¹³ In the years since, WMAs were responsible for projects that resulted in the installation of an additional 102 within the watershed.

WMAs also bring a wide reach to the table; more than 300 jurisdictions are members of at least one. Multiple elected officials are affiliated with each jurisdiction (such as county supervisors and SWCD commissioners) totaling more than a thousand local leaders connected to their efforts.

In the process, local leaders are seeing benefits and investing their own skin in the game. Respondents indicated more than \$21 million has been invested by local communities in their WMAs, with a median total of local contributions of \$177,300.

WMAs are adding further value by bringing money to Iowa and their local communities. They have secured more than \$50 million in federal funding, as well as more than \$1.9 million in funding from other sources, such as private foundations and nonprofit organizations. When executing projects, WMAs keep the money in Iowa by hiring local contractors—in at least 56 instances to date.

To continue their good work, and act on local demand, WMA leaders are extremely clear. When asked what action from decision makers would significantly benefit their WMAs, more than 70% of respondents said having a stable source for coordinator funding.

^{13 &}quot;Iowa Nutrient Reduction Strategy - Edge of Field Practices and Structural Erosion Control." Iowa State University, arcgis.com/apps/dashboards/02cdcb2123e74c91 aad829568a987fbb. Accessed January 2023.

This feedback was expressed at a time when coordinators were being lost, and still more may be lost soon. Since the beginning of 2022, the number of WMAs with full-time coordinators has fallen from 13 to 7. These conditions sit in stark contrast to the demonstrable success that WMAs have had across the state, and action must be taken to keep their efforts strong.

These realities present an opportunity for lawmakers to invest in Iowa's WMAs, and to ensure their stability and longevity. State lawmakers and decision makers should explore ways to help WMAs find a steady path forward to build upon their success, including exploring options for stable coordinator funding for all of the state's WMAs.

VII. Conclusion

A little more than a decade after their creation by the Iowa Legislature, WMAs have made demonstrable impacts across the state to advance flood resiliency and water quality. Most notably, they have successfully implemented more than 2,600 voluntary practices, the majority in partnership with farmers and landowners. Each practice, installation, and project is a step closer to flood resiliency and meeting Iowa's NRS and water goals.

With new WMAs continuing to form, there is a sustained energy for the entities and demand for their efforts to continue. Today, as WMAs find themselves in vulnerable and uncertain situations, there is an opportunity to take action to support them.

State lawmakers and decision makers can explore ways to help WMAs chart a steady path forward, including providing stable coordinator funding. Doing so would be a sound investment in Iowa's future.

VIII. Acknowledgements

The Center for Rural Affairs thanks the partners and stakeholders who played a role in shaping and circulating the WMA surveys. They include but are not limited to:

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- Kate Giannini, program manager, Iowa Flood Center
- Mary Beth Stevenson, Watersheds & Source Water Program manager, City of Cedar Rapids
- Linda Murken, supervisor, Story County
- John Swanson, Watershed Management Authority coordinator, Polk County Public Works
- Jennifer Fencl, director, Environmental Services Department, East Central Iowa Council of Governments
- Jody Bailey, watershed coordinator, English River Watershed Management Authority

Finally, we extend a sincere thank you to WMA board members and leaders across the state for participating in our surveys, and for their steadfast dedication to Iowa's watersheds.

About the Center for Rural Affairs

Established in 1973, the Center for Rural Affairs is a private, nonprofit organization with a mission to establish strong rural communities, social and economic justice, environmental stewardship, and genuine opportunity for all while engaging people in decisions that affect the quality of their lives and the future of their communities.