

Iowa Watershed Approach: Year 3 Evaluation Activities Report

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As submitted to:

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Acronyms Used in this Report

[Acronyms may not all appear in the body of this report; some may appear in material contained in an appendix]

Iowa Watershed Approach Watershed Management Authorities:

- Clear Creek WC: Clear Creek Watershed Coalition
- East/West Nishnabotna WMC: Combined East and West Nishnabotna Watershed Management Coalitions
- English River WMA: English River Watershed Management Authority
- Middle Cedar WMA: Middle Cedar Watershed Management Authority
- North Raccoon WMC: North Raccoon River Watershed Management Coalition
- Upper Iowa WMA: Upper Iowa River Watershed Management Authority
- Upper Wapsipinicon WMA: Upper Wapsipinicon River Watershed Management Authority

Iowa Watershed Approach partners:

- HSEMD: Homeland Security and Emergency Management Division
- IDALS: Iowa Department of Agriculture and Land Stewardship
- IDNR: Iowa Department of Natural Resources
- IEDA: Iowa Economic Development Association
- ISU EO: Iowa State University - Extension and Outreach
- ISU INRC: Iowa State University - Iowa Nutrient Research Center
- ISU IWC: Iowa State University – Iowa Water Center
- UNI TPC: University of Northern Iowa Tallgrass Prairie Center
- UI FRT: University of Iowa Flood Resilience Team
- UI IFC: University of Iowa Iowa Flood Center

Other Acronyms:

ACPF: Agricultural Conservation Planning Framework

BBHH: Bee Branch Healthy Homes Resiliency Program

BMP: Best Management Practices

BOS: Board of Supervisors

CAP: Community Action Programs

CDI: Conservation Districts of Iowa

CDBG: Community Development Block Grant

CEA: Center for Evaluation and Assessment

CGA: Clapsapple-Garber Associates (Engineering firm)

COADs: Community Organizations Active in Disaster

COG: Council of Government

CRP: Conservation Reserve Program (land conservation program of the USDA)

CRS: Community Rating System (part of NFIP)

DR: Disaster Recovery

ECICOG: East Central Iowa Council of Governments

EOR: Emmons and Olivier Resources (Engineering firm)

EPA: Environmental Protection Agency

EWP: Emergency Watershed Protection

EWRP: Emergency Wetland Reserve Program

FEMA: Federal Emergency Management Agency

FRAP: Flood Resilience Action Plan

FSA: Farm Service Agency

GIS: Geographical Information System

HACAP: Hawkeye Area Community Action Program

HUC: Hydrologic Unit Code (lower # = larger area)

HUD: Housing and Urban Development

IAWA: Iowa Agriculture Water Alliance

ICGA: Iowa Corn Growers Association

IIHR: University of Iowa Hydrosience and Engineering

INHF: Iowa Natural Heritage Foundation

INRS: Iowa Nutrient Reduction Strategy

INRCOG: Iowa Northland Regional Council of Governments

IGS: Iowa Geological Survey

ISA: Iowa Soybean Association

IV RC&D: Iowa Valley Resources and Conservation Development

IWA: Iowa Watershed Approach

JEO: JEO Consulting Group

LAP-AID: Linn Area Partners Active in Disaster

LMH: Low- and Moderate-Income Housing

LMI: Low- or Moderate-Income

LOC: League of Cities

MAPA: Metropolitan Area Planning Agency (Council Bluffs – Western Iowa)

MID-URN: Most Impacted and Distressed Unmet Recovery Needs

NDRC: National Disaster Resiliency Competition

NEICOG: Northeast Iowa Council of Governments

NEI RC&D: Northeast Iowa Resources Conservation and Development

NFIP: National Flood Insurance Program

NRCS: Natural Resources Conservation Services (US Department of Agriculture)

NSF: National Science Foundation

PWA: Protected Water Area (Iowa)

RC&D: Resources Conservation and Development

RCPP: Regional Conservation Partnership Program

SWCD: Soil and Water Conservation Districts

SWCS: Soil and Water Conservation Society

SWIPCO: Southwest Iowa Planning Councils

TNC: The Nature Conservancy

UERPC: Upper Explorerland Regional Planning Commission

USACE: United States Army Corps of Engineers

USGS: United State Geological Survey

WASCOB: Water And Sediment Control Basin

WHKS: WHKS & Co. (Engineering firm)

WMA: Watershed Management Authority

WQI: Water Quality Initiative (Iowa)

Introduction

The Year 3 program evaluation of the *Iowa Watershed Approach (IWA)* was conducted by the Center for Evaluation and Assessment (CEA). The CEA is a Board of Regents approved, independent center in existence under its charter since 1992. The CEA staff drafted all evaluation designs and instrumentation, shared the drafts with the IWA Principal Investigator and/or selected project staff, partners, and stakeholders for suggested revisions, and revised as needed. At all times, significant groups of stakeholders, including the project partners, had the opportunity to comment on evaluation materials and approaches. The IWA program evaluation is informed by *The Program Evaluation Standards: A Guide for Evaluators and Evaluation Users, 3rd Edition (2011)*.¹ Until January 17, 2019, all surveys and interview protocols developed by the CEA were reviewed by the University of Iowa Human Subjects Office (HSO). At that time, the CEA worked with the HSO to confirm that the IWA evaluation is not generalizable research, and the Institutional Review Board (IRB) Chair indicated that “the project described in the application does not meet the regulatory definition of human subjects research and does not require review by the IRB.” The determination memo is attached to this report as [Appendix A](#).

Evaluation Activity

The central foci for the IWA evaluation in Year 3 continued to be on process monitoring and providing timely formative feedback to the project principal investigator, Larry Weber, for project improvement. During Year 3, the CEA continued to follow the evaluation plan prepared in collaboration with the IWA (see [Appendix B](#)). The CEA also followed the plan developed for the Bee Branch Healthy Homes (BBHH) project (see [Appendix C](#)). After programmatic changes occurred for the University of Iowa Flood Resilience Team (UI FRT), in August-September 2019, the CEA revised the evaluation plan again to align with their current suite of activities (see [Appendix D](#)). The evaluation methods for the IWA evaluation consisted of participant observation in project meetings and affiliate group meetings, as well as interviews and/or surveys with the following stakeholder groups:

- Project coordinators
- Watershed Management Authority (WMA) board members
- Watershed planners
- IWA project partners
- BBHH clients, contractors, and team members
- Potential IWA Information System users
- IWA leverage partners²
- Iowa Water Conference attendees
- Community partners in Vinton

A more detailed description of the methods used for surveys, interviews, meeting summaries, and other evaluation activities can be found in the corresponding appendices.

Overall, the evaluation for Year 3 aligned to the planned activities. However, there were four areas of deviation worth noting.

¹ Yarbrough, D.B., Shula, L.M., Hopson, R.K., Caruthers, F.A. (2011). *The Program Evaluation Standards: A guide for evaluators and evaluation users* (3rd. Ed). Thousand Oaks, CA: Corwin Press.

² Operationally, IWA planning partners refer to this group as “stakeholders.” To avoid confusion, this report will reference “leverage partners” unless citing a quote or a title.

WMA Project Coordinator Data Collection

In fall 2018, the CEA staff conducted extended interviews with the project coordinators (PCs). The interviews offered a unique perspective on the project progress made at approximately the halfway point of the five-year project. Due to the length and comprehensive nature of the interviews, they replaced the previously planned two surveys in Year 3.

WMA Meeting Attendee Surveys

Instead of conducting surveys during WMA meetings in Year 3, the CEA administered a survey to all WMA board members in fall 2018 and conducted interviews with two to three key informants for each watershed during summer 2019 (in most cases, current and former chair). The surveys and interviews complement data from PC interviews and documentation of WMA meetings, providing multiple perspectives on the progress of each WMA.

IWA Advisory Board

As described in the Year 2 report, the evaluation plan called for the CEA to conduct an annual survey of the IWA Advisory Board; however, IWA partner meetings evolved and included the stakeholders who would have previously attended the advisory board meetings. In Year 3, the CEA confirmed with the University of Iowa Iowa Flood Center (UI IFC) that the advisory board as originally proposed should no longer be a focus of CEA's work. Accordingly, the CEA did not conduct any surveys and interviews with the IWA Advisory Board.

Visualization and Information System User Surveys

In January 2019, seven potential IWA Information System (IWAIS) users were invited to participate in an online survey to provide feedback about the platform and information. After three reminders (one from Kate Giannini with UI IFC), only one participant completed the survey. The information from that survey was provided to UI IFC in March 2019 but is not included in this report since there was only one respondent. The CEA will continue to work with UI IFC to strategically solicit feedback on this tool.

Report Structure

The organization and content of this annual report differs somewhat from the first two evaluation reports in that it also provides a mid-point review of the IWA program. Accordingly, the Executive Summary of the Year 3 activities is followed by an IWA Mid-Program Report, which provides an overview of the past accomplishments, current activity, and future outlook of the program. It also offers an abbreviated summary of overarching issues from the perspective of WMA board members and IWA partners. The main body of the report is divided into two major sections. In the first section, the activities and outcomes of the programmatic components of the IWA are detailed. This section begins with an overview of the contributions and activities of the different tiers of IWA partners, the PCs, and the planners. These summaries were each informed by the integration of multiple sources of data in order to lead to a more comprehensive understanding of each group's unique activities and impact. Also, within this first section, the progress of the Flood Resilience Program, which saw significant developments throughout Year 3, is described. In the second major section, the focus shifts to the IWA watersheds, which provides a lens into the local enactment of the IWA. This section begins with a collective summary of past accomplishments, current activity, and future outlook of the collection of rural watersheds through the perspective of key informants in each WMA. Next, a case study of each IWA watershed details the various activities, progress, and perspectives as they have unfolded throughout the year.

IWA Year 3 Context

During Year 3, several contextual factors initially described in the *IWA Year 2 Evaluation Activities Report* continued to affect the state of Iowa and may have effects on the success of the IWA. One factor, which was

cited during WMA meetings and during interviews with WMA board members and IWA partners, was an increasing concern about the potential impact of the weak farm economy. In April 2019, a Des Moines Register article reported, “Trade-damaged prices, combined with flooding along the Missouri River and rain-soaked fields across the state, are amping up farm concerns.”³

In addition, the severe weather resulting in flood events has continued to have widespread effects during this grant year across the state of Iowa. In May 2019, UI IFC Assistant Research Engineer Antonio Arenas Amado published an interactive timeline⁴ that described extreme weather events from fall 2018 through spring 2019. In the introduction, Arenas described a myriad of contributing factors to the catastrophic spring 2019 flooding:

Significantly above normal rainfall, reservoirs close to uncontrolled releases, flash flooding and tornados, an extremely cold (e.g., the Polar Vortex) and snowy winter, powerful and rare events known as *bomb cyclones*, rivers spilling out of their banks and flooding communities due to ‘ice dams,’ levees crumbling or being overtopped reminding us of our limited ability to control mother nature, massive flooding along the Missouri River and its tributaries, and extended periods of major flood conditions as well as flood stage records along the Missouri River.

During Year 3 WMA meetings, UI IFC engineers kept meeting attendees up to date on heavy rainfall events that continued across Iowa through the spring 2019. Additionally, stakeholders in the particularly hard-hit East and West Nishnabotna watersheds frequently discussed recovery efforts, and consequently, the feasibility of completing their IWA construction projects.

Another factor receiving attention in state media was the lack of progress in improving water quality in Iowa, a threat to waters beyond Iowa through passage down the Mississippi and Missouri Rivers. Local newspapers continued to describe this issue and the efforts required to address it. For example, in an article in the Des Moines Register⁵, the program director for the Iowa Environmental Council reported, “We’re talking hundreds to thousands of years at the current rate [of practice implementation] to get to the goals of the nutrient reduction strategy.” Additionally, the IIHR Water Quality Research Engineer, of Chris Jones blog⁶ received attention both during WMA meetings and in the local media. The top post on the blog titled *Iowa’s Real Population*⁷ has been viewed 1,100 times since it was published in March 2019.

As IWA passed the midpoint of the project this year, conversations among the IWA partners and within and among the WMAs have begun to turn to sustainability of water resources management work after the grant ends. Given the necessity to model and fund best management practices (BMPs) in the state, three issues could have an impact on the sustainability of the water resources management and conservation work.

First, on May 8, 2019 Governor Reynolds approved Senate File 638⁸, which included language developed by Allen Bonini from Iowa Department of Natural Resources (IDNR) and Jake Hansen from Iowa Department of Agriculture and Land Stewardship (IDALS), broadening eligibility for WMA membership to allow more inclusive representation for communities in Hydrologic Unit Code 8 watersheds (HUC 8s) that cross Iowa’s state borders. For example, this will allow Hamburg (a frequently flooded community which lies just

³ <https://www.desmoinesregister.com/story/money/agriculture/2019/04/12/iowa-farmers-unable-to-get-operating-loans-agriculture-economy-downturn-struggles-tariffs-prices-ag/2339163002/>

⁴ https://cdn.knightlab.com/libs/timeline3/latest/embed/index.html?source=1zSbT3QFLjsDYCC7F8sf1Lq5Yqe0jO-BkdMmQ68808do&font=Default&lang=en&initial_zoom=1

⁵ <https://www.desmoinesregister.com/story/money/agriculture/2019/07/17/iowa-water-quality-years-nutrient-reduction-goals-gulf-mexico-dead-zone-environment-council-nitrogen/1746256001/>

⁶ <https://www.iihr.uiowa.edu/cjones/scientific-insights-into-improving-water-quality-in-iowa/>

⁷ <https://www.iihr.uiowa.edu/cjones/iowas-real-population/>

⁸ <https://www.legis.iowa.gov/legislation/BillBook?ga=88&ba=SF638>

downstream of the confluence of the East and West Nishnabotna Rivers, and therefore technically not *in* the watersheds, to become a voting member of the East and West Nishnabotna River Watershed Management Coalitions (East/West Nishnabotna WMC⁹).

Second, in an article from the *Globe Gazette*¹⁰, in September 2019, the commissioners of the Conservation Districts of Iowa “approved a proposal to lobby for an Iowa buffer law that would require a 30-foot permanent grass buffer along streams and waterways” in what was described as a “bold move for our group” by the reporter. He expressed the urgency of addressing the water quality and quantity issues in the streams and rivers in Iowa and called for a reduction in the practice of placing “row crop farming right next to streams where field runoff and eroded soil can so easily enter our surface water” as “one of the first steps in responsible soil and water conservation.”

Third, finding consistent funding sources for water resources management work has been a persistent concern in the IWA watersheds. A few partners and watershed key informants have described the missed opportunity for the Iowa State Legislature to approve a state sales tax increase of 3/8th of a cent to fund the Natural Resources and Outdoor Recreation Trust Fund, a component of which is the Iowa’s Water and Land Legacy¹¹.

⁹ Since the East and West Nishnabotna River watersheds share counties and are often represented on both boards, for the purposes of this report, the two watershed management coalitions will be treated as one.

¹⁰ https://globegazette.com/opinion/columnists/carney-commissioners-seek-law-requiring-more-land-between-crops-and/article_10dd88b1-9417-5fdb-a586-35b4b9bc9606.html

¹¹ <http://www.iowaswaterandlandlegacy.org/about-us/>

Year 3 Executive Summary

The central foci for the evaluation of Year 3 of the Iowa Watershed Approach (IWA), carried out by the Center for Evaluation and Assessment (CEA), continued to be on process monitoring and providing timely formative feedback to key stakeholders for project improvement. “During Year 3, the CEA continued to follow each of the evaluation plans prepared in collaboration with the IWA Planning Partners.” Accordingly, the evaluation methods for the IWA evaluation during Year 3 consisted of participant observation in project meetings and meetings of affiliate groups, as well as conducting interviews and/or surveys with the following stakeholder groups:

- Project coordinators (PCs)
- WMA board members
- Watershed planners
- IWA project partners
- Bee Branch Healthy Homes (BBHH) clients, contractors, and team members
- Iowa Watershed Approach Information System (IWAIS) users
- IWA stakeholders (leverage partners)
- Iowa Water Conference attendees
- Community partners in Vinton

This executive summary is organized into major themes and provides a summary of the IWA activities and accomplishments during Year 3. For additional information about the program evaluation activities and findings, consult the body of the report and the corresponding appendices.

Watershed Management Authority (WMA) Activities

Each watershed functions as a distinct entity, forging somewhat unique paths to accomplish the goals of the IWA. Each WMA receives consistent support through IWA funding and partners, but each watershed is distinct in terms of local terrain, culture, priorities, strengths, and challenges.

The WMAs are the focus points for both partner support and program funding, so the activities being implemented at the watershed-scale are varied. This section describes progress in the following areas: WMA operations, the process of project implementation, the role of project coordinators, and the development of watershed plans.

WMA Operations

In Year 3, all WMAs were operating and making progress toward the goals of the IWA. Additionally, nearly all IWA WMAs had begun to focus on and discuss their future sustainability through activities like applying for additional funds for installing conservation practices or planning, approving letters of support for complementary water resources efforts, participating in WMAs of Iowa (a group organized by the ISU IWC to provide networking opportunities for WMAs), or adding a section focused on WMA sustainability into their watershed plans.

In a survey administered by the CEA, WMA board members expressed satisfaction with their WMA, indicating that they understood and agreed with the mission of their WMA, were familiar with its current work, felt informed enough to make decisions on behalf of their WMA, and agreed that they had adequate opportunities to provide input to their WMA. They also expressed a great deal of optimism about the effectiveness of the work of their WMAs, as well as the individuals that were involved in leadership roles within the WMA.

One of the major themes that consistently emerged in some form across nearly all the watersheds was the notion of engagement; however, sometimes it was named as a strength, sometimes as a challenge, and sometimes both. For example, board members from four WMAs highlighted as strengths the diversity of the individuals and partner groups (both geographical and urban versus rural) engaged in their WMA either prior

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to IWA or because of it. However, board members in the western watersheds reported that collaboration and engagement have been both a critical component and an ongoing challenge requiring careful attention.

Board members described that it has become increasingly difficult for WMAs to maintain full participation and involvement from the range of entities that together make up the board. For some WMAs, the struggle to achieve quorum at meetings has recently become a critical challenge. Regardless of the reasons for the decline in attendance, board members generally emphasized the critical nature of ensuring as much participation and cooperation across all entities as possible so that current projects and planning will continue to be carried effectively and in a timely manner.

Related to the challenge of educating the public and conducting outreach, several board members said they did not have enough landowners and interested citizens who attend WMA meetings. When asked who else should be involved in the WMA, respondents listed: government officials, federal entities, agricultural groups, environmental groups, and members of other watershed coalitions.

Process of Project Implementation

Board members from various watersheds also acknowledged the vital role of the financial assistance they received through the IWA, enabling them to more successfully implement practices in their watersheds.

By the end of Year 3 all WMA watersheds:

- Actively recruited landowners
- Accepted and approved applications from landowners or projects of interest (Application approval is ongoing as funds are available and projects meet program requirements.)
- Hired engineers
- Identified priority HUC 12s (additional eligible watersheds were added in Year 3)
- Began marketing the new level of cost share, which was adjusted from 75%/25% to 90%/10% with an opportunity for a waiver for projects constructed on public land

At the time of this report, all but one of the watersheds had bid packages already approved by the board or currently under review, and all watersheds were making progress toward conducting environmental review, hiring contractors, and beginning construction. All the eastern Iowa watersheds had hired archaeologists. The Middle Cedar Watershed Management Authority (Middle Cedar WMA) set the curve for practices with their first project out for bid, and subsequently, the first project under construction. WMAs were also at very different stages related to allocating their funds for specific projects. In three watersheds, during WMA meetings, several PCs reported that they were close to their maximum budget for practices if they were to complete all the projects in the pipeline. However, in a couple of the watersheds where they did not anticipate spending the money currently allotted to them, Iowa Economic Development Authority (IEDA) has mentioned that they may need to reallocate funds to other watersheds with additional projects lined up for construction.

PCs and WMA board members described various motivations and barriers to progress on the part of landowners related to the implementation of practices through the IWA. Through interactions with landowners, some PCs reported learning that they were typically interested in participating in the IWA because they wanted practices for their own land or because they wanted to be “part of the bigger project.” Conversely, both PCs and board members cited the cost to landowners or financial concerns as the most significant barrier to participation. Additionally, both groups focused on additional challenges related to this process including: extensive flooding in 2019; defining a process for compensatory stream mitigation for projects; bureaucracy inherent in a large project; the lingering impact of the Des Moines Waterworks lawsuit in the North Raccoon watershed, and navigating construction issues related to karst topography in the Upper Iowa watershed

During their interviews in fall 2018, several PCs expressed regret that they did not yet have projects in the implementation phase in their watersheds. However, they readily identified the following indicators of

success: initial landowner engagement and long lists of applicants; locating promising implementation sites; hiring an engineer; projects submitted to engineers for preliminary design; dollar amount associated with potential projects; getting bid packets ready to go out; getting through the environmental/archeological assessment process; and discussions with landowners about other conservation practices. PCs were excited to get construction underway as soon as possible to add this achievement to the growing list of current project successes.

Project Coordinators

An important aspect of the IWA is the presence in each of the IWA watersheds of a dedicated PC who is responsible for coordinating the IWA work in the watershed. During evaluation interviews with board members, many specifically praised the work of their PCs, describing the board's confidence in their PC's capacity to successfully carry out the work of the WMA.

PCs' work priorities have naturally centered on project implementation. They self-reported the following activities as being central to their role in the IWA: making connections between all stakeholders involved in the project; recruiting landowners and soliciting interest in the project; serving as conduit between interested landowners and the project resources; identifying potential projects; and implementing the vision of IWA on the ground. Additionally, during WMA meetings, many PCs reported doing some sort of outreach in their watershed, and three PCs described specifically engaging or planning to engage women landowners in these efforts. Additional priorities mentioned by the PCs included reviewing and finalizing watershed plans and supporting efforts for water quality monitoring.

In addition to support from IWA partners and other stakeholders, the PCs also reported that a great source of support came in the form of interactions with other IWA PCs, both informally and formally. They described the group meetings or conference calls as valuable opportunities to share critical information and support each other through challenges.

Watershed Plans

The purpose of the watershed planning effort in each of the IWA watersheds was to produce a FEMA-aligned, comprehensive watershed plan that addresses factors that contribute to flooding and water quality within the watershed. As of August 2018, all IWA watersheds had engaged watershed planners.

Each of the watersheds were at different stages with respect to the planning and development of their respective watershed plans. Two watershed planners presented final versions of their plans, three watershed planners made drafts available for the board and public comment, and one watershed planner continued to share elements of the plan with the intention to provide a draft for official review in late summer 2019. North Raccoon WMC was the last IWA WMA to select their planner and start the process. In surveys and during WMA meetings, planners described the following activities as parts of their planning process: community and board input sessions; integrating data received from partners; hiring additional contractors for support; and facilitating a flood resiliency simulation activity. Additionally, two WMAs extended their planning contracts during this grant year to allow planners adequate time to integrate additional data and feedback.

Toward the end of Year 2, planners indicated that they were on schedule to complete their watershed plans by the time designated; however, two expressed some concern that the workload was heavy for the established timeline. Then, in Year 3, two planners indicated that they were no longer on schedule, and three planners indicated that the workload was not reasonable for the established timeline. In Year 3, planners were asked their opinions about integrating hazard mitigation information into the plans, and all indicated that integrating and organizing information related to hazard mitigation plans went smoothly. They also agreed that working with the IWA partners in this process was going well.

When asked about the future utility of their watershed plans, planners agreed that securing a sustainable funding source and implementing the plan were the most important tasks that remained for WMAs. Moreover, the planners indicated that a PC would be needed in order to carry out these tasks.

Partner Contributions

By design, the IWA has been a collaborative effort coordinated and supported by a group of key partner organizations from across the state, each of whom was selected because of their unique expertise and ability to contribute to the overall mission of the program. The IWA planning partners (who have provided direction and oversight for the broader program) are:

- University of Iowa Iowa Flood Center (UI IFC)
- Iowa Department of Natural Resources (IDNR)
- Iowa Economic Development Authority (IEDA)
- Iowa Homeland Security and Emergency Management Department (HSEMD)

The remaining IWA partners, who have been contracted to provide technical assistance, support, or other deliverables, include the following organizations:

- Iowa State University Extensions and Outreach (ISU EO)
- Iowa State University Iowa Water Center (ISU IWC)
- Iowa State University Iowa Nutrient Research Center (ISU INRC)
- University of Iowa Flood Resilience Team (UI FRT)
- University of Northern Iowa Tallgrass Prairie Center (UNI TPC)
- Iowa Department of Agriculture and Land Stewardship (IDALS)

During Year 3, the IWA partners came together with project coordinators, grant administrators, WMA board members, and other program stakeholders two times for project management meetings. The meetings were opportunities to describe progress, answer questions, discuss important topics, and hear from project leverage partners.

Many of the IWA partners' activities through the midpoint of the grant could be broadly described as providing key resources and support to the project coordinators (PCs), as well as the members of the WMA boards. However, many of their major contributions to the work of the IWA were unique to the specific roles and functions of their organizations within the project. In simplified terms, partners¹² described the following as their organization's most important contribution(s):

- UI IFC: Providing consistent, participatory, and value-added leadership and vision for the project and support for WMA leadership; hydrologic assessments and modeling
- IDNR: Supporting the formation of the WMAs for IWA and across the state; supporting the development of a process and guidance for hiring watershed planners; conducting field work to collect land use assessment data
- IEDA: Administering IWA grant funds; assisting IWA partners and WMAs with federal grant compliance
- HSEMD: Providing resources and information to the PCs, enabling them to more effectively define problems, identify available resources, and scale their flood mitigation projects
- ISU EO: Developing education and outreach resources; supporting outreach events; providing local support for WMAs
- ISU IWC: Offering the Iowa Water Conference; providing Daily Erosion Project data with PCs and planners

¹² IDALS declined to take part in the interview process

- ISU INRC: Conducting research to inform a more thorough understanding of the effectiveness and economic benefits of the practices identified in the Iowa Nutrient Reduction Strategy for improving water quality
- UI FRT: Supporting the development of a FEMA-recognized process for applying for multijurisdictional hazard mitigation assistance
- UNI TPC: Responding to PCs' needs and providing them with resources and support related to prairie restoration (e.g., list of contractors)

During Year 3, in a series of evaluation interviews and surveys conducted by the CEA, PCs, WMA board members, and watershed planners all described ways in which they have been supported by IWA partners. PCs reported receiving varying degrees of support from IWA partners, with the most common types of support including providing information relevant to their work, answering questions, and providing feedback about materials developed. In listing the benefits of being involved with the IWA, WMA board members from six of the eight WMAs directly acknowledged the support they received from various partners. Whether in the form of sharing expertise and information or providing general direction and assistance as the coalitions were forming, several board members expressed deep appreciation for the critical role that their partners have played thus far. Watershed planners identified IWA partners as important collaborators in the development of watershed plans. Planners specifically named hydrologic assessment reports (including modeling and ACPF/BMP map analyses) (UI IFC) and guidance for incorporating hazard mitigation information into the plans (HSEMD, UI FRT) as particularly valuable in their work.

When board members were asked about the benefits of being involved in the IWA, they frequently cited the UI IFC, whose contributions have included providing technical modeling to develop plans and set goals, being “instrumental in education,” providing robust analysis and guidance, and generally, “getting the ball rolling.” Members of the UI IFC produced hydrologic reports for all WMAs and watershed planners for review and presented highlights from these reports during WMA meetings. Furthermore, UI IFC, in collaboration with a team of interagency partners and local emergency management coordinators, has identified priority locations across the state to expand the UI IFC stream sensor network, thereby improving their flood monitoring and forecasting efforts. Due in part to the discussions between these entities, new UI IFC stream sensors will be deployed through the Upper Wapsipinicon River watershed by the end of 2019.

IWA Leverage Partners

During early 2019, the CEA collaborated with HSEMD to design and administer a survey of IWA stakeholders to learn about their current and future interests in the IWA, and in watershed management issues in Iowa. Approximately half of the respondents described their current role within the IWA using general terms like “support,” “co-sponsor,” and “regular interaction.” Other more specific ways that respondents described their organization's role included: providing WMAs with information for watershed planning; assisting WMAs in applications for grants or other funding; providing technical advice; serving on WMA boards or attending meetings; promoting and supporting project implementation (including providing funding); providing feedback about communications; and helping with conservation planning.

Leverage partners also identified ways they would like to be involved with the IWA in the future. Some said they would like to continue with the activities they were doing at the time; meanwhile, others offered descriptions of additional ways their organization could support the work of the IWA, such as providing educational resources and conducting training programs, protecting source water, and advocating and promoting the watershed approach. Regarding ways in which leverage partners saw for their organization to collaborate with Iowa WMAs, responses included: collaborate in planning, provide “technical knowledge for upstream communities,” support the WMA boards, and help with engaging the agricultural community and with identifying and addressing natural resources issues. Additionally, respondents described ways in which

they or their organization is available to engage with WMAs by providing resources to support WMA work, connecting WMAs to each other, and promoting their own WMAs.

When asked about their current role in water management in Iowa, half of the respondents' comments were related to water quality or conservation, and a few were related to flood control and mitigation or both water quality and quantity issues.

University of Iowa Flood Resilience Team

Flood resilience is a construct without an agreed upon definition or process, and the development of the University of Iowa Flood Resilience Team (UI FRT) activities and its ongoing program evaluation continue to be developmental.

This year, the University of Iowa Flood Resilience Team (UI FRT) employed a new strategy to collaborate with contractors and partners to develop the project deliverables. In Year 3, the UI FRT conducted three team meetings and two meetings with the Dubuque Bee Branch Healthy Homes team. These meetings typically included updates on the status of different projects, some discussion about next steps, and opportunities for collaboration and support. Additionally, the UI FRT facilitated or attended meetings with external stakeholders for specific projects. The UI FRT's activities in Year 3 are detailed in this section.

FEMA Multijurisdictional Plans

During Year 3, the UI FRT collaborated with HSEMD and the UI IFC to support the development of FEMA multijurisdictional flood hazard mitigation plans. Specifically, they began developing a methodology to determine if acceptable economic benefit-cost ratios could be achieved using proposed IWA flood mitigation practices to produce an analysis that is "credible and actionable from FEMA's perspective." The UI FRT, UI IFC, and HSEMD met with representatives from FEMA and FEMA's technical assistance contractor to discuss the modeling being proposed for a multijurisdictional plan to qualify for hazard mitigation assistance. A representative from Stantec planned to connect with the UI IFC team and move forward with the modeling discussion.

Flood Mitigation Elements for Watershed Plans

Building on the work from Year 2, the UI FRT collaborated with HSEMD to integrate flood mitigation elements into the IWA watershed plans. In August 2019, the UI FRT reported that the watershed plans were finished or nearly finished for seven of the IWA watersheds. They provided hazard mitigation information for each of these plans that were integrated at the planners' discretion. In a survey of IWA watershed planners in summer 2019, the respondents generally agreed that integrating and organizing information related to hazard mitigation plans went smoothly. The only challenge reported by planners in this process was providing the report in a format acceptable to HUD or FEMA.

Community Care Coordination System

Building on discussions with Hawkeye Area Community Action Program (HACAP) from the previous years, and now also in collaboration with the United Way of Linn County, in Year 3, the UI FRT continued to seek ways to concretely support vulnerable populations in Linn County during and after flood events. The group explored the use of My Care Community and United Way 2-1-1 referral helpline and website to develop and implement a community care coordination system for vulnerable populations in the county.

Flood Resilience Action Plans

The UI FRT's Flood Resilience Action Plans (FRAPs) continued to shift in focus and scale over the course of Year 3. The UI FRT has been working with different sub-contractors that have a local connection and a strong familiarity with the region and the people that live in each of the communities in which this work is being carried out. The final product anticipated from these sub-contractors will be community-scale plans that enable community leaders to engage in mitigation efforts, develop more comprehensive plans for responding

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in times of flooding and disaster, and to help communities be more prepared for disaster and decision making. At the time of this report, there were seven FRAP projects underway. In the Upper Iowa WMA, the UI FRT subcontracted with the Center for Sustainable Communities at Luther College (Luther CSC) to develop The Freeport FRAP, which was disseminated to local stakeholders. In the Middle Cedar WMA, the UI FRT was working with Iowa Valley Resource Conservation and Development (IV RC&D) to develop the Vinton Flood Resilience Action Plan: Flood Resilient Vinton. As of the summer 2019, the final report was being drafted by the IV RC&D. In the Upper Wapsipinicon WMA and Clear Creek WC, the UI FRT was working on executing contracts with Northeast Iowa RC&D and Astig Planning LLC (respectively) for work to be done in Year 4. In the East/West Nishnabotna WMC, the UI FRT was working with Golden Hills RC&D. Given recent flooding in southwestern Iowa, this project was on hold to allow the community time to recover. In the North Racoon WMC and English River WMA, the UI FRT has been engaged in preliminary discussions with stakeholders about potential sites for the FRAP.

Social Vulnerability Information and Visualization

Informed by work in IWA Years 1 and 2 to visualize flood resilience and social vulnerability information (SVI) onto maps, the CEA collaborated with the UI FRT to develop a usability interview for potential users of the SVI available on the IWA information system (IWAIS). The purpose of the interviews was to provide information about the purposes for accessing the system; their ability to find the information they were seeking; whether and how they would use that information; how trustworthy they thought the information was; and any problems they encountered when using the system. The four people interviewed for this study indicated that they found the site's information about socially vulnerable populations interesting, and they were positive about its ultimate utility. However, they indicated the need for additional information to make the site more useful in their work. Based on the interview data, the CEA recommended that they provide more information about the indicators and provide training on how to use the information effectively. The UI FRT reported making changes to the SVI maps on IWAIS based on this feedback.

Informed by the visualization interviews and the first round of watershed planners' integration of social resilience information into watershed plans, the UI FRT planned to develop a How-to Guide for planners on ways to incorporate social resilience information into watershed plans in a useful and accurate way. The UI FRT was working on a contract with Astig Planning LLC, a watershed planning organization in Coralville, IA, to bring a planner's perspective to this work.

Outreach and Education

In addition to the targeted activities of the UI FRT, the team regularly interacted with local and national stakeholders who were also engaged in community resilience work. In Year 3, the UI FRT team attended local meetings to see how different project stakeholders were working together and to learn of the culture of disaster response in the state. At two meetings of the Benton County Community Organizations Active in Disaster (COAD) group, the UI FRT presented the social vulnerability information available on IWAIS and provided updates about their work with IV RC&D to learn how to increase resilience among vulnerable populations in Vinton. Feedback from members of the COAD was positive overall. They were appreciative of the attention being given to their area and what residents have endured: "Vinton is not being forgotten!" Additionally, the UI FRT self-reported having participated in the following outreach activities: Iowa Homeland Security Conference: Disaster Lessons Learned (October 2018), FEMA meeting (Fall 2018), and National Conference of State Legislators Public Private Partnership on Disaster Mitigation and Recovery Summer Convening (August 2019).

Bee Branch Healthy Homes Resiliency Program

During Year 3, the three main elements of the IWA evaluation related to BBHH project included: 1) interviews with BBHH clients, 2) interviews with BBHH team members, and 3) a BBHH program contractor survey.

Based on the collection and synthesis of these data sources, the BBHH project appeared to be in full swing and achieving all benchmarks with limited setbacks.

The feedback from a majority of BBHH clients about their involvement in the program was overwhelmingly positive. Major themes throughout the interviews were an appreciation for the financial assistance to complete the various flood resilience projects on their homes, as well as increasing the safety and security they experienced as a result. Many of the clients interviewed described how impressed they were by the coordination efforts of the BBHH staff. They reported that BBHH program staff were helpful throughout all stages of the process, ensuring that everything ran smoothly from start to finish.

Although clients consistently praised the BBHH staff, their experiences working with contractors was reportedly much more diverse. Some expressed varying levels of frustration with the overall quality of the contractors' workmanship and effectiveness of their communication, as well as the time of the project from start to finish. Issues with contractors ranged from simple lack of attention to detail and miscommunications, to more alarming safety violations. Some clients were able to have their problems remedied through intervention from the BBHH home advocates; however, others felt reluctant to reach out to their advocate or were unaware of the scope of the advocate's role in the program. Despite any setbacks, BBHH clients were grateful for the work that was done on their homes.

BBHH staff reported that their roles were largely unchanged from prior years. They described ways the following ways that BBHH clients were benefitting from the program: physical improvements in keeping water from their homes; less stress among the families resulting from financial difficulties; improvement in the health of the residents; and up-to-date information about services available to residents that they did not previously know existed. The BBHH team members were asked to identify gaps in available programming to meet Dubuque residents' needs. They generally reported that Dubuque does a great job; however, a couple staff mentioned some areas that could be improved, including assistance with pest control, public transportation gaps, and access to mental health services. Challenges experienced by the BBHH team members included contractor shortages, weaknesses in internal communication for the home advocates, and staffing issues.

The BBHH program contractors who responded to the survey indicated that they did not feel deterred by the complexity of the process from bidding on BBHH projects and planned to continue bidding on future projects, despite some differences of opinion in the bidding process. Much of the challenges they reported related to their experiences as sub-contractors working with general contractors. They recommended that the BBHH team should act as the general contractor or that there should be no general contractor at all.

In support of the BBHH work, UI FRT has been collaborating with the BBHH team to develop and administer social resilience surveys to participants in the BBHH program. The BBHH team reported that the response rate has been low. Accordingly, the UI FRT and BBHH made changes to the survey, including moving it to an online format. Other changes that were cited as helpful in increasing response rates by the BBHH home advocates were customizing sections, offering fewer response options, and improving item wording.

In summary, the IWA was steadily making progress toward achieving its goals during Year 3 of the grant. The extent of the progress and the milestones achieved by individual watersheds naturally varied according to a host of contextual factors. However, many WMAs began to pivot toward applying the lessons learned and seeking avenues by which to ensure the future sustainability of their entities. In the words of Larry Weber, this grant continues to be "a voyage of discovery," the benefits of which are beginning to be manifested.

IWA Mid-program Review

The Iowa Watershed Approach (IWA) is one of 13 projects funded in January 2016 under the National Disaster Resilience Competition (NDRC)¹³. According to the IWA grant proposal¹⁴, the IWA will accomplish six specific goals in the eight selected rural watersheds and Dubuque, IA:

1. Reduce flood risk
2. Improve water quality
3. Increase resilience
4. Engage stakeholders through collaboration and outreach/education
5. Improve quality of life and health, especially for vulnerable populations
6. Develop a program that is scalable and replicable throughout the Midwest and the United States.

The IWA is a complex project supported by many IWA partners whose goals are both discrete and collaborative. Despite the somewhat specific goals of each of the IWA partner groups, the IWA is also, to a great extent, a project that is developmental in nature and as a result the evaluation employs an iterative process. The course and progress of the IWA is dependent on factors both physical (hydrologic factors, weather, geology) and human (project coordinators, planning staff, consultants, and landowners) and the ways in which these physical and human factors combine to affect progress toward the project goals will be different in each of the eight different watersheds.

The IWA calls for the Watershed Management Authorities (WMA), with the support of the HUD NDRC funds and the IWA partners, to be the agent of change in eight designated watersheds across the state of Iowa.

The IWA involves the following three main categories of stakeholders:

- IWA partners: These groups received IWA funding and are directly involved in supporting the project across the state.
- Leverage partners: Leverage partners are a diverse collection of entities from across the state of Iowa who wrote letters of support for the IWA grant proposal and indicated their willingness to provide assistance to the IWA in a way consistent with their unique expertise and mission.
- Watershed stakeholders: This final stakeholder group encompasses any and all residents within each of the designated watersheds. According to Iowa Legislation regarding 28e, agreements required to form Watershed Management Authorities, all eligible political subdivisions must be invited to be part of the WMA. Eligible political subdivisions include municipalities, counties, and Soil and Water Conservation Districts (SWCDs). In order to carry out the work, each WMA employed a project coordinator (PC) and entered into a contract with a planning entity to formulate a watershed plan. WMAs engaged with various other local and/or regional organizations to support their work including RC&Ds, USDA/NRCS offices, conservation non-profits, etc. The WMAs will also interact in some cases with elected officials at the local, state, and federal level. Finally, in order to install best management practices (BMPs) as part of the IWA, WMAs sought and continue to seek the involvement of landowners and any other interested community members in each watershed. Project implementation will in turn involve engineers, contractors, administrators, and archaeologists.

¹³ U.S. Department of Housing and Urban Development. (2016, January 21). National disaster resilience competition grantee profiles. Retrieved from <http://portal.hud.gov/hudportal/documents/huddoc?id=NDRCGrantProf.pdf>

¹⁴ The Iowa Watershed Approach for Urban and Rural Resilience. (2015, October). *HUD National Disaster Resilience Competition*. State of Iowa.

Finally, by extension, the IWA will potentially have an impact on all Iowa residents, and the country at large, both through the physical impacts of the work being done and the dissemination of information related to the watershed approach model as a framework for others to follow in carrying out similar work in the future.

This review, developed and informed by the work of the University of Iowa Center for Evaluation and Assessment (CEA), is intended to provide a stand-alone summary of the accomplishments of the IWA during the first three years of grant activity. CEA team members synthesized multiple data sources including interviews and surveys with stakeholders, meeting notes, and direct observations to produce a review that balances accuracy and brevity.

Below is a brief description of some state-context highlights which could have implications for the work of IWA in the next two years. Following that, there will be a narrative of the progress of IWA focused around important categories of stakeholders: WMAs, IWA partners, leverage partners, project coordinators, and watershed planners. This review ends with a short description of high-level considerations for IWA and water resources management in the state from the perspective of WMA board members and IWA partners.

Context

There were several contextual factors that affected the state of Iowa which may have implications for the overall success of IWA. First, catastrophic flooding in both 2018 and 2019 have affected communities along both the Missouri and Mississippi Rivers. Additionally, the news media, as well as program stakeholders, have described challenges to project implementation as a result of a weak farm economy. Lastly, Iowa's lack of progress in improving water quality has been a rather contentious subject of discussion as reported in local, state, and national media outlets.

At the halfway point in IWA, conversations among IWA partners and among the WMA boards have begun to turn to long-term sustainability of water resources management in the state. In Year 3 of the grant, Iowans were beginning to see state-level changes in how water resources management is approached (i.e., Conservation Districts of Iowa approving a proposal to lobby for a 30-foot grass buffer along streams, Governor Reynolds broadening eligibility for WMA membership), but also at least one missed opportunity to fund this work in a sustainable way (i.e., failure to approve a state sales tax increase of 3/8th of a cent to provide funding for Iowa's Water and Land Legacy).

Activities and Outcomes

To guide the discussion through the major components and outcomes of the IWA, the CEA has identified the following broad categories: WMA milestones, IWA partner contributions and support, leverage partners, Flood Resilience Team (UI FRT), and Bee Branch Healthy Homes (BBHH). Within each category, which are utilized as subheaders within this section, the narrative describes the progress made through Year 3 of the grant.

WMA Milestones

Each watershed is a unique entity, forging somewhat unique paths to accomplish the goals of IWA. Each WMA receives consistent support through IWA funding and partners, but each watershed is distinct in terms of local terrain, culture, priorities, strengths, and challenges. The WMAs are the focus points for both partner support and program funding, so the activities being implemented at the watershed-scale are varied.

IWA partners conducted IWA Kickoff Meetings in each of the IWA watersheds during May and June of 2016. After the meetings, each of the WMAs (and or WMA formation groups for those who had not yet filed their official 28e agreements) began conducting regular quarterly meetings. The content of the meetings evolved during the first two years. Initially, they primarily consisted of partner presentations about the IWA and about the ways in which partners could assist the WMAs. As time progressed, there were more technical

presentations and contributions. Finally, more recently, there have been discussions about water resources, IWA practice implementation, or WMA procedural requirements.

Evaluation surveys conducted early in Year 1 found that WMA meeting attendees had a strong interest in being involved in the IWA and believed it would improve flood mitigation; have a positive impact on water quality in their area; foster new collaborations and increase communication among entities in their area to address watershed problems; and carry out the process of installing new BMPs in the watershed. In Year 2, as attendees were more immersed in the work of the IWA, WMA meeting attendees said they wanted to know more about how each of the partners contributed to the project including how they work with other stakeholder groups (e.g., NRCS, farmers, cities), what resources they bring to the WMAs (including possible additional funding), and whether the partners would stay engaged after IWA was complete. In Year 3, WMA board members were invited to share their evolving perceptions of the IWA and the work of their WMA in surveys and interviews. In a survey administered by the CEA in Year 3, WMA board members expressed overall satisfaction with their WMA, indicating that they understood and agreed with the mission of their WMA, were familiar with its current work, felt informed enough to make decisions on behalf of their WMA, and agreed that they had adequate opportunities to provide input to their WMA. They also expressed a great deal of optimism about the effectiveness of the work of their WMAs, as well as the individuals that were involved in leadership roles within the WMA. During interviews, selected board members from various watersheds acknowledged the vital role of the financial assistance they received through the IWA, which enabled them to more successfully implement practices in their watersheds.

By the end of Year 3 all eight watersheds had:

- Established and/or revitalized WMAs that were ready to begin the work of the IWA in particular with the support of the Iowa Department of Natural Resources (IDNR), three new western Iowa WMAs were established by recruiting eligible entities and filing Iowa 28E agreements.
- Hired grant administrators, project coordinators, watershed planners, and engineering firms
- Identified all priority Hydrologic Unit Code 12 watersheds (HUC 12s) for IWA best management practices (BMPs)
- Actively recruited landowners
- Accepted and approved applications from landowners or projects of interest (Application approval is ongoing as funds are available and projects meet program requirements.)
- Begun the watershed planning process
- Begun marketing the new level of cost share from 75%/25% to 90%/10% with an opportunity for a waiver for projects constructed on public land

In Year 3, all WMAs were operating and making progress toward the goals of IWA; however, there was a range of progress for the WMAs in their process. The first IWA bid package to go out for bid was in the Middle Cedar Watershed Management Authority (Middle Cedar WMA) in spring 2019. At the time of this report, all but one of the watersheds had bid packages already approved by the board or currently under review, and all watersheds were making progress toward environmental review, hiring contractors, and construction. However, in a couple of the watersheds where they did not anticipate spending the money currently allotted to them, Iowa Economic Development Authority (IEDA) announced that they may need to reallocate funds to other watersheds with additional projects.

During their interviews in fall 2018, several PCs expressed regret that they did not yet have projects in the implementation phase in their watersheds. However, they readily identified the following indicators of success: initial landowner engagement and long lists of applicants; locating promising implementation sites; hiring an engineer; projects submitted to engineers for preliminary design; dollar amount associated with potential projects; getting bid packets ready to go out; getting through the environmental/archeological assessment process; and discussions with landowners about other conservation practices. PCs were excited

to get construction underway as soon as possible to add this achievement to the growing list of current project successes.

In Year 3, nearly all IWA WMAs had begun to focus on their sustainability after IWA ends through activities like applying for additional funds for installing conservation practices or planning, approving letters of support for complementary water resources efforts, participating in WMAs of Iowa (a group organized by the ISU IWC to provide networking opportunities for WMAs), or embedding a section on WMA sustainability into their watershed plans.

IWA Partner Contributions and Support

A major component of the IWA is the collaboration of many partner groups, each of whom was selected because of their unique expertise and ability to contribute to the overall mission of the program. They have been integral in supporting the development and functioning of the WMAs and the implementation of the IWA. The IWA planning partners (who have provided direction and oversight for the broader program) are:

- University of Iowa Iowa Flood Center (UI IFC)
- Iowa Department of Natural Resources (IDNR)
- Iowa Economic Development Authority (IEDA)
- Iowa Homeland Security and Emergency Management Department (HSEMD)

The remaining IWA partners, who have been contracted to provide technical assistance, support, or other deliverables, include the following organizations:

- Iowa State University Extensions and Outreach (ISU EO)
- Iowa State University Iowa Water Center (ISU IWC)
- Iowa State University Iowa Nutrient Research Center (ISU INRC)
- University of Iowa Flood Resilience Team (UI FRT)
- University of Northern Iowa Tallgrass Prairie Center (UNI TPC)
- Iowa Department of Agriculture and Land Stewardship (IDALS)

During the first three years of the IWA grant, the partners pursued their goals by developing and maintaining relationships with the IWA WMAs, with stakeholders concerned about water quantity and quality across the state of Iowa, and with each other. While the IWA partners' self-reported contributions to the work of IWA were unique to the specific roles and functions of their organizations with respect to the IWA, many of their activities could be more broadly described as providing key resources and support to the project coordinators (PCs), as well as the members of the WMA boards.

In the first half of the grant, the IWA partners provided technical support to the WMAs in areas of hydrology, geology, and soil science. They also provided advice and guidance on WMA formation and regulation compliance, searching for and hiring personnel, and providing support for WMA personnel and planning teams. During Year 3, in a series of evaluation interviews and surveys conducted by the CEA, PCs, watershed board members, and watershed planners have all described ways that they have been supported by IWA partners and the impact that this support had on their work.

When board members were asked about the benefits of being involved in the IWA, they frequently cited the UI IFC, whose contributions have included providing technical modeling to develop plans and set goals, being "instrumental in education," providing robust analysis and guidance, and generally, "getting the ball rolling." Members of the UI IFC produced hydrologic reports for all WMAs and watershed planners for review and presented highlights from these reports during WMA meetings. Furthermore, UI IFC, in collaboration with a team of interagency partners and local emergency management coordinators, has identified priority locations across the state to expand the UI IFC stream sensor network, thereby improving their flood monitoring and forecasting efforts.

Leverage Partners

HSEMD was charged with encouraging leverage partner engagement and matching their specific interests and expertise with the needs of the WMAs. Leverage partners have been active in different IWA watersheds and certain leverage partners have been invited to present during IWA project management meetings. During early 2019, the CEA collaborated with HSEMD to design and administer a survey to leverage partners in order to learn about this group's current and future interests in the IWA and in watershed management issues in Iowa. Respondents described their current role in IWA both generally (e.g., "support," "co-sponsor") and more specifically. Specific contributions included providing WMAs with information for watershed planning; assisting WMAs in applications for grants or other funding; providing technical advice; serving on WMA boards or attending meetings; promoting and supporting project implementation; providing feedback on communications; and helping with conservation planning.

All leverage partners identified ways they would like to be involved with the IWA in the future. Some indicated they would like to continue with the activities they were doing at the time; meanwhile, others offered descriptions of additional ways their organization could support the work of the IWA, such as collaborating in planning, providing "technical knowledge for upstream communities," supporting the WMA boards, and helping with engaging the agricultural community and with identifying and addressing natural resources issues.

Project Coordinators

An important aspect of the IWA is the presence in each of the IWA watersheds of a dedicated project coordinator (PC) who is responsible for coordinating the IWA work in the watershed. During evaluation interviews with board members, many specifically praised the work of their PCs, describing the board's confidence in their PC's capacity to successfully carry out the work of the WMA.

Hiring and training of PCs

Another important element of the IWA is the funding to employ a dedicated PC in each of the IWA WMAs who is responsible for coordinating the IWA work in the watershed. The WMAs conducted their own hiring process for the PC positions with input and support from IWA partners. During Year 1, with support from the IDNR and the IDALS, the five previously existing WMAs had all successfully conducted searches and hired PCs, and East/West Nishnabotna WMC had hired a coordinator. Then, at the beginning of Year 2, the final PC was hired to work in the North Raccoon WMC.

The PCs hired by the WMAs had common educational backgrounds focused on the land and how it is used. They brought varied agency experience to their work (e.g., NRCS, US Fish and Wildlife Services, state and county conservation departments, AmeriCorps, and Pheasants Forever), but shared common interests related to working with people and having a positive impact on the land. WMA PCs have received consultation about how to get started on the IWA work from partner organizations (IDALS, IDNR, and UI IFC). Additionally, ISU EO organized multiple events with training sessions for the PCs including bi-annual Watershed Academies. During training, the UI IFC provided coordinators with extensive materials about the IWA, and IDALS created materials about HUD requirements and procedures, and a list of questions commonly raised by landowners who express interest in the project.

PC job responsibilities and work

In an evaluation survey conducted early in 2018, PCs indicated that the work with their WMAs was going well and said they had a clear vision for their work in the watershed. They reported similar priorities (figuring out the logistics of selling practices; getting projects on the ground; planning; and outreach) and challenges (tight program timeline and slow progress on certain aspects of the project logistics). When asked about their confidence about spending the money allocated to their WMA, most PCs were quite optimistic. PCs also reported working with the IWA partners at varied levels and receiving different types of support. Generally, PCs said they benefitted from strong communication with the partners but had some ongoing confusion over

partners' roles. Despite any confusion, PCs reported receiving support from partners in the form of training, technical data, guidance, and communication and outreach materials. During their interviews in fall 2019, PCs described receiving support from the partners in the following ways (partners listed in alphabetical order):

- HSEMD: Varied interactions with the HSEMD team members including facilitating communication with project partners, providing information about flood damages, and reviewing materials to be submitted for environmental review
- IDALS: General guidance in addition to specific support from IDALS related to requirements for implementation processes and projects
- IDNR: Answering questions, providing general support, and initiating an informal PC group
- IEDA: Answering questions and general support, verifying that processes are being done correctly, and supporting PCs throughout the necessary review processes (cost share change to 90%/10% and environmental review)
- ISU EO: Hosting the Watershed Academies, developing materials about practices for outreach, providing support for outreach (contacts, planning), and reviewing materials.
- ISU IWC: Facilitating the WMAs of Iowa, hosting the Iowa Water Conference, and providing Daily Erosion Project data
- UI FRT: Providing social resilience information, answering questions and recommending valuable training events
- UI IFC: Online tools, Agricultural Conservation Planning Framework (ACPF) analyses, answering questions and general support, social media and outreach
- UNI TPC: Receiving seed mixes, sharing contractor lists, and answering questions

In addition to support from the IWA partners and other stakeholders, the PCs also reported that a great source of support came in the form of interactions with other IWA PCs, both informally and formally. They described group meetings or conference calls as valuable opportunities to share critical information and support each other through challenges.

Transitioning to the start of Year 3, PCs described how their work priorities centered primarily on project implementation. PCs cited the following activities as being central to their role in the IWA: making connections between all stakeholders involved in the project; recruiting landowners and soliciting interest in the project; serving as the conduit between interested landowners and project resources; identifying potential projects; and implementing the vision of the IWA on the ground. Additionally, during WMA meetings PCs in many of the WMAs reported doing some sort of outreach in their watershed, and three PCs described specifically engaging or planning to engage women landowners in these efforts. Additional priorities mentioned by the PCs in Year 3 included reviewing and finalizing watershed plans and supporting efforts for water quality monitoring.

Watershed Planners

Another important element of the IWA is the explicit designation of funds for IWA WMAs to secure watershed and flood resilience planning services to produce a FEMA-aligned, comprehensive watershed plans that addresses factors contributing to flooding and water quality within the watershed. These efforts have proceeded at different rates in each of the watersheds over the course of the first three years of the grant.

During Year 1, with guidance from the IDNR, the five eastern Iowa WMAs engaged planning contractors to create watershed plans. Contractors met with WMAs to share the start of their planning process, met with community members, and conducted and analyzed surveys of landowners and other watershed residents. By the end of Year 1, one additional WMA was soliciting bids for planning services (East/West Nishnabotna WMC) and one had formed a committee to publish a request for proposals to engage their planning services (North Raccoon WMC). As of August 2018, all IWA watersheds had engaged watershed planners.

Toward the end of Year 2, planners indicated that they were on schedule to complete their watershed plans by the time designated; however, two expressed some concern that the workload was heavy for the established timeline. Then, in Year 3, two planners indicated that they were no longer on their original schedule, and three planners indicated that the workload was not reasonable for the established timeline. In Year 3, planners were asked their opinions about integrating hazard mitigation information into the plans, and all indicated that integrating and organizing information related to hazard mitigation plans went smoothly. They also agreed that working with the IWA partners in this process was going well.

In Year 3, two watershed planners presented final versions of their plans, three watershed planners made drafts available for the board and public comment, and one watershed planner continued to share elements of the plan with the intention to provide a draft for official review in late summer 2019. North Raccoon WMC was the last IWA WMA to select their planner and start the process. In surveys and during WMA meetings, planners described the following activities as parts of their planning process: community and board input sessions; integrating data received from partners; hiring additional contractors for support; and facilitating a flood resiliency simulation activity. Additionally, two WMAs extended their planning contracts during this grant year to allow planners adequate time to integrate additional data and feedback.

When asked about the future utility of the watershed plan, planners agreed that securing a sustainable funding source and implementing the plan were the most important tasks that remained for WMAs. Moreover, the planners indicated that a PC would be needed in order to carry out these tasks.

Partner contributions to the plans

During the first three years, IWA partners worked to support the WMAs in the planning process and in providing in-depth analysis of the HUC 8 watersheds.

- In Year 2, UI IFC worked with WMAs to recruit landowners to allow the placement of hydrologic monitoring stations and water quality sensors in each watershed. The UI IFC also produced hydrologic assessment reports for each of the IWA watersheds. Including UI IFC engineers attended many WMA meetings to provide updates on their progress on the assessment work and on other relevant flood-related information. Phase I hydrologic assessment reports were delivered in late summer 2018 and early 2019.
- UI IFC staff worked to compare maps of existing BMPs created by the IDNR, IGS, and ISU, with output from the Agricultural Conservation Planning Framework (ACPF), a planning tool that recommends placement for potential BMPs. This comparison of needs vs resources, along with input from project coordinators on landowner interest in the selected HUC 12s is part of the process of understanding where effective BMPs to hold water on the land could be installed.

In support of the hydrologic assessments for the IWA watersheds, the UI IFC developed the Generic Hydrologic Overland Sub-surface Toolkit (GHOST) to model simulated flood conditions. UI IFC engineers built GHOST by modifying and enhancing PIHM, an earlier simulation model from Penn State University. The UI IFC hydrologic assessments reports used GHOST in the eastern Iowa watersheds and US Army Corps of Engineers modeling tool (HEC-HMS) in the western Iowa watersheds for the Phase I reports and will use GHOST for all IWA watershed modeling in the Phase II reports.

In two surveys conducted at the end of Year 2 and at the midpoint of Year 3, watershed planners all agreed that working with the IWA partners was going well. In Year 3, planners were asked to share their opinions about integrating hazard mitigation information into plans, and all indicated that integrating and organizing information related to hazard mitigation plans went smoothly.

Flood Resilience Team

Flood resilience is a construct without an agreed upon definition or process, and the development of the University of Iowa Flood Resilience Team (UI FRT) activities and its ongoing program evaluation continue to

be developmental. The UI FRT has made strides toward defining and operationalizing flood resilience and integrating it into the forefront of hazard mitigation planning.

The goals defined by the UI FRT members during the first year of the project¹⁵ were:

1. Measure, visualize, and communicate flood resilience resources
2. Enhance flood resilience content in formal watershed plans
3. Improve social resources for flood resilience

In writing the IWA proposal, the UI FRT described exploring innovative approach to flood resilience, and IWA leadership decided that intensive evaluation efforts would focus on resilience in the project. As the work of the UI FRT is more open-ended and is an evolving process, the evaluation to document the activities and outcomes is also different than the overall evaluation of the IWA. Progress is described below year by year.

Year 1

During Year 1, the UI FRT experienced a year of intense definition and development. UI FRT members engaged in research and discussion related to the best ways to define and measure flood resilience, presented their program during two rounds of WMA meetings, and fostered connections with other people and groups in the state interested in flood resilience work.

A noteworthy development during Year 1 was that UI FRT established a partnership with the Iowa Department of Homeland Security and Emergency Management (HSEMD). Driven by both teams' interest in the human aspects of flood resilience, the teams created a partnership to work with watersheds to develop watershed plans to complement county Hazard Mitigation Plans.

Year 2

In Year 2, the UI FRT worked with collaborators from HSEMD and the UI IFC to develop Flood Resilience Action Plans (FRAPs), documents to be used locally to help communities be more prepared for disaster and decision making. In July 2018, the UI FRT indicated that, given the input received from the first rounds of feedback, they were going to make significant changes to the organization and purposes of the FRAP, and the schedule for completing the FRAPs was also going to be altered.

In August-October 2017, WMA meeting attendees across project watersheds reported varied levels of understanding of the role of UI FRT. During May-August 2018, the UI FRT either presented WMAs with an introduction to flood resilience or a discussion of resilience as it applies to flood mitigation and hazard planning work. In all cases, when asked in a survey to identify which aspects of the flood resilience work were most important to their watersheds, responses were varied and included things such as providing them with links to emergency management agencies, the “social side” of resilience, the potential to plan and mitigate flooding based on models and simulation, and the need for more communication and awareness about flood risks and mitigation potential.

In Year 2, the UI FRT led and participated in meetings with parties both internal and external to the IWA. The purpose of some of the meetings was to explore potential connections, and then build on these connections. These connections included groups from private industry related to water issues, RC&Ds, and existing disaster recovery coalitions.

Over the course of Year 2, the PCs indicated that they increasingly understood the role of the UI FRT and reported benefitting from the UI FRT through clarification of the UI FRT's role within IWA, gaining a better understanding of the concept of community resilience, and getting UI FRT support in creating presentations for local residents. One watershed planner said they planned to use UI FRT support for “connecting the resiliency plans with hazard mitigation plans so they are recognized by FEMA and emergency management.”

¹⁵ A description of the process of goal definition for UI FRT is included in the *IWA Year 1 Evaluation Activities Report*.
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Year 3

In Year 3, the UI FRT employed a new strategy to collaborate with contractors and partners to develop the project deliverables. The UI FRT and their collaborators or sub-contractors have been working on the following activities:

- FEMA Multijurisdictional Plans: The UI FRT is collaborating with the HSEMD and the UI IFC to support the development of FEMA multijurisdictional flood hazard mitigation plans.
- Flood Mitigation Elements for Watershed Plans: Building on the work from Year 2, the UI FRT collaborated with HSEMD to integrate flood mitigation elements into IWA watershed plans.
- Community Care Coordination System: Building on discussions with Hawkeye Area Community Action Program (HACAP) from the previous years, and now also in collaboration with the United Way of Linn County, in Year 3, the UI FRT team continued to seek ways to concretely support vulnerable populations in Linn County during and after flood events.
- Flood Resilience Action Plans: The UI FRT's Flood Resilience Action Plans (FRAPs) have continued to shift in focus and scale over the course of Year 3, with the focus now on contractor-based, community-scale plans.
- How-to Guide: In response to feedback about the presentation of social vulnerability information, the UI FRT developed a How-to Guide for planners on ways to incorporate social resilience information into watershed plans in a useful and accurate way.
- Dubuque Survey: The UI FRT has been collaborating with the Bee Branch Healthy Homes (BBHH) team since Year 1 to develop and administer social resilience surveys to participants in the BBHH program.
- Outreach and Education: In addition to the targeted activities of the UI FRT, the team regularly interacted with local and national stakeholders who were also engaged in community resilience work.

Bee Branch Healthy Homes Resiliency Program

Bee Branch Healthy Homes Resiliency Program (BBHH) in Dubuque, IA is a program helping low- or moderate-income home or property owners through forgivable loans to increase the flood resilience and safety of their homes. Additionally, home advocates, social workers from the Visiting Nurses Association, conduct assessments with all participants to match them with community resources from which they could benefit. Based on the collection and synthesis of the data sources, the BBHH Project appeared to be in full swing and achieving all their benchmarks with limited setbacks.

During Year 1, the City of Dubuque BBHH accepted and reviewed applications for participants and conducted home inspections, as well as Home Advocate-conducted intake assessments. Though team members noted that administrative setbacks had delayed the onset of construction, they had already witnessed benefits related to participants' relationships with home advocates and remained confident that the BBHH would have a positive impact on participants' lives.

During Year 2, BBHH team members described that they were getting both busier and more comfortable with their work in serving the needs of eligible residents. They continued to cite the following ways that participants were benefitting from the BBHH program: less water in properties, families could use their basements again, families were experiencing less stress and worry, were receiving referrals for needed resources, and there was a "human touch." A major theme throughout the interviews was that there is no "one size fits all" approach to this kind of work. Accordingly, it is important to be responsive to the needs of each individual.

Also in Year 2, during evaluation interviews, a majority of BBHH clients believed that participating in the program would have a positive impact on their lives financially, personally, and through increased pride in their neighborhood. One participant said, "I think it's a wonderful project. I think that the work they did, outside of just helping the homes and the sustainability of the homes in this area that they did for Bee Branch,

the landscaping and the securing of all that...is beautiful.” The group described the “best parts” of the program to be the work done on their home to prevent further water damage, working with the City of Dubuque team members and contractors, and that low- or moderate-income residents have access to this type of program.

During Year 3, the feedback from a majority of BBHH clients about their involvement in the program was overwhelmingly positive. Major themes throughout the interviews were an appreciation for the financial assistance to complete the various flood resilience projects on their homes, increasing the safety and security they experienced as a result, and how impressed they were by the coordination efforts of the BBHH team members.

Although clients consistently praised the BBHH staff, their experiences working with contractors was reportedly much more diverse. Some expressed varying levels of frustration with the overall quality of the contractors’ workmanship and effectiveness of their communication, as well as the time of the project from start to finish. Issues with contractors ranged from simple lack of attention to detail and miscommunications, to more alarming safety violations. Some clients were able to have their problems remedied through intervention from the BBHH home advocates; however, others felt reluctant to reach out to their advocate or were unaware of the scope of the advocate’s role in the program. Despite setbacks, BBHH clients were grateful for the work that was done on their homes.

BBHH staff reported that their roles were largely unchanged from prior years. They described ways that BBHH clients are benefitting from the program: physical improvements in keeping water from their homes; less stress among the families resulting from financial difficulties; improvement in the health of the residents; and up-to-date information about services available to residents that they did not know existed. The BBHH team members were asked to identify gaps in available programming to meet Dubuque residents’ needs. They reported that Dubuque does a great job in general, but a couple mentioned some areas that could be improved, including assistance with pest control, public transportation gaps, and access to mental health services. Challenges experienced by the BBHH team members were contractor shortages, weaknesses in internal communication for the home advocates, and staffing issues.

The BBHH program contractors who responded to a survey indicated that they did not feel deterred from bidding on BBHH projects and planned to continue bidding on future projects, despite some differences of opinion in the bidding process. Much of the challenges they reported related to their experiences as sub-contractors working with general contractors. They recommended that the BBHH team should act as the general contractor or that there should be no general contractor at all.

Reflections from Key Stakeholders

At the midpoint of the IWA grant, key personnel from the partner organizations and WMA boards were invited to reflect on the progress made thus far, as well as the future outlook during the final two years of the grant and beyond. Note that, while project coordinators (PCs) also participated in similar interviews, their responses were more focused on the implementation aspects of the grant and have been incorporated in the section above. This section will be organized according to the following topic areas: the benefits of participating in the IWA, the strengths and weaknesses of the overall watershed approach and the WMAs as the coordinating entities, and the challenges that lie ahead and the sustainability of the current activity.

Benefits of Involvement in IWA

Looking back at the accomplishments and outcomes of the IWA project through the halfway point in the grant, stakeholders identified a range of benefits, which largely centered on the physical and quantifiable impact of the work being carried out or the level of engagement and collaboration in the WMAs.

Physical impact

Even though most WMAs had yet to begin construction on their projects at this point, there was an overwhelming consensus that a primary benefit of the IWA has been the potential for measurable improvements in the areas of water quantity and quality. Board members focused on the vital role of the financial assistance they received, which enabled them to successfully fund the implementation of practices in their watersheds. They also mentioned how these practices have the capacity for “reducing instances of flooding” and decreasing the nutrient content not only where they are being installed, but also for other downstream communities. The partners were slightly more cautious about the extent of the physical benefits that will be experienced as a result of these practices. The predicted scale of the benefits, as well as the degree of certainty of their outcomes, varied among the partners. Some projected significant and lasting positive impacts; meanwhile, others discussed the potential for more localized impacts of the practices and pointed toward the larger sums of money that would be needed to affect the desired changes across the entire state. Regardless, several partners were optimistic about the potential avoidance of future losses and damages to property through the work of this grant.

Engagement in the WMAs

One of the major themes that consistently emerged in some form across nearly all stakeholder groups was the notion of engagement. For some, this was in reference to the increased levels of interest, activity, and collaboration occurring in and through the WMAs; for others, engagement was exemplified by the support and guidance of key partners in carrying out the work of the WMA. Still others viewed engagement as coming from landowners or public individuals and groups beyond those directly implicated in the IWA.

Although some WMAs existed prior to the IWA, the formation of several new WMAs through this grant has served as an important early outcome of the project that may continue to pay dividends down the road. Within these organizing entities, board members and partners alike have cited the importance of being able to make connections and network with individuals from many disparate organizations that all have common objectives. Board members repeatedly emphasized the value of being supported by partners that have vast technical knowledge and expertise. In particular, they described benefiting from the leadership and guidance of the planning partners and becoming properly equipped through ongoing education to successfully establish and achieve their goals as a board. Likewise, partners also shared evidence of individual or organizational capacity-building that they experienced through collaboration with other individuals and organizations in the WMAs. For example, several partners described expanding the scale or scope of their work or developing a better understanding of the roles of other partner organizations, which in turn has enabled them to be more effective in their own work. According to key stakeholders, this level of collaboration and networking has also strengthened the current work of the IWA.

Looking to other outcomes of this collaboration, board members and partners each discussed how this increased engagement has facilitated a greater awareness of the watershed approach (explicit acknowledgement of the hydrology of a watershed and the interaction of upstream and downstream communities) among stakeholders within and outside of the WMAs. First and foremost, has been the development of knowledge and awareness of the board members themselves. For example, board members from both Middle Cedar and English River WMAs offered personal anecdotes of their level of awareness regarding the causal relationship between farming practices and water quality. A small handful of partners also recognized increased agency and awareness among the board members, suggesting that they have a more fundamental understanding of why they gather and how they function within their geographic (rather than political) boundaries. Another critical manifestation of the watershed approach would be the bridging of rural and urban perspectives, which was evident in both the Clear Creek WC and English River WMA. Ultimately, the collaboration and increased awareness of the watershed approach has begun to build momentum that may lead to greater sustainability of the WMAs beyond the life of the IWA.

Strengths and Weaknesses of the WMAs

While there were inherently unique strengths and weaknesses when considering each individual WMA, there were also several consistent themes that emerged when discussing the collection of WMAs more broadly. Many of the strengths appeared to parallel the benefits as outlined above; meanwhile, the weaknesses provided an indication of opportunities for growth as the WMAs look toward the future sustainability of their entities and the watershed approach more broadly.

Strengths

Themes of local engagement and support from partners were complemented by praise for the quality of the staff that play key roles in the WMA, as well as the diversity of perspectives that have been represented on their respective boards. Based on their survey responses, board members reportedly understood and agreed with the mission of their WMA, were familiar with its current work, felt informed enough to make decisions on behalf of their WMA, and agreed that they had adequate opportunities to provide input to their WMA. They also expressed optimism about the operational effectiveness of their WMAs, as well as the individuals that have been involved in leadership roles within the WMA. In their interviews, multiple board members specifically praised the work of their project coordinators, describing how confident they have been in their capacity to successfully carry out the work of the WMA. Several of the partners echoed the positive statements about the overall quality of the participants involved and their ability to effectively “move things forward on a local level.” Board members in particular highlighted the diversity of individuals and partner groups engaged in their WMA, which for some was novel and directly attributable to the IWA at large.

Weaknesses

The main area of weakness appeared to be the ability of the WMAs to sustain the initially high levels of interest and engagement. Additionally, the range of experience and knowledge of board members, as well as their feelings of insecurity surrounding funding, have clouded some of their ability for their WMAs to, in the words of one partner, be “utilized to the extent possible for the impact they could be having.” This endeavor was described as a “voyage of discovery” in which individual WMAs are learning lessons that hopefully will lead to greater resiliency and effectiveness over time.

Board members and partners consistently agreed that the interest and excitement related to the awarding of the grant has begun to wear off. Especially toward the midpoint of the grant, it has become increasingly difficult for them to sustain that initial level of interest, with several WMAs experiencing more frequent attendance and quorum issues at their quarterly meetings. Although the reasons for the decline may be numerous, including a lack of grassroots formation, the board members and partners have begun to view this as a weakness that must be swiftly addressed to ensure their ability to continue carrying out the work of the IWA in the final two years of the grant.

While the diversity of WMA board members was initially viewed as a strength by some, it has also been considered a weakness by others. For example, some partners pointed to a “struggle to connect,” or the inability for all members to access and understand the technical information. This in turn has produced to a lack of clarity regarding the appropriate actions to take in response the information being shared. Thus, while the multiplicity of perspectives of the many WMA members may enable a greater level of collaboration (see strengths above), it may also negatively affect their ability to connect to and effectively carry out the goals and activities of the IWA.

Looking ahead toward opportunities for improvement based on their current weaknesses, board members expressed a desire to see the actual impacts on the watershed, to secure additional funding, to increase the number of practices on the ground, and to expand the implementation areas for IWA-funded conservation. This notion of being in a perpetual state of learning and continually striving for greater outcomes was reinforced by multiple key informants, one of which stated, “We’re still learning. I know that we can do better.”

Future Challenges and Sustainability

The most obvious challenge currently facing the WMAs is the implementation of practices within the timeline remaining. Although some WMAs were further along in the process than others, board members and partners almost unanimously expressed some degree of apprehension about their ability to get projects completed and the money spent within the allotted grant funding period. In some cases, stakeholders reported feeling pressure from outside observers to move the process along more quickly and to demonstrate the positive outcomes of their efforts. This sense of urgency to implement practices has been further accentuated by the perceived need to leverage completed practices to solicit interest and engagement from a wider base of stakeholders. This imperative has been especially challenging in more rural watersheds where public outreach has remained critical to getting projects through the pipeline. Perhaps because of their role in the grant, partners tended to focus less on the issue of landowner engagement and more so on the likelihood of the practices to produce measurable impacts on water quantity and quality. Regardless of the varied nature of the challenges being faced by the WMAs, there was a collective assumption of responsibility and a shared willingness on the part of all those involved to do everything within their power to overcome these challenges and build momentum, thereby laying the foundation for continued success beyond the IWA. In fact, many of the partners and board members viewed the implementation of practices as critically necessary in their pursuit of securing supplemental or renewable sources of funding to continue this work moving forward.

Turning toward the replicability of the project and the outlook for others to continue utilizing the watershed approach in Iowa beyond the IWA funding period, there was a healthy combination of apprehension and cautious optimism. Regarding the overall construct of the IWA, most expected that the desire to maintain the approach would endure. Building on the benefits of the IWA, several board members and partners alike spoke highly of the potential for the lessons learned through this project to inform the future directions and decisions of others that wish to pursue a similar model. For example, one board member described how the lessons they have been learning from the other IWA watersheds that were ahead of them in the process have been helpful for their own WMA in knowing how to make their “communities within the watershed more resilient and sustainable.” Similarly, a partner described how the breadth of lessons that IWA participants have learned may lead to a more strategic and efficient execution of this approach moving forward, essentially creating the muscle memory necessary to increase their overall efficiency in carrying out the same tasks in the future. However, this general optimism about the value of the replicability of the watershed approach was met with varying degrees of hesitancy regarding the myriad factors that influence their ability to sustain the effort over the long term.

As the central entity in continuing the watershed approach in Iowa, the outlook for the WMAs to maintain their current level of activity was met with much apprehension, primarily owing to the uncertainty of funding. To that effect, Weber (UI IFC) stated, “We’re at ground zero of the most critical time in the state of the WMAs in Iowa.” Several board members and partners spoke with a sense of hopeful anticipation about how the current tools and resources might be leveraged by the WMAs to apply for and be awarded additional streams of funding in the future. Recognizing the primacy of funding to the continuation of their efforts, WMAs have already begun to turn their efforts toward discussing options for funding their continued activity and researching potential grants for which they can apply.

Looking Forward

Years 4 and 5 will provide an opportunity to directly observe progress in the WMAs and other key areas of IWA in accomplishing the tangible goals of the program. CEA will work with IWA leadership to define key questions for the evaluation in the last two years of the project which will likely shift in focus toward volunteer landowner interest and engagement; completion of community infrastructure projects in Storm Lake, Dubuque, and Coralville; sustainability of water resources work in the state of Iowa; and dissemination of IWA at state, regional, and national levels.

IWA Programmatic Components

Iowa Watershed Approach (IWA) is a complex program involving support from and interaction among different groups of stakeholders. Key IWA stakeholders include IWA partners, project coordinators (PCs), and IWA leverage partners. This section describes the stakeholders' roles in and contributions to the program, and presents their perspectives on their involvement in the program.

IWA Partners

By design, the IWA has been a collaborative effort coordinated and supported by a group of key partner organizations from across the state, each of whom was selected because of their unique expertise and ability to contribute to the overall mission of the program. These key partner organizations provided direction and oversight for the broader program. They are referred to as the IWA planning partners, and consist of:

- University of Iowa – Iowa Flood Center (UI IFC)
- Iowa Department of Natural Resources (IDNR)
- Iowa Economic Development Authority (IEDA)
- Iowa Homeland Security and Emergency Management Department (HSEMD)

Additional IWA partners who have been contracted to provide technical assistance, support, or other deliverables, include the following organizations:

- Iowa State University – Extensions and Outreach (ISU EO)
- Iowa State University – Iowa Water Center (ISU IWC)
- Iowa State University – Iowa Nutrient Research Center (ISU INRC)
- University of Iowa – Flood Resilience Team (UI FRT)
- University of Northern Iowa – Tallgrass Prairie Center (UNI TPC)
- Iowa Department of Agriculture and Land Stewardship (IDALS)

In addition to the partners named above, other watershed-specific partners include the Cities of Coralville, Dubuque, and Storm Lake; and eight Iowa counties: Benton, Buena Vista, Fremont, Howard, Iowa, Johnson, Mills, and Winneshiek. The cities and counties will act as fiscal and administrative agents for the watershed work of IWA.

In order to better understand the roles and contributions of each partner during Year 3 of the IWA grant, the CEA interviewed partner representatives; observed bi-annual IWA partner meetings and administered formative surveys of attendees; and observed their presentations and interactions at Watershed Management Authority (WMA) quarterly meetings. This section begins with a self-reported overview of the partner organizations' contributions to the IWA thus far. Next, a chronological summary of the IWA partner meetings and the responses from partner survey are presented. The final part of this section presents the major findings from the IWA partner representative interviews, during which they described perceived benefits of the overall project, the strengths and weaknesses of the watershed approach, and the challenges that lie ahead. At the end of the interview, partners were given the opportunity to provide anonymous feedback about what they would have done differently if they had the chance to start over knowing what they know now. This anonymous feedback is integrated throughout this section regarding the ways that their efforts could have been more strategically leveraged or more closely aligned with the scope of duties as originally outlined in the proposal. For a complete report of methods and findings from the IWA Partner Representative Interviews, see [Appendix E](#).¹⁶

¹⁶ In the watershed case study section of this report, additional information is provided regarding the specific involvement of IWA partners at WMA meetings.

Partner Contributions

In IWA Partner Representative Interviews (described in more depth below) partner representatives were asked to name their organization's most important contribution(s) to the success of the project. Whereas much of the partners' contributions had been unique to the specific roles and functions of their organizations with respect to the IWA, many of their activities could be more broadly described as providing key resources and support to the PCs, and members of the WMA boards. A summary of their self-reported contributions is presented below by organization.

UI Iowa Flood Center (IFC)

Larry Weber initially summed up UI IFC's primary contribution to the IWA with one word, "leadership." Expanding on that, he stated, "It's not just leadership from my chair, but it's leadership amongst our team. And the team has been consistent, participatory, adding value, helping the watershed leadership think outside of the box a bit, bringing a state, regional, national, and even to some degree an international perspective to this issue." Craig Just (UI FRT), who is also a faculty member affiliated with UI IFC, used similar language to describe the role of UI IFC in facilitating the success of the IWA. Acknowledging the involvement of the whole team at UI IFC, Just confirmed that their most valuable contribution has been to cast the vision and provide leadership to the WMAs. He said that UI IFC has been primarily involved in "creating the reason or at least promoting the reason why even forming a WMA is worth it."

As a secondary contribution, both Weber and Just spoke of the quality of the technical modeling performed by UI IFC. To that end, Weber applauded, "the hydrologic assessment and the modeling work in Phase 1 has been strong and solid. I think the Phase 2 portion of that is just going to be rock solid and pushing the envelope in that technical area." Similarly, Just described how their technical work, which has been "pretty powerful as they get embedded into the watersheds plans," has provided the backbone for others to make informed, science-based decisions in the watersheds.

Iowa Department of Natural Resources (IDNR)

Kyle Ament described that the majority of the IDNR's involvement has been at the onset of the project. Ament stated, "What we've done to get these WMAs on the ground is probably the major contribution that we've given. That was a lot of heavy lifting, took a lot of organization, took a lot of traveling to city councils, district meetings, and trying to explain how they will benefit and what the value of this is to them." Referring to the investment of time and effort in establishing the WMAs, Ament added, "It's something that hopefully now will be around for decades and evolve into something that maybe has sustainable funding someday." Elaborating on their activity since the initial formation of the WMAs, Ament reported that IDNR has "[used] what we learned to help expand the watershed management authorities across the state." Specifically, IDNR has been providing insight and guidance to "communities in other watersheds with what I've learned from this Iowa Watershed Approach." Ament also described being "heavily involved with drafting the RFP, the outline of what the watershed plan should look like, what should it entail." During this effort, he provided support to the "local members who don't know how that process works, guiding them through it, helping them make those decisions about 'Who do we hire as a consultant?', 'What else do they have to do to get that consultant on board?'" Ament noted that the IDNR's "last major contribution has been [doing] some field work with collecting land use assessment data in at least two watersheds. So hopefully that'll be a valuable product for the watershed management plan."

Iowa Economic Development Authority (IEDA)

Jeff Geerts described that the major role of the IEDA is "being the administrator of the dollars and providing the assistance to make sure we stay in compliance with the federal requirements that come with those dollars."

Homeland Security and Emergency Management (HSEMD)

Jessica Turba anticipated that her organization's greatest contribution to this project will be to provide resources and information to the project coordinators to enable them to define problems more effectively, identify available resources, and scale their flood mitigation projects according to those resources. She explained that flood mitigation is not only about standing water, but also water that causes damage to the built environment. As such, HSEMD has been "looking at a lot of different aspects of what that damage is, how it affects or creates the problem that you're trying to solve, and what [is] the best scale of the solution." As an example of the scale of a solution, Jessica described that a farmer cannot fix the issue of having water on their field if the real problem is further upstream. She hopes that, through the information provided by HSEMD, the PCs will be equipped to see their implementation work in the larger frame of "What problem was I trying to solve?" Turba further described that the information they have been sharing is embedded in the planning aspects of HSEMD's work. She said, "We've been sharing data, trying to show the connection between damage and different kinds of occurrences for flooding."

ISU Extension and Outreach (ISU EO)

Jamie Benning said, "For Extension, our contributions really revolved around developing education and outreach resources and supporting stakeholder involvement and outreach events." Benning further described the role of ISU EO as a team that considers who needs the information and how to deliver it. She said, they consider how the different audiences prefer to receive information, and the appropriate content and volume of information. She mentioned having regional or county team members "working with each project in different ways in each watershed depending on their local needs." Speaking to this point, she said, "Those sorts of outcomes are some of the best contributions-- having our people do what they do best and serve in a way that the watershed needs it." Finally, Benning described two additional ways they have been supporting various watersheds: developing materials for the PCs and connecting PCs with teams to help with outreach events.

ISU Iowa Water Center (ISU IWC)

Melissa Miller articulated the most valuable contribution of the ISU IWC in a couple ways. First, she described the importance of being able to offer the Iowa Water Conference as a venue to share the story and results of the IWA to a broader audience. Miller said, "I think that's something that is contributing to the success of the project, not just in these five years, but helping with the sustainability." CEA conducted a survey during the IWA sessions at the Iowa Water Conference in May 2019. Session attendees at all four IWA sessions found the information valuable and most were interested in learning more about the IWA (see [Appendix F](#) for methods and findings). Second, she mentioned sharing the Daily Erosion Project (DEP) data with the planners and PCs who may not have known about it before. Miller said, "It's tying the role of soils into what we know about water resource management."

ISU Iowa Nutrient Research Center (ISU INRC)

Jaime Benning represented both ISU EO and ISU INRC in her interview. In her reflection about INRC, she discussed the potential for their research during the early stages of the IWA to contribute to a more thorough understanding of the Iowa Nutrient Reduction Strategy (INRS). Specifically, "updating the scenarios of the INRS will help everyone better understand the practices that are being installed and their impact on nitrogen and phosphorous reduction." She also described how their research relates to landscape and economic benefits. Benning said these findings will be incorporated into the watershed plans during the last couple of years of the project where possible, but "also will be available to incorporate into statewide INRS efforts and the next phase of each of these projects, whether they are part of another large effort or more individual at the watershed level."

UI Flood Resilience Team (UI FRT)

In describing the main contribution of UI FRT, Craig Just described how they have "helped to make the idea of a 'multijurisdictional' hazard mitigation assistance a real possibility." Specifically addressing the technical

efforts of UI FRT, he indicated that they may “create a new model for communities to garner technical assistance and funding to restore their watersheds.” Through the research efforts of a graduate student, they have laid the groundwork for just such an opportunity with Federal Emergency Management Agency (FEMA), thereby pointing toward the replicable model that was called out in the initial IWA proposal. He described that the team has been developing a narrative to hopefully “trigger FEMA technical assistance in a way that’s never been done in Iowa before.” He continued, “At the onset, the UI FRT purposefully targeted the most difficult stakeholder group, ‘vulnerable populations’, since we have tremendous resources and that group is always named as the most difficult to hear from and plan for. So, even if we only move the needle a little bit for this broad group, then the project will be a success in my view.”

UNI Tallgrass Prairie Center (UNI TPC)

Laura Jackson described how UNI TPC has focused on the practical aspects of supporting the work of the IWA, and being able to “move the ball forward for ourselves and really for anybody who’s thinking about expanding prairie at a meaningful scale.” Laura recognized that in a project like this, “a lot of times people get stuck with just advocacy about the benefits. But that will only get you so far, you really have to start addressing the barriers and being proactive and observant about ‘what is really holding us back here?’” UNI TPC’s practical response to this question has reportedly been their biggest contribution to the overall IWA project. Expanding on that, Jackson described how they have been “paying attention to the watershed coordinators’ needs” and providing them with the resources and support they need to carry out their jobs. As a concrete example, she offered, “We realized what they really needed was a list of contractors who could provide prairie restoration services and native seed and things like that. And so, we did it.”

Iowa Department of Agriculture and Land Stewardship (IDALS)

IDALS was invited to participate in the interview process, but they declined.

IWA Partner Meetings

During Year 3, the IWA partners met twice. The first meeting was the IWA Project Management Team Meeting on December 12, 2018 at the Huxley Learning Center in Huxley, Iowa. Fifty-nine people attended the meeting, including IWA partners, PCs, grant administrators, contracted engineers, and other invited project stakeholders. In advance of the meeting, all IWA partners were asked to provide a written summary of their recent work in the watersheds. The meeting included the following topics for presentations and discussion:

- Watershed practices and US Army Corps of Engineers permitting
- Grant updates from IWA partners
- Grant updates from PCs
- Stakeholder engagement: Iowa Agriculture Water Alliance
- Stakeholder engagement: Iowa Natural Heritage Foundation
- Opportunities and challenges associated with co-funding project and local coordination
- Implementation of on-road structures
- PCs, grant administrators, and IEDA roundtable

Following this meeting, the CEA administered an online survey for meeting attendees to share feedback about the meeting and the IWA at large and their role in it. Given the sensitive nature of some of the responses, a full report of the findings was not shared to the broader IWA stakeholder groups; rather, it was only shared confidentially with the IWA planning partners (UI IFC, HSEMD, IEDA, and IDNR) in February 2019. CEA provided recommendations for future meetings based on the collection of responses:

- The meeting agenda should be collaboratively planned by a group of partners and perhaps PC.
- The meeting should be organized in a way that allows people to attend the most relevant sessions. People seemed eager for sessions targeted toward their group and wanted the option to not attend a full day of presentations that did not apply to them.
- There should be an opportunity for people to speak openly about their challenges and concerns.

- Networking time should be organized differently. Lunch was too long and did not ensure that people would be able to meet productively with multiple parties.
- Presenters should be aware of what will be expected of them and presentations should be focused on meeting the needs and answering the questions of the groups in attendance.
- The meeting should be held at venues aligned with the goals and spirit of IWA.

At the end of the survey, IWA partners were asked about concerns they had going into the second half of the IWA project. The concerns reported included sustainability of watershed work, partner support for PCs, construction delays and funding, and communication among the partners. These challenges were explored in greater detail in the partner interviews, which are summarized in the following section.

The partners met again in Dubuque, Iowa on May 21, 2019. Forty-three people attended the meeting. Attendees included IWA partners, PCs, WMA board members, and contractors for the WMAs. Ann Schmid (IEDA) reported that presentations during the meetings were selected based on feedback from the PCs. The following topics were presented and discussed: the environmental review process and construction bid package tips. Attendees were invited to ask questions to the presenters and the partners. A representative from each partner organization and the PCs were invited to give a brief update on their accomplishments over the last six months. The meeting also included an overview discussion of flooding and resilience in Dubuque by Teri Goodman, as well as a lunch and learn session presented by the Catfish Creek WMA Administrator and a representative from Houston Engineer, Inc. The meeting was followed by a bus and walking tour of the Bee Branch Creek and a property from the Bee Branch Healthy Homes (BBHH) program. During her interview, one partner representative, who had provided critical feedback survey following the December 2018 meeting, described that “the next quarterly meeting after that in Dubuque was much better.” To this individual, it was important that these meetings be relevant for all participants, which they felt was the case in this second meeting.

IWA Partner Representative Interviews

In July 2019, interviews were conducted with representatives from the IWA partner organizations in order to gain perspectives on the current program activities and gather data that may help inform improvements. In total, eight participants agreed to be interviewed, representing a total of nine partner organizations (see Table 1). This section begins by looking back and discussing what the partner representatives shared about the overall benefits of the IWA to date. Next, findings related to the perceived challenges of carrying out the work are discussed, providing an indication of barriers to be addressed in the final two years of the grant. This section ends with partner representatives’ perceptions regarding the strengths and weaknesses inherent in the WMA system at large, as well as their forecast for the continuation of these efforts beyond the grant.

Table 1. Partner organizations and interview participants

Representative	Partner Organization
Larry Weber	University of Iowa - Iowa Flood Center (UI IFC)
Craig Just	University of Iowa - Flood Resilience Team (UI FRT) & Iowa Flood Center (UI IFC)
Jeff Geerts	Iowa Economic Development Authority (IEDA)
Jessica Turba	Homeland Security and Emergency Management (HSEMD)
Kyle Ament	Iowa Department of Natural Resources (IDNR)
Jamie Benning	Iowa State University -Extension and Outreach (ISU EO) &

Iowa Nutrient Research Center (ISU INRC)

Melissa Miller

Iowa Water Center (IWC)

Laura Jackson

University of Northern Iowa Tallgrass Prairie Center (UNI
TPC)**Benefits**

Reflecting on the accomplishments and outcomes of the project through the halfway point in the grant, the partner representatives identified a range of benefits of the IWA. The majority of benefits mentioned by interviewees relate to the measurable impact of the work being carried out, the heightened sense of awareness resulting from the collaborations in and through each of the WMAs, and impacts on their organizations' scope of work

Measurable impact. When asked about the benefits of the IWA, all eight partner representatives cited some aspect of the measurable improvements for water quantity and/or quality; however, the predicted scale of these benefits and the degree of certainty varied among interviewees. Two interviewees described the potential for significant and lasting positive impacts related to the work of the IWA, including improvements in water quality, flooding, ecosystem, and public health. The remaining six representatives were moderately optimistic about the impact of the IWA on water quantity and quality in the watersheds. Several spoke of the potential for localized impacts of the practices being installed. As a byproduct of the potential reduction in flooding, three interviewees also discussed the potential for loss-avoidance for communities or landowners.

Collaboration and awareness. For many of the partners, the IWA has served as the catalyst for increased collaboration enabling them to facilitate greater public awareness surrounding issues of water quantity and quality. Within this effort, the WMAs have served as the organizing entity through which partners have supported the development and maintenance of the watershed approach through the life of the grant. For a small handful of partners, the ability to learn about the personnel, resources, and activities of the other IWA partners was a key benefit of the IWA, which has led to capacity building among partner organizations.

Several partners also referenced the momentum being created through the IWA to increase stakeholders' awareness of the purpose and value of the watershed approach. Two partners specifically viewed the current activity as laying the groundwork for a "culture change." Collectively, these less-tangible benefits of the IWA rival the measurable impact; they are critical elements in sustaining the long-term vision and activity of the watershed approach.

Organizational change. Several partners described how being involved in the WMA has expanded the scope of their organization's work. For most organizations, this has meant gaining a new perspective on the work they do, adapting the functions they perform, or modifying the scale of their work. Five partners indicated that their organizations have gained practical experience in functions or directions that were previously unfamiliar. Other partners described performing similar functions as before, yet expanding their audience, direction, or scale. In many ways, partner organizations have demonstrated practical changes to their work, flexibly expanding their focus and skillset in response to the needs of the program.

Beyond the practical considerations of expanding roles, responsibilities, and scope of their organization's work, a few partners also discussed a shift in their perspective on an individual level. In other words, they were able to expand their own awareness and appreciation for the collection of activities that make up the watershed approach.

Challenges

The two main challenges that partners reported were related to the implementation of practices and continued engagement of the WMA board members and other stakeholders in the watersheds.

Implementation of practices. According to the partners, the most obvious challenge that lies ahead in the final two years of the grant is the successful implementation of practices. This challenge was cited by all interviewees, with an understanding that the outcomes of this grant may have an impact on future funding and continued activity of the watersheds across Iowa. Most interviewees were cautiously optimistic that the practices would be installed; however, they listed the following potential barriers to achieving success: spending the grant funds influenced both by landowner interest and the amount of time it takes to get through all stages of the process. As far as responding to these barriers, partners expressed collective responsibility to support the WMAs.

For other partners, the more significant challenges or concerns have to do with the likelihood of these practices producing measurable impacts on water quantity and quality. Some expressed skepticism about being able to demonstrate the level of impact of the best management practices (BMPs) through modeling or actual measurement, particularly because of the addition of priority sub-watersheds may reduce the overall impact in each watershed.

Engagement. The second most frequently cited challenge is maintaining an adequate level of engagement from existing stakeholders. For those partners that discussed WMA board member engagement, the issue of obtaining quorum at quarterly meetings was of most importance. They offered several explanations for the attendance issues, including but not limited to distance traveled, competing demands on their time, and lack of perceived individual benefit. Regardless of the source of the quorum concerns, there was a consensus among interviewees about the vital importance of maintaining board member interest and engagement. Multiple partners offered ways to help engage the board members and increase participation in the watershed and WMA meetings: financial contributions, focus on local policy, and developing a more engaging and efficient agenda for meetings.

Other challenges. There were additional challenges that partners cited as potentially having an influence on the outcomes and activities of the IWA. A few representatives discussed the lack of engagement among farmers or landowners, and a desire be more purposeful in engaging them as collaborators, to give them a voice in the process. Other challenges expressed by individual interviewees included the influence of large agricultural corporations and the need for citizens to advocate for and take ownership of improvements in their watersheds; the challenges of effectively connecting research and outcomes to the audiences that could most benefit from the information; and the need to find creative ways to ensure that the outcomes of the flood resilience program are of value to the communities in which they are engaged.

As a counterevidence to the challenges cited by other representatives, one interviewee felt strongly that the project as a whole was on a solid trajectory “to meet all of the major objectives that were promised.”

Anonymous feedback. When asked to share anonymously what they wished could have gone better so far in the process of IWA, some interviewees offered constructive criticism related to potential opportunities for their increased involvement or activity during the early stages of the grant. Other partners discussed situations in which they felt there was a disproportionate effort or contribution, either from their own organization or partner organizations.

Suggestions for improvement. A handful of partners provided suggestions for how the initial development of the proposal and the inception of the project could have gone more smoothly. Specifically, two partners described how a greater level of involvement from partners during the planning process may have resulted in a stronger and clearer program design. A related suggestion, which was brought up by three partners, was the potential value of having a partner meeting at the onset of the project to ensure that everyone understood their roles to avoid duplication of effort and promote greater networking and collaboration.

Disproportionate effort or output. With a grant of this scale, it is perhaps unsurprising that one of the more frequently cited elements of anonymous feedback from partners centered on the imbalance of output or the disproportionate effort being put forth by different partner organizations. One interviewee offered examples

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of how certain partners either deviated from their defined role or underperformed according to what was originally expected from them. These critiques were expressed from the vantage point of knowing that this grant has been a learning process for many, and that there remains time for some of these imbalances to be rectified.

Strengths and Weaknesses of the WMAs

In the words of Weber (UI IFC), the WMAs “all come with their own strengths and weaknesses.” While there are inherently unique strengths and weaknesses when considering each individual WMA, there are also several consistent themes that emerged from among the partners’ responses when discussing the collection of WMAs more broadly.

Strengths. The two most frequently cited strengths of the WMAs were the fact that these entities are locally led, and that they function through collaboration from a range of stakeholders and partners. Their ability to leverage local connections and multiple organizations toward a common objective in carrying out the watershed activities has been a resounding strength.

Weaknesses. The main areas of weakness of the WMAs described by the partners were related to board member engagement, the diversity of perspectives and knowledge, and the skills of PCs.

Engagement. As mentioned above, several WMAs have begun to experience attendance and quorum issues at their quarterly meetings. This was indicative of a growing weakness in the WMAs’ ability to maintain engagement from all members. While many of the WMAs have a core group of board members that participate regularly, other members attend infrequently. One partner questioned the extent to which WMA board members felt empowered to develop agency in and through the work of their WMA. The partner noted what seemed like a sense of apathy on their part, stating, “I’m not sure they recognize that they are the WMA.”

Multiple perspectives and expertise. Several partners made remarks about how the diversity of the WMA members’ background and experiences has been something of a double-edged sword. Multiple partners reported observing a “struggle to connect” or a lack of ability to understand some of the technical information being presented. Furthermore, this diversity of background and expertise among the board members may have led to a lack of clarity regarding appropriate actions to take in response to the information being shared. Whereas the multiplicity of perspectives may enable a greater level of collaboration (see strengths above), it may also negatively affect their ability to connect to and effectively carry out the goals and activities of the IWA.

Skills of PCs. Finally, the varying level of quality of PCs in the WMAs was also discussed by a few partners. Addressing the lack of adequate performance by one PC in particular, a partner advocated, “We should look at the watershed coordinators at this point and decide who is evaluating their work and should they stay on.”

Despite the list of weaknesses that were articulated by the partners, one interviewee reiterated the many benefits of the WMA; however, they expressed concern that the WMAs were not “being fully utilized to the extent possible for the impact they could be having.”

Sustainability

When considering the outlook for utilizing the watershed approach in Iowa beyond the IWA funding period, partners expressed a mix of apprehension and cautious optimism. Regarding the overall construct of the IWA, most interviewees expected the desire to maintain the approach would remain strong. However, this general sense of optimism about the value of the watershed approach was met with varying degrees of hesitancy regarding the myriad of factors that influence long-term sustainability. Regardless, several partners spoke of the enduring lessons already learned as a result of participating in this project, and their potential to pay dividends in future watershed activity.

Looking toward the future benefit of what has already been accomplished through the IWA, a few partners cited how the lessons learned may lead to a more strategic and efficient execution of this approach moving

forward. They addressed gaining experience in the area of project scoping and future implementation, particularly at the intersection of urban and rural practices. Partners offered multiple strategies and suggestions that address the underlying question, “How do we transition from this big grant from HUD to something that sticks?”

WMA sustainability

As the focus point in continuing the work of the IWA approach, many of the partners focused their attention on the sustainability of the WMAs, or the likelihood that they would remain active beyond the IWA funding. As Weber pointed out, “We’re at ground zero of the most critical time in the state of the WMAs in Iowa.” There were mildly varying perspectives on the outlook for WMAs to maintain their current level of activity, with much of the apprehension centering on the uncertainty of funding. Broadly speaking, several partners hoped that the current activity of the WMAs, as well as the tools and resources provided by partners, might better position the WMAs for future funding. A few partners, however, expressed skepticism about the extent to which the WMAs would be able to sustain the current level of activity in the long term.

Partners consistently viewed the lack of secure and renewable funding sources as the greatest impediment to the sustainability of the WMAs. Several partners highlighted the urgency of devoting significant attention to securing additional funding for WMAs to maintain the day-to-day operations and to continue implementing practices. The only differences in the representatives’ suggestions were the means by which to pursue funding and the sources from which it should be derived.

In summary, while the partners agreed that the overall concept of the IWA holds the potential to have a great impact on flood mitigation, without a secure source of funding, it seems that the outlook for maintaining the current level of activity is bleak.

IWA Project Coordinators

An important aspect of the IWA is the presence in each of the IWA watersheds of a dedicated project coordinator (PC) who is responsible for coordinating the IWA work in the watershed. After completing the work of the *Iowa Watersheds Project* and when writing the proposal for the IWA, the project leads decided that it would be advantageous to have a local coordinator with “boots on the ground” in each watershed. While all the WMAs worked with the UI IFC, IDNR, and IDALS as advisors in the process of hiring and training their coordinators, the WMAs were also given great latitude as to what they looked for in the coordinator, where coordinators were housed, how they were supervised, their main responsibilities, and other issues that arose as the hiring and initial work with the PCs began.

During fall 2018, the CEA staff conducted extended interviews with the IWA PCs. The interviews primarily focused on the following topics: the main aspects of their work as IWA watershed coordinators; the successes and challenges they were facing; their interactions with IWA partners and other collaborators; their interactions with their WMAs; further training needs or assistance, and their views of the progress of the IWA work in their watershed. The following summary provides an overview of the main findings and is organized according to the major themes as presented in the full summary report (see [Appendix G](#)).

Roles, Responsibilities, and Challenges of Project Coordinators

PCs described the following activities as being central to their role in the IWA: making connections with all stakeholders involved in the project; recruiting landowners and soliciting interest in the project; serving as a conduit between interested landowners and project resources; identifying potential projects; and implementing the vision of IWA on the ground.

A “typical day” for the PCs generally consists of two broad responsibilities. The first is the desk job, which includes communicating with stakeholders via email, phone calls, or by mail; administering WMA business; preparing outreach materials such as newsletters about BMPs; tracking applications; using ArcGIS software

to evaluate sites; consulting with IWA partners; and working on supplemental grant applications. The second part is the field job, which includes visiting sites or potential sites to meet with landowners or accompanying soils crew; informing landowners of the IWA; reviewing maps with landowners and engineers; and reviewing sites for on road structures with county engineers. Additionally, PCs attend meetings or trainings and give presentations.

At the time of the interviews, the PCs reported having a manageable workload; however, they predicted becoming much busier once the projects got under way. Additionally, multiple PCs reported having competing demands on their time and encountering obstacles beyond their control that have slowed their pace and prevented them from accomplishing what they had hoped to by this point of the grant. Some of the PCs also discussed performing daily activities outside of their role, such as doing WMA administrative responsibilities, talking to customers about non-IWA programs, and helping the watershed planners with setting up events and facilitating contact with the WMA for other groups wanting to engage with the watershed work. Some PCs reported that performing the extra activities was a “good trade” to be able to pay back the help they received from other staff in their office and could contribute to the sustainability of the PCs position beyond the program.

The PCs were housed at varying organizations depending on available office space in their regions and good fit. As a result, the PCs reported receiving supervision from multiple sources, each providing different types of direction and demands. The supervision sources reported by the PCs included the County Board of Supervisors, the WMA Board, Soil and Water Conservation District (SWCD), Natural Resource Conservation Services (NRCS), Councils of Government, and the Resource Conservation & Developments (RC&D). Despite the multiple sources of supervision, the majority described having a great deal of autonomy in how they spend their time, with two reporting that they act as their own supervisor.

The job-related frustrations reported by PCs were largely related to the uncertainty or lack of clarity of their responsibilities. The PCs discussed feeling frustrated with the lack of clarity related to the compensatory stream mitigation, the bureaucracy, not knowing who to reach out to for help when needed, the timing of the IWA-related events, and fielding calls from landowners to handle problems not related to their job. Other factors affecting their ability to do the work of the IWA included the composition and dynamics of the WMA, site eligibility issues, landowners not having “the whole sense of ‘the big picture’”, and the farm economy.

Looking ahead toward the remaining period of the grant, PCs expressed interest in additional training including geographical information systems (GIS) and other interactive hands-on sessions; stream restoration process; computer-aided design (CAD); Generic Hydrologic Overland-Subsurface Toolkit (GHOST) model; Agricultural Conservation Planning Framework (ACPF) tool; and connecting with landowners. PCs also anticipated needing support in the following areas: answers to questions; completion of the archeologists’ reports; assistance with approaching landowners; clarification on the environmental review process; more direction and feedback and establishing a realistic timeline for project completion.

Interactions with Collaborators and Partners

The PCs reported varying degrees of engagement, types of interactions, and support they received from the IWA partners, affiliated groups, and other stakeholders involved in the program. The most common types of support included receiving information relevant to their jobs, answers to their questions, and feedback about the materials they developed. The PCs also reported receiving support from and interacting with other IWA PCs, particularly during group meetings or conference calls. They described the calls as an opportunity for sharing information and supporting each other.

Through the PCs’ interactions with landowners, some PCs learned that landowners were typically interested in participating in IWA because they wanted something for their own land or because they wanted to be “part of the bigger project.” Barriers or impediments to landowner participation included financial concerns and issues with the farmland.

Indicators of Success, Current Priorities, and Future Outlook

When assessing the current progress of the grant and forecasting what lies ahead, PCs tended to focus on the status of projects. Several PCs expressed regret that they did not yet have projects in the implementation phase; however, they readily identified the following indicators of success: initial landowner engagement and long lists of applicants; locating promising implementation sites; hiring an engineer; projects submitted to engineers for preliminary design; dollar amount associated with potential projects; getting bid packets ready to go out; getting through the environmental/archeological assessment process; and discussions with landowners about other conservation practices. Other accomplishments included locating promising implementation sites; hiring an engineer; getting bid packets ready to go out; getting through the environmental/archeological assessment process; establishing good working relationships with partners and collaborators; adding to their own personal technical capacity; and conducting effective WMA meetings. PCs were unmistakably hoping to get construction underway as soon as possible to add this achievement to the growing list of project successes.

Marking the halfway point of the project's timeline, the most commonly cited priorities by PCs fell into two main categories, both centered on implementation. The first main priority was to get practices on the ground, and the second was to act as the facilitator to keep the processes going so that practices could continue to be implemented on schedule. Additional priorities mentioned by PCs included reviewing and finalizing watershed plans, completing water quality analyses and presenting the findings, and adapting to changing realities about where practices should be installed.

As an indicator of their confidence in their work progress thus far, most PCs projected being able to spend all the money allocated to their watershed by the end of the funding period. A couple of PCs, however, were less confident that they were on track to do the same.

Recommendations for the IWA Team

The most common recommendations offered by the PCs were related to advanced preparation of formal materials and increasing stakeholder buy-in. In hindsight, they indicated how beneficial it would have been to have developed the documents and paperwork necessary for formalizing agreements with landowners before launching the project. Additionally, they expressed the need to get buy-in from all the agencies involved with housing, supervising, and cooperating with the PCs. Other recommendations made by individual PCs included helping everyone involved understand that the pace of the work will be slow; getting the archeologist on board sooner; providing initial and ongoing details of the *Iowa Watershed Approach* to the WMAs; engaging with social development specialists to involve more people in WMA work; making sure watershed plans "harmonize" with existing city, county, and state-level plans; designating a human resources person for the project coordinators as a group; and specifying a hierarchy and well-defined differentiation of services offered by all the IWA partners.

IWA Planners

An important aspect of the IWA is the explicit designation of grant funds for all eight IWA watersheds to secure watershed and flood resilience planning services to produce a FEMA-compliant, comprehensive watershed plans that address factors that contribute to flooding and water quality in each watershed. While all the WMAs worked with IDNR staff members as advisors in the process of advertising for and selecting planners, WMAs were given great latitude as to their specific priorities within the requests for qualifications. By August 2018, all IWA watersheds had engaged watershed planners.

During July 2018 (Year 2) and July 2019 (Year 3), the CEA collaborated with IWA partners to create surveys for IWA watershed planners. The purpose of the online surveys was to give watershed planners the opportunity to:

- Let IWA partners know about any challenges or problems
- Describe their planning process
- Share their experiences working with each watershed
- Provide their comments or feedback about the work and the IWA project

The CEA sent email invitations with links to complete the online surveys to the planning group representatives with whom the WMAs had contracted to create watershed plans, asking them to complete the voluntary surveys in July 2018 (Year 2) and July 2019 (Year 3). Five and four planners (out of a possible 6 and 7 respectively) completed the surveys in Years 2 and 3, respectively. This section summarized the findings from the planner survey, organized by theme. The surveys, a full summary of methods, and the survey findings are attached as [Appendix H](#) and [I](#).

Timeline

In Year 2, planners indicated that they were on schedule to complete their watershed plans on time, but two expressed some concern that the workload was heavy for the established timeline. However, in Year 3, two disagreed that they were on schedule to complete their watershed plans on time, and three indicated that workload was not reasonable for the established timeline. One said that the funding was not reasonable for the amount of work to be done.

In Year 2, planners were concerned about managing the tight timelines, so they requested extensions on their timetables. Similarly, in Year 3, two planners said that managing timelines was a challenge since some components of the plan were dependent on other partners. Three planners indicated that they received extensions on their timetables that helped them to meet the goals.

IWA Partners and Collaborators

In Year 2, one planner said that the IWA partners' roles were not clear to them. They named the local technical team, IWA partners, WMA, a local seed dealer, the watershed coordinator, and Iowa Agriculture Water Alliance were named as important collaborators on watershed planning. the hydrologic assessment reports, the modeling received from the UI IFC and working with HSEMD were names as valuable more than one planner.

In Year 3, they all agreed that working with the IWA partners was going well for their teams in both years. They named the local technical team, IWA partners, WMA, NRCS, and officials (engineers, emergency management, city, and county) as important collaborators in Year 3. In addition to the hydrologic assessment reports, the planners named ACPF data, BMP analysis, and guidance for incorporating hazard mitigation information as valuable.

Hazard Mitigation Plans

In Year 3, the planners were asked about their opinions about hazard mitigation plans, and all indicated that integrating and organizing information related to hazard mitigation plans went smoothly. One planner stated that they had "very few issues" related to integrating or coordinating information to inform hazard mitigation plans due to prior experience with watershed planning and hazard mitigation planning, and they stated that Homeland Security was easy to work with. However, two planners indicated challenges related to presenting this information in a format deemed acceptable by FEMA.

Accomplishments

In Year 2, three planners indicated that completing a social assessment of landowners was an accomplishment. In Year 3, the use of ACPF and BMP mapping data for the planning process and development of a cover crop analysis were reported as an accomplishment by two planners.

Stakeholder Meetings

In Year 2, the planners defined stakeholder meetings that they have had or plan to have as successes. Similarly, in Year 3 planners indicated that they had meetings with various stakeholders to inform them about the planning process and gather feedback.

IWA Watershed Planning Needs

In Year 2, four planners described additional needs for which they hired extra staff or consultants to complete their IWA watershed planning, including survey work, stream restoration design, and urban analysis GIS work. When asked a similar question in Year 3, one planner stated that they hired GeoTREE Center at UNI for “more stormwater modeling work.”

The Future of the Watershed Plan

When asked about the future of the watershed plan, planners provided similar responses in both Years 2 and 3. The planners agreed that securing sustainable funding and implementing the plan were the most important tasks that remain for the WMAs. Moreover, the planners indicated that a PC would be needed in order to carry out these tasks.

IWA Leverage Partners

In the context of the IWA, *leverage partners* were defined as representatives of organizations who had written letters of support for the IWA during the grant proposal phase. As part of its role in the IWA, HSEMD is responsible for engaging with the leverage partners during the implementation of the project. During the first two years of the project, some of the leverage partners had already worked with various aspects of the IWA, however, the HSEMD wanted to reach out to all leverage partners to learn about their current activity and interest in watershed work in Iowa.

During early 2019, the CEA worked with Jessica Turba and Larry Gioffredi from HSEMD to create a survey of leverage partners in the IWA. The purpose of the survey was to learn about their current and future interests in the IWA and in watershed management issues in Iowa. A full report of methods and findings are included as [Appendix J](#).

In addition to working with the CEA on the content of the survey, the HSEMD provided the CEA with a list of all the parties they considered to be stakeholders including governments, non-governments, conservation groups, agricultural consumer bodies, agricultural industry associations, and others.

In April and May 2019, forty representatives were invited to participate in the survey. A total of 13 invitees completed the survey for a response rate of 33%. Respondents most frequently indicated that they already work in the Middle Cedar WMA or the North Raccoon WMC, and least frequently named the Bee Branch Creek (Dubuque). Two respondents indicated their organization works in all IWA watersheds. Three respondents did not select any of the IWA watersheds. Additionally, eight indicated that their organization or its operations had been directly affected by flooding.

All respondents gave descriptions of their current role in the IWA, although seven respondents were quite general using terms like “support,” “co-sponsor,” and “regular interaction.” Other more specific ways that respondents described their organization’s role with the IWA included the following (listed roughly in order of frequency):

- Provide WMAs with data and other information for watershed planning (e.g., cost/benefit analysis, flood forecasts and warnings)
- Advocate for more funding for WMAs
- Provide technical advice (e.g. related to mitigation strategies)
- Serve on board or take part in WMA meetings

- “Promote activities” and help with other outreach about IWA to farmers and others
- Support implementation of the Iowa Nutrient Reduction Strategy (INRS)
- Work on a “supporting project” (Regional Conservation Partnership Program)
- Provide feedback on communications
- Fund wetland restoration in IWA watershed
- Partner on grant applications
- Help with conservation planning

All respondents also supplied a description of the ways they would like to be involved with IWA in the future. Four respondents wanted to continue with the activities they are now doing with the IWA. Several respondents provided descriptions of new ways their organization would like to work with IWA. In some cases, responses were quite specific and unique. Therefore, they are included below in their entirety:

- “Our organization is working to develop strategies which would enable perennial cropping systems on the landscape which improve water quality, enhance soil health and would lend itself to a biomass cropping system for the biomass-based economy. We are focused on models and data collection to support that vision.”
- “Providing educational resources to distribute locally on urban stormwater issues as well as watershed resources. We also conduct training programs.”
- “Protection of our source water supplies - surface water intakes and wells that are near waterways - is of utmost importance as is the protection of the quality of the water drawn from those sources.”
- “We would like to advocate for a statewide watershed approach with dedicated funding. We promote the watershed approach to our members and supporters as the best way to work on water quality improvement. We work in law and policy and would like to learn ways we can support the watershed approach from a law and policy standpoint.”
- “Expand our upstream watershed nutrient reduction strategy efforts and document projects in State of Iowa RIBITS [Regular In-lieu fee and Bank Information Tracking System] program.”

When asked about their current role in water management in Iowa, 12 respondents made comments which fell under one of three categories of water management: water quality/conservation; flood control and mitigation; or both water quality and quantity issues. Additionally, 12 respondents described their future role in Iowa water management. While about half of respondents said they would be continuing their current efforts, several respondents described ways in which they would “scale up” and diversify their work.

Respondents were also asked to rate the extent of their interest in being involved with strategy development and/or implementation for FEMA’s four phases of emergency management (preparation, response, recovery, and mitigation)¹⁷; water quality improvement; and funding watershed management. At least one respondent indicated interest in each aspect of each phase or category. The majority of respondents indicated strong interest in water quality strategy development, while slightly fewer indicated strong interest in implementation. Eight respondents were very interested in flood mitigation strategy development and four were interested in flood mitigation implementation. In all cases, respondents were more interested in strategy development than in implementation.

Survey respondents were also asked what other opportunities (if any) they saw for their organization and WMAs. Two respondents said they were open to any collaborations with WMAs. Individual respondents commented that they would be happy to collaborate in: planning; providing “technical knowledge for

¹⁷ https://training.fema.gov/emiweb/downloads/is111_unit%204.pdf

upstream communities”; supporting the WMA boards; helping engage the agricultural community; and identifying and addressing natural resource issues, including assistance with developing proposals for the NRCS Regional Conservation Partnership Program.

Eleven respondents described ways in which they are available to engage with WMAs. Four respondents said generally that the WMAs should let stakeholder organizations know what their needs are. Others provided more specific ways to reach out to their organization, as listed below:

- “I will seek out WMAs in areas where we might be able to put a biomass-based system in place commercially.”
- “We have staff on the ground in select watersheds but also have staff that work at a broader, state level. Our organization also has capacity beyond Iowa working on natural solutions and soil health and water quality issues throughout the Mississippi basin. We engage with decision makers at local, state and national levels to utilize sound science and practical solutions to addressing flooding and water quality issues.”
- “Develop regional conference on WMA engagement and best practices so WMAs in close geographical area could connect and create and expand internal work support relationships.”
- “Public outreach (presentations, publications etc.) that will inform stakeholders as to who you are and what your mission is.”
- “Each WMA should reach out to local ag organizations directly, and WMA state leadership (including IIHR/UI IFC) should reach out more to state level ag organizations (IAWA [Iowa Agriculture Water Alliance], Iowa Corn, Iowa Pork, IFBF [Iowa Farm Bureau Federation], etc.).”
- “Keep us informed locally and at the state level of your priorities and activities and stay informed about NRCS programs and services. Please call us either in Des Moines or at your local NRCS office if you have any questions or if you would like to discuss potential project ideas.”

University of Iowa Flood Resilience Team

This section contains a summary of activities of the University of Iowa Flood Resilience Team (UI FRT) during Year 3, including documentation of meetings and communications, complemented by additional interviews and surveys. This component of the report is intentionally written in a different format from other components because of the evolving nature of this program.

Defining Flood Resilience

As stated in the Year 2 IWA Evaluation Activities Report, flood resilience is a construct without an agreed upon definition or process, and the UI FRT activities and its ongoing program evaluation continue to be developmental.

Craig Just, the UI FRT lead, described flood resilience in two ways during an interview with Iowa State University’s web series, Ask a Scientist¹⁸. First, he described “hard engineering practices” that improve the physical resilience of a community. Then he said,

The other part of resilience for our project is looking at socially vulnerable populations and seeing how we can create actions. Could be related to how do you provide evacuation plans for the elderly or the disabled in the lead up to a flood and then how do you differentially provide recovery resources for people, again, who might be a single head of household or they

¹⁸<https://iawatercenter.wordpress.com/2019/08/19/ask-a-scientist-resilience/>

might have childcare needs or they might have other special needs that require our special efforts as a community to create the resilience that we all need together.

Goals and Activities of the UI FRT

The goals defined by the UI FRT members during the first year of the project¹⁹ were:

1. Measure, visualize, and communicate flood resilience resources
2. Enhance flood resilience content in formal watershed plans
3. Improve social resources for flood resilience

In collaboration with Just, the CEA defined the following major activities of the UI FRT:

- Support the development of FEMA multijurisdictional plans
- Provide flood mitigation elements to integrate into watershed plans
- Support the development and implementation of a Community Care Coordination System
- Contract with planners to develop community-wide Flood Resilience Action Plans
- Support the ongoing maintenance of the Bee Branch Healthy Homes social resilience surveys
- Develop and provide social vulnerability information and visualization
- Contract with a planner to develop a social resilience “How-to-guide”
- Conduct outreach and education in the form of presentations, trainings, and participation in WMA meetings

These activities will be used as the sub-section headers for this portion of the report, with a detailed description of the UI FRT’s involvement in each activity.

Methods for Evaluating the UI FRT

In writing the IWA proposal, the innovative approach to flood resilience was described, and it was decided to focus intensive evaluation efforts on the resilience work. As the work of the UI FRT is more open-ended and is an evolving process, the evaluation to document the process is also different than the overall evaluation of the IWA.

The CEA met regularly with UI FRT throughout the grant year to discuss their activities and how to best align evaluation efforts. Additionally, the CEA attended UI FRT team meetings: three internal team meetings and two meetings with the Dubuque Bee Branch Healthy Homes (BBHH) team. These meetings typically included updates on the status of projects, some discussion about next steps, and opportunities for collaboration and support. After the December 2018 meeting, Just decided to have fewer large group meetings and focus more on smaller project-specific meetings. Additionally, the UI FRT facilitated or attended meetings with external stakeholders as relevant.

A CEA team member attended, documented, and reviewed the content of 28 documented meetings and approximately twelve forwarded emails. This review was complemented by strategic data collection conducted by the CEA to document UI FRT’s formative activities and develop a narrative of their accomplishments. Data collection events included:

- Luther College partner interviews (summer 2018) ([Appendix K](#))
- Social Vulnerability Information and Visualization interviews (summer 2018) ([Appendix L](#))
- Vinton Partner Meeting surveys (February 2019) ([Appendix M](#))
- Selected items from IWA planner survey (summer 2019) ([Appendix I](#))

Selected findings will be referenced in this section, with full reports, including methods and findings in appendices.

¹⁹ A description of the process of goal definition for UI FRT is included in the *IWA Year 1 Evaluation Activities Report*.
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In July-August 2019, CEA collaborated with the UI FRT to update the evaluation plan for this program to be more in line with the current activities and the desired information. The updated plan for UI FRT is attached to this report as [Appendix D](#).

UI FRT Updates and Activities

The UI FRT project coordinator, Ashlee Johannes, left the team in February 2019. Her responsibilities were taken over by Kate Giannini (UI IFC). Additionally, in Year 3, the UI FRT employed a new strategy to collaborate with contractors and partners to develop the project deliverables (see Table 2 for list of activities and collaborators). Each of these activities are listed in greater detail below.

Table 2. Year 3 UI FRT activities and collaborators

Activity	Partners
FEMA multijurisdictional plans	Iowa Department of Homeland Security and Emergency Management (HSEMD) and the Iowa Flood Center (UI IFC)
Flood mitigation elements for watershed plans	HSEMD
Bee Branch Healthy Homes social resilience surveys	Dubuque Bee Branch Healthy Homes Program
Support the development and implementation of a Community Care Coordination System	United Way of East Central Iowa and Hawkeye Area Community Action Program (HACAP)
Community-wide Flood Resilience Action Plans (FRAPs)	Local watershed planners for each community
Social vulnerability information and visualization	UI FRT only
Social Resilience “How-to guide”	Local watershed planner
Outreach and education in the form of presentations, trainings, and participation in WMA meetings	UI FRT only

FEMA multijurisdictional plans

During the August 2018 UI FRT meeting, Just explained that Max Brouman, a UI FRT member and UI graduate assistant, was using the Hazards US (HAZUS) geographic information system to examine flood loss estimations for different communities, specifically Vinton. Brouman conducted a cost-benefit analysis by examining the economic impact on downstream communities of strategically placed upstream flood best management practices (BMPs) in agricultural areas. Just connected this work to his EPA Mud Creek proposal²⁰, and said this type of information could make a case for use of BMPs.

In late winter and early spring 2019, the UI FRT facilitated two conversations with HSEMD and UI IFC to consider a potential multijurisdictional flood mitigation effort based on the planning and implementation work in progress in the Middle Cedar WMA. The conversations in these preliminary meetings included many operational topics including:

- The goal to produce a funding application demonstrating that mitigation practices (beyond levees) can reduce flood damage. The University of Iowa Team (collaboration between UI IFC and UI FRT), with specific guidance from HSEMD, planned to develop a replicable model for the application process. Ideally, at least one application would be approved for funding by the end of IWA, but since funding opportunities are not consistent, completing an application that meets FEMA criteria may be

²⁰ <https://www.engineering.uiowa.edu/news/university-iowa-receives-107-million-water-quality-epa>

a more appropriate goal. The group also discussed opportunities for external groups to fund this work including FEMA, Silver Jackets²¹, and hazard mitigation funds.

- The use of GHOST²² simulation to demonstrate modeled decreases in peak flow, which can be translated into Brouman's HAZUS work to calculate loss avoidance and the resulting cost-benefit ratio.
- The need to identify geographical areas for applications that have the necessary hydrologic data at the appropriate scale to see benefit within the allotted resources, and that have enough buildings and critical infrastructures to reach the necessary cost-benefit ratio. The group decided to begin with Mud and Hinkle Creeks in the Middle Cedar WMA as a proof of concept, and then broaden their scope to other IWA watersheds to reconcile the process.

After correspondence between Just, Jessica Turba (HSEMD), and her colleagues who work at FEMA, Just drafted a document titled, "Estimating Flood Mitigation Benefits in Mud Creek, Hinkle Creek, and Vinton, IA Using a Watershed Approach" to send to FEMA for review. This document proposed a refinement of Brouman's process in partnership with the Risk MAP team (modeling technical assistance for FEMA) at Stantec "to determine if an economic [Benefit cost ratio] greater than 0.75 can be achieved." Just's stated goal was to produce an analysis that is "credible and actionable from FEMA's perspective," and he described that the Middle Cedar WMA PC already had a list of interested landowners for BMPs in that area.

In August 2019, Weber, Arenas, Just, and Turba met with representatives from Stantec and FEMA to discuss the modeling being proposed for a multijurisdictional plan to qualify for hazard mitigation assistance. The group described the current research and modeling processes and stated that the model could be used to demonstrate the benefits of a combination of practices with a focus on distributed storage. It was determined that Jason Schrieber from Stantec would connect with the UI IFC team and move forward with the modeling discussion. Just highlighted that there were 20 landowners that were ready to participate, and keeping them engaged and capitalizing on their willingness to move forward was critical.

Flood Mitigation Elements for Watershed Plans

Building on the work from Year 2, the UI FRT has been collaborating with Turba and Jim Marwedel (HSEMD) to integrate flood mitigation elements into IWA watershed plans. This novel approach is meant to allow the watershed plans to be recognized as a county's hazard mitigation plan for flooding (a separate plan would be required for other disasters).

Since the watershed plans were projected to be finished on different timelines, progress in integrating flood mitigation elements into the plans has also been staggered. To illustrate, in December 2018, Just reported that Turba and Marwedel were reviewing the proposed mitigation section for the Middle Cedar WMA plan, and in June 2019, Marwedel and Just had a call with Pat Conrad from Emmons & Olivier Resources (EOR) about what this effort might look like in the North Raccoon WMC plan.

In August 2019, Just reported in an internal meeting that the watershed plans were finished or nearly finished for all but one of the IWA watersheds. He described that they have provided hazard mitigation information for the plans; however, it is only integrated into the plans at the planners' discretion. He considered the possibility of having a UI graduate student working with UI FRT do an analysis describing how the information was incorporated into the plans with an opportunity for the CEA or another UI FRT team member to conduct interviews to explore which strategies meet FEMA's needs. This information would be provided to planners and jurisdictions hoping to use this model in the future.

In a summer 2019 survey of watershed planners, respondents agreed that integrating and organizing information related to hazard mitigation plans went smoothly. The only challenge reported in this process

²¹ <https://www.floodrisk.iowa.gov/>

²² <https://iowawatershedapproach.org/resources/ghost/>

was providing the report in a format acceptable to HUD or FEMA, since the plans were provided online. A full report of methods and findings from the IWA watershed planners survey is included as [Appendix I](#).

Community Care Coordination System

During Years 1 and 2, the UI FRT pursued supporting vulnerable populations by working with existing community service organizations. Building on discussions with Hawkeye Area Community Action Program (HACAP) from Years 1 and 2, Just and the UI FRT team continued to seek ways to concretely support vulnerable populations using the existing relationship with HACAP and a newly established relationship with United Way. In August 2018, Just reiterated that HACAP can serve as the UI FRT liaison to vulnerable communities in the Middle Cedar WMA. Additionally, Just reported that HACAP has expressed a need for improved case manager training related to flooding, and better resources for case manager self-care following disaster coverage. Just wanted to learn how the UI FRT can support HACAP and similar organizations so that people across the state are better served. In support of this work, a UI FRT graduate student reviewed data from the United Way 2-1-1 website and database, which is a “confidential information and referral helpline and website²³.” The existing database can be sorted by location, gender, and age of person seeking information, and allows them to look at the reason for the call and whether solutions were available. The group thought this was an interesting database to explore. Eric Tate, a UI faculty member and UI FRT team member, suggested connecting with Leslie Wright at United Way to discuss potential options for supporting vulnerable populations in Linn County.

Just and the UI FRT connected with Wright through engagement with the Linn Area Partners Active in Disaster (LAP-AID) group. In the subsequent discussions in spring and early summer 2019, Wright described the following (with selected responses from Just for clarity):

- The 2-1-1 service can help anyone who is not currently receiving “support services” after a disaster.
- For individuals who are already receiving support services, the My Care Community (developed by TAV Connect) can help people already receiving support services and the 2-1-1 service can help anyone who is not currently receiving services. She explained that My Care Community is an innovative tool leveraging chat, text, and artificial intelligence to provide continuity in support and recovery for people who need it most. Just said, “This will provide improved coordinated care for individuals and families by creating a better information system for case managers and service providers.”
- The current system does not account for people who do not call in during a disaster, but research shows they are impacted. She said they need a system where information goes out through trusted networks to help people who are not typically responsive.
- There are resources available, but the systems are obsolete. Wright said they need this information integrated, packaged, and piloted through a project like the one being developed by TAV Connect. She said that having better resources could help both the clients and the service providers. Just and Wright agreed that they would need a proof of concept, and eastern Iowa would be a good place for that.
- In order to leverage UI FRT’s existing relationship with HACAP, Wright described HACAP as a group that has personal experiences with clients and could inform what operations look like on the ground. Just and Wright also talked briefly about the need for support and resilience among the organizers and care providers, a topic that the UI FRT had previously discussed with the HACAP team. Just anticipated reaching out to HACAP about their willingness to partner with organizations such as United Way and Unity Point to help inform the design and support beta testing for the TAV Connect products currently in development.

²³ <https://www.hacap.org/what-we-do/information-referral/>

- UI could have some power to catalyze change by bringing academic research and a new perspective to bear on an issue.
- Wright saw an opportunity to improve decision-making and modernize systems at the state level since the structure under the Iowa Utilities Board allows for different standards across providers.

Wright expressed interest in staying involved in this effort and helping connect organizations. Just indicated that he will explore the possibility of UI FRT funding for some of this work and discussed other organizations who could be interested in this work across the state.

In July 2019, Just invited Jane Drapeaux and Mitch Finn of HACAP to partner on this effort and asked if this system would be valuable to Linn County case managers.

In an email to CEA in August 2019, Just confirmed that Wright and United Way were still engaged members of this effort, and Wright planned to connect Just with United Way staff members, Steve Okonek and Amy Grunewaldt, via email to “push the coordinated disaster care concept forward in Linn County.”

Flood Resilience Action Plans

The Flood Resilience Action Plans (FRAPs) have continued to shift in focus and scale over the course of Year 3, with the focus now being on contractor-based, community-scale plans (See Mid-Program Review for the progression). The section below describes community-level plans (formerly case studies), then describes the progress to date for each of the community-scale FRAPs. The previous iterations of the FRAP informed the flood mitigation elements for watershed plans, social vulnerability information and visualization, and sections of the How-to guide.

In August 2018, Just described that the UI FRT was starting on community-level plans in targeted communities for more detailed work (e.g., surveys, community meetings, interviews with local officials) to understand flooding, resilience, and community networks with low- or moderate-income (LMI) residents. Just said their team was listening for compelling stories about how the project could make an impact in a community.

In December 2018, this conversation continued at the general level with a UI FRT member describing the importance of talking to people in this type of planning effort. He reiterated that it’s not enough to just use indicators or metrics.

By August 2019, the “case studies” were officially retitled as “FRAPs,” and Just provided updates on the projects in various stages. Tate considered a meta-analysis of the FRAPs as an option for a graduate student to work on, but this task may not be feasible in the timeline since there were only two community-level plans underway at the time (there was no opportunity to finish this work given the PhD student’s timeline).

Freeport flood resilience action plan

Watershed: Upper Iowa

Contractor: Center for Sustainable Communities at Luther College

Status: Dissemination and action

The Center for Sustainable Communities at Luther College (Luther CSC) continued their work on their FRAP for Freeport. The Luther CSC received funding for this work through a subcontract with the UI FRT as a local partner in flood resilience work in the Upper Iowa WMA. The discussion below was informed by updates about the UI FRT collaboration, meetings with Luther CSC, and interviews with Luther CSC. A full report of methods and findings for the interviews is attached as [Appendix K](#). This section is followed by a summary of a community meeting hosted by Luther CSC to share the results of their FRAP study.

Freeport FRAP activities. During their interviews in summer 2018, Jon Jensen and Rachel Brummel from Luther CSC described the following elements of their work: Freeport case study, Upper Iowa WMA resident

survey, Decorah floodplain zoning issues, emergency management personnel meeting, and Upper Iowa WMA meeting participation.

Freeport case study. At the time of the CEA interviews with Jensen and Brummel, the Luther CSC had conducted, transcribed, and completed a preliminary analysis of 18 interviews with 15 Freeport residents, and four emergency managers or people who were directly involved with flood response. The Luther CSC team was able to talk with residents who received buyouts for their homes and those who remained in their homes. Brummel said they planned to present the results of the preliminary analysis at the November 2018 Upper Iowa WMA meeting. Jensen said they would also be sharing a report with the Winneshiek County Director of Emergency Management, and with the Winneshiek County Board of Supervisors.

Jensen said the Freeport case study focused on looking at a community that experienced extensive direct impacts of flooding. He was also pleased with the team's success with the interviews and said he believes there is "value in gathering and telling stories." He said that for people to understand the impact of flooding, "It's not just statistics or images, but it is stories that are sometimes important for people to see." He said that Luther CSC hopes that people "learn from this particular event, this particular community, and how can that help [others] do a better job of... preparing for the future." He added that the task of improving resilience is particularly important in lower income and single parent households.

The Luther CSC also presented their findings of the Freeport case study to the community in 2019. During their presentation, they shared process information about their methods for comparisons with other FRAPs and announced the name change from "case study" to "FRAP."

In conjunction with a summer 2019 Upper Iowa WMA meeting, Just met with Luther CSC to discuss progress and next steps for their work. Jensen and Brummel reported that their focus that summer had been on sharing information with the Freeport community, as well as considering what they can learn from the process and what their next steps should be. They solicited feedback from Just on their written report, specifically related to the target audience, the tone, and a process for formal feedback. Considering their three intended audiences (watershed planners, academics, and community members), Luther CSC intended to create and disseminate not only a technical report but also a two-page summary, a newspaper article, and a presentation for the community members. He said the report should not be surprising, but that it would provide useful information for the community and planners to make a case for change. Brummel said the data can help ground some difficult conversations. [A summary of the community meeting is in the Freeport Community Meeting section.]

Upper Iowa WMA resident survey. In their interviews with the CEA, Brummel and Jensen discussed the survey that Luther CSC conducted with local residents. They said the survey, titled *Understanding Flood Impacts in the Upper Iowa Watershed*, was a way to look at financial and displacement burdens experienced by area residents, explore how residents responded to flooding, and how they may have changed their households to improve their personal flood resilience. According to Brummel, the purpose of the survey was to examine how people are impacted by flooding, "even if they don't have flooding in their backyard or standing water," with the objective of learning more about "the broader ways that communities are impacted by flooding." Their intention was to present the findings of the survey to the general public in the watershed, saying that they did not want it to be a report only for "experts or decision makers." Jensen hoped that this would make the information accessible for anyone.

Brummel said they sent out 2,250 surveys and had a response rate of greater than 20%. At the time of the interview, the data had been entered, and preliminary analysis was underway. Brummel and Jensen also made the following comments in their interviews:

- In this effort, they wanted to conduct a survey of the general population in the area to build on the information that the Northeast Iowa Resource Conservation and Development (NEI RC&D) group collected at an earlier time from landowners only.

- The survey will provide some demographic information that will help them “get a better sense of the communities in the watershed... and at some fairly basic level, how much people were impacted by the flooding, particular the most recent flood in 2016.”
- The survey and Freeport case study were “two different lenses to look at the same issue of how flooding impacts our communities and what are potentially some things that we might do more broadly to build our flood resilience.” Brummel said they were learning about the flooding experiences of area residents, but that “doesn’t necessarily tell us about how to become more resilient.”
- A key piece for the Luther CSC in being involved in the work with the UI FRT, conducting the survey and the case study, was to “have a local, on the ground presence in the short term.... but then also to have a longer-term presence... somebody who is here at an institution with individuals who live here, are in the community, and that can make sure the work continues in a sense.” Jensen said they sought to be “the local partner within the watershed.”
- This work potentially contributes to the ways in which flood impact and resiliency are studied in the future. Jensen followed up his comments about being the local partners by saying the Luther CSC team wanted to gather information specific to their community and watershed, and use that to best inform flood resilience planning locally and “in conversation with folks in other watersheds, but specifically at the Flood Center about how flood resilience works.” Jensen said that they would probably provide a shorter “accessible” report and then a more detailed report for UI IFC that would provide information that would be “in conversation with other literature that’s out there.”
- They hope to use the results from the survey and case study interviews to look at broader goals and to define interventions they may want to do locally. Brummel said she also hopes that what they are learning about the methodology “may help inform what other people do as well.”

Brummel and Jensen later presented their preliminary findings at the November 2018 Upper Iowa WMA meeting, along with case study findings, to an engaged audience.

Decorah floodplain zoning issues. Brummel and Jensen described their participation in the discussion around a floodplain zoning request that came before the Decorah City Council. They both indicated that, if not for their involvement in the IWA resilience work, they might not have been as involved in the zoning question. Brummel explained that the issue involved the potential for rezoning an area in the Decorah floodplain to build a Menard’s store.²⁴ [She also briefly mentioned another potential for rezoning for a storage facility.] She said Freeport area residents who were impacted by the 2016 flooding questioned the rezoning proposal, and this came to her attention because of her involvement in the Freeport case study. She said the Freeport community was “much more organized and very visible at community meetings,” and they attributed this to the community having been “brought a little closer together through the 2016 flood events.” She said that Luther CSC’s primary involvement in the rezoning issue was through monitoring the process by collecting newspaper articles and said it would potentially be part of their case study. Jensen also described the potential rezoning question and said he had attended public hearings and was in conversation with local citizens, the city council, and the planning and zoning commission.

In addition, Jensen said they hosted a meeting with a former city council member and floodplain expert from Cedar Falls, Iowa²⁵, about lessons learned as a community that informed changes to their floodplain policies after catastrophic flooding in 2008. He said that, although the meeting was not in their plans, “that’s kind of the nature of the work. Sometimes a decision comes up that takes up space in the room because that’s what everybody’s thinking about – they think about flooding right now.” Jensen said that bringing the Cedar Falls

²⁴ <https://decorahnewspapers.com/Content/Home/Home/Article/Every-speaker-opposed-to-Menards-plan-to-build-in-flood-plain/-2/-2/45684>

²⁵ https://wfcourier.com/news/local/education/floodplain-expert-to-speak-at-luther-college-june/article_6f0137b7-79b4-51ae-a7b6-a533b4af4027.html

speaker gave them a good opportunity to “play a positive role in the community conversation about the zoning issue.” He added that it was good to be a local resource for decision making.

Emergency Management Personnel meeting. Jensen and Brummel said that in December 2017 (Year 2 in the IWA), the Luther CSC partners coordinated and led a meeting that included emergency managers from several counties and municipalities in the watershed, and NEI RC&D staff. Jensen said the intent of the meeting was to begin sharing ideas about flood resilience in their area. He commented that the UI FRT had talked with the Luther CSC team about the existence of similar groups in other watersheds [Community Organizations Active in Disaster (COAD)]. He said that although area law enforcement groups meet on a regular basis, there was not a group that involves additional entities (e.g. public health, social services, schools) in the Upper Iowa River watershed. He said it can be difficult to schedule meetings for people in those roles, but they would like to help formalize this kind of a group and were trying to schedule another meeting with the same group later in 2018.

WMA meeting participation. Brummel and Jensen talked about their involvement in the Upper Iowa WMA by being present at the WMA meetings. Brummel said that they were “trying to plug in a little bit more” to their community and that being a visible presence at the WMA meetings has been part of that effort. She said being at the meetings also gives them a better understanding of how people in the community think about the issues and their priorities. She said the WMA has been focused on the hydrological aspects of flooding and how the IWA money is spent on projects, and that the Luther CSC group would like to get people interested in the resilience aspect as well. She explained, “The concept of resilience is a hard thing to talk about with the public. It is jargon – they don’t know what it means... Sometimes people just see it and are like, ‘Who are these academics and what are they talking about? What does this mean for me?’” She added that, at the meeting, they want to find a good way to combine the quantitative data from the survey with the “story-telling qualitative piece.”

Other. Jensen and Brummel asked for more information about the flood resilience simulation game being hosted in some of the other watersheds. Just also discussed the possibility of a graduate student providing support with survey analysis in the coming months. That conversation and the potential for this support was continued with Tate during a UI FRT meeting in August 2019.

There was a new element to this work announced in summer 2018. During an August 2018 UI FRT meeting, Just announced that there was a possibility to do work upstream from Freeport because IWA allowed watersheds to add additional HUC 12s to their eligible areas. He saw this to be complementary with the work the Luther CSC was doing.

Freeport community meeting

On July 16, 2019, the Luther CSC, led by Jensen and Brummel, hosted a community meeting to share the results of their watershed survey and Freeport interviews, and to facilitate a discussion about next steps. The event was attended by approximately 40 Freeport residents, as well as county officials, an emergency manager, and representatives from the University of Iowa and NEI RC&D. The meeting was an opportunity for the Luther CSC to share their work with invested community members; introduce community members to service providers, the NEI RC&D, and elected officials in their area; to hear stories from community members about their experiences; and to listen to reactions to the data.

Before the floor was opened for discussion, there was an informal panel of presenters:

- Rachel Brummel and Jon Jensen (Luther CSC) presented the findings from their Upper Iowa watershed survey and key themes from the Freeport interviews.
- John Beard (Winnebago County Supervisor and WMA board chair) highlighted the importance of soil health and slowing water down where it lands. He also acknowledged that, while both recovery and prevention work are expensive, this extreme weather is the “new normal.”

- Ross Evelsizer (NEI RC&D) described his organization's role in watershed planning and the goal of watershed plans. He stated that everyone can do something, including talking to their upstream neighbors, and information helps people prepare and respond. He shared online resources accessible to anyone in the watershed.
- Craig Just (UI FRT) described how IWA demonstrated credibility of the watershed approach, and the IWA partners want to change the paradigm for cost-benefit. He said that in the past, FEMA would not fund upstream structures to protect downstream communities/properties. He described UI IFC's capacity to model ways to prevent losses and the accompanying economic benefits, and a project in progress to support the community of Vinton, Iowa. He said that stories can change "the narrative" for these groups who previously didn't have agency. He also encouraged attendees to connect with emergency management personnel and other service providers to be familiar with critical resources before the next disaster.
- Sean Snider (Winneskie County EMA) described tools that are available to community members, including phone alerts and social media. He described how FEMA funding is activated for private and public damage and the importance of reporting property damage. He strongly encouraged attendees to report any damage using his online damage assessment tool and to include a photo. He said this information helps him know where to focus his efforts, and helps better report the community's need to FEMA and others.

At this point in the meeting, attendees began asking about specific situations (both focused on their properties and the community at large), and at the request from a few community members, Lee Bjerke (Winneskie County Engineer) came to the front. He described his positive relationships with IDNR and US Army Corps of Engineers in response to criticisms for how a "log jam" and a lack of action caused problems. He described his work to improve the creek in their neighborhood, but also cautioned them that their actions have a downstream impact. The group discussed the impacts of possible practices, such as prairie and bank stabilization.

The conversation became somewhat more tense at this point (e.g., audience members became restless and chatty and questions took on a more serious tone). Some general impressions from community members' comments in the conversation were as follows:

- Community should not be building in the floodplain or increasing impervious surfaces upstream.
- Whether or not field tile makes flooding worse ("It depends").
- Regardless of the cause, these weather events are getting more intense, "It's not a new level, it's a new trend."
- It is necessary to demonstrate need when you are applying for mitigation funds (or other funds for agricultural practices), even though the funds may not be constant or consistent.

Despite the frustrations being shared, one audience member commended Bjerke for the work he has been doing. The community members in the audience were also supportive of his work.

Jensen commented that the meeting attendees discussed what can be done upstream to mitigate flooding and Freeport. He said that he wanted to also start a discussion about what Freeport community members could do for themselves. A new neighbor was interested in connecting the community members and possibly facilitating a citizens' group. The group discussed the importance of a phone tree or network to communicate amongst themselves and with Snider. Luther CSC volunteered to be a part of this process, and Brummel circulated a sign-up sheet to start the process. The meeting ended with an opportunity to connect and ask questions.

Vinton Flood Resilience Action Plan: Flood Resilient Vinton

Watershed: Middle Cedar

Contractor: Iowa Valley RC&D

Status: Drafting report

The sections below describe planning meetings, Vinton Flood Resiliency Partner Meeting and Survey, *Flood Resilient Vinton* Community Conversations and Resilience Game. A full report of methods and findings from the Vinton Flood Resiliency Partner Meeting Survey are attached as [Appendix M](#).

Planning meetings

During the summer 2018, UI FRT began working with Iowa Valley Resource Conservation and Development (IV RC&D) to facilitate the development of a FRAP for Vinton. At the time, this was meant to be complementary with data analysis efforts being conducted by a UI FRT graduate student. The IV RC&D contracts were split into two phases of work:

- Phase I: Scale and adapt the Institute for Social and Environmental Transition (ISET) Framework for the Vinton scale (late 2018-early 2019)
- Phase II: Facilitate a community input process and develop a Flood Resilience Action Plan for Vinton and specifically the Frog Flats, a low-income flood prone neighborhood. (early 2019-mid 2019)

In addition to the scope defined above, during Vinton FRAP planning meetings in October 2018, Just reiterated that the end product should include something that could help low- or moderate-income (LMI) or socially vulnerable households. Just expressed caution that they only engage in collecting community concerns if they can also support possible actions to address the concerns (They did not want to give anyone false hope). IV RC&D and UI FRT discussed that Frog Flats (a loosely defined neighborhood within the city of Vinton) is prone to flooding because of an insufficient drainage system, and Vinton, as a whole, is also vulnerable because Middle Cedar River flooding can inundate critical community infrastructure including the power plant. Vanessa Fixmer-Oraiz and Misty Rebik from the IV RC&D reported that they would work with local planners and decision-makers to build on what has already been done in the community, and that they would leverage existing community connections to inform the work.

In late January 2019, IV RC&D and the UI FRT met to discuss the progress that had been made on this effort. Fixmer-Oraiz reported that she had good meetings with the Benton County COAD, Rick Ericson (Vinton Public Works Director), and Melissa Schwan (Executive Director for Vinton Unlimited), but her team was also looking to connect with direct service providers for the vulnerable populations in Vinton. She also described the IV RC&D team's visit to a food distribution event at the Vinton Mobile Food Pantry. She said they shared information about the project and collected information from community members, so they could follow up about upcoming events or for one-on-one interviews. She said that IV RC&D planned to participate in the upcoming Vinton Health Fair (April 2019), because it could be a good platform to advertise their project and events. She reported that IV RC&D would be hosting an open house for the general public (likely in April 2019) and follow it up with two workshops to be conducted in late spring to mid-summer 2019. The tentative topics were to developing resilience principles and culture and vulnerability risk assessment. Fixmer-Oraiz shared the website for the IV RC&D work: <https://www.floodresilientvinton.com/>.

In February 2019, UI FRT and IV RC&D met to discuss their upcoming community partner meeting and the personnel changes happening on both teams. At this point in the process, Ashlee Johannes was leaving the UI FRT, and Fixmer-Oraiz and Rebik were leaving IV RC&D. (Fixmer-Oraiz's last day was March 1). The meeting attendees discussed a plan for the upcoming Flood Resiliency Partner Meeting. Fixmer-Oraiz reported they had been organizing and meeting with community leaders to build trust with people who represent the vulnerable members of the community. She said that during each discussion she and her team ask the community members, "What does resilience mean to you?" She also reported receiving a call from a person they met at the food distribution event. When discussing about the work that they are doing, Just asked the

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meeting attendees not to use the term “case study” because it connotes research rather than action, and asked them to call their work Flood Resilience Action Plans. The CEA asked the group how they wanted to approach evaluation to provide them with formative information, and they were enthusiastic about having help in this area. This meeting was also an opportunity for graduate students from the UI Sustainable Water Development Program to hear about the work being done by IV RC&D and the potential priority research areas for Vinton.

In March 2019, after the Flood Resiliency Partner Meeting, UI FRT and IV RC&D regrouped twice to discuss collaboration efforts for Flood Resilient Vinton given the recent staff departures, the success of the community partner meeting, and upcoming events. The group discussed the current scope of work and the plans to host a booth for the Vinton Health Fair. Jessica Rilling (Executive Director of the IV RC&D and new project lead for the UI FRT/IV RC&D collaboration) reported that she was optimistic they would soon have a time and location for the upcoming open house, so they could begin advertising the event. Rilling expressed interest in the flood resiliency game that JEO Consulting Group (JEO) presented at the Iowa Water Conference, and Just considered whether it could be integrated into the open house. The group identified the health fair participants and the purposes for open houses and input sessions, as well as key concepts for the upcoming workshops. Rilling said she would meet with community partners soon.

Vinton flood resiliency partner meeting

Date: February 21, 2019 9-11 AM

Location: Benton County Service Center, Vinton, IA

In February 2019, Fixmer-Oraiz facilitated a meeting to share progress on their project to date and solicit input from community leaders about engaging underserved communities in Vinton. Partners represented the following organizations: HACAP, ISU EO, Benton County, Benton County Public Health, Benton County Social Services, Vinton Unlimited, Vinton-Shellsburg Community Schools, and Vinton city officials. After introductions, Just provided a general introduction to the IWA, the purpose of the FRAPs, and the strategic importance of this work in Vinton (repetitive flooding for LMI residents). Just and Fixmer-Oraiz both emphasized the importance of local input in this Flood Resilient Vinton effort to ground their activities going forward. The following were highlights from this discussion:

- An overview of what they had learned so far from community leaders, including the ambiguous geography of Frog Flats and the water issues most important to the Vinton stakeholders. Just reported that the UI IFC has done a detailed analysis of flooding in Vinton.
- The IV RC&D team successfully engaged with individuals at the mobile food pantry. Fixmer-Oraiz described that they collected some stories and contact information for follow-up. She said that they planned to be part of the health fair, then work towards the open house later in April, and workshops in either May or July. She said the open house will be for a broad audience focusing on awareness and an introduction to the program.
- The subsequent workshops and themes would involve reflecting on personal resilience and the city's resilience. Fixmer-Oraiz described an activity to map critical city systems and services. In the workshops, participants were going to be asked to “get outside themselves” and make some tough decisions about what they have and what they need during a disaster.
- IV RC&D continued to work toward telling Vinton's story. Fixmer-Oraiz showed the website, which was intended to be interactive yet simple, that said, “Dear Flood, we are resilient.” The group discussed that Vinton's story should focus on other natural disasters in addition to flooding, because the most widespread impact in the community was caused by a windstorm, and resilience spans all disasters.

Over the course of the meeting, the group was asked to identify key community members or organizations who could inform the work with vulnerable populations, geographic locations and demographics to have represented, recruitment strategies and possible event venues.

Vinton Partner Meeting Survey

In collaboration with the IV RC&D and the UI FRT, the CEA prepared a survey for attendees at the February 21 meeting of partners interested in Flood Resilient Vinton. The primary purpose of the survey was to learn about partners' interests, questions, and opinions following the meeting. A full report of methods and findings can be found in [Appendix M](#).

The meeting was characterized by a great deal of positive, productive discussion of the work that the IV RC&D would be doing (e.g., lively discussion, abundant recommendations to the IV RC&D team), and of the needs and resources available in Vinton. To honor the constructive communication during the meeting, when it came time for the survey to be administered, a CEA staff member told the group that the survey would be asking the meeting attendees to repeat much of what they had already said. Therefore, the CEA staff member asked them to look at the survey questions and answer only the questions they wanted to. Participants were also encouraged to add whatever they wanted, including names and contact information for people they had mentioned during the meeting as important resources.

Attendees reported that the most important takeaways from the meeting were the IV RC&D staff member's intention to work with the most vulnerable members of the community; resources available in the community; the "relationship aspect of resilience," and the specifics of this project. Building on that, the group also reported intending to tell others about the meeting, including that the project is about more than just flooding, community leaders are wanting to help, resources available in Vinton, and the many ways to get engaged in this work.

Only two attendees raised questions about the project in the survey:

- "What are we going to help people with: flood insurance, buyouts, etc.? Help renters move out of a 100-year floodplain?"
- "What does the end look like? Maps to success?"

Overall, feedback from the meeting was very positive and productive. The group was excited to provide input and plan for next steps.

Flood Resilient Vinton community conversations and resilience game

[Community conversation 1, July 18, 2019 6-8PM](#). Seven participants attended the first workshop, during which Rilling emphasized that they wanted to capture the residents' stories and incorporate them into a narrative that can have an impact on a larger scale. The seven participants were invited to share their background in Vinton, why they were at the meeting, and how they had personally responded to flooding. Some shared emotional experiences about how they felt powerless because the city was either not doing anything or making the situation worse. One was even considering suing the city to catalyze change. Participants' responses to past flooding included using generators, closing their businesses, and evacuating self and livestock. The group discussed that they needed to stop the water uphill and the city needed to look out for the residents. When asked from whom they received help, the participants mentioned Red Cross, FEMA, and help from friends and neighbors. However, one participant reported receiving no help and having difficulties with insurance. Through their individual stories, the community members demonstrated an underlying sense of frustration and impatience for change.

To close the conversation, participants were asked to reflect on something they were proud of in their response to flooding. Members of the group described the efforts involved in response and recovery, and the ability to help others through actions or prayer. One participant said he was grateful every day for his neighbors.

[Community conversation 2, July 25, 2019 6-8PM](#). Eight community members attended the second workshop (three had also attended the first). Similar to the first workshop, participants were invited to briefly share their background and personal experience with flooding. Again, participants shared stories of repetitive

flooding from both riverine and water seeping through limestone, and they brought both city and rural perspectives. The group reported varied experiences with flood insurance and funding for recovery, and one joined his local Farm Bureau to help make change. Participants said they look for flood information (pre- and post-event) from various media: TV news, neighbors, radio, weather radio, and the United States Geological Survey website.

When asked how Vinton has changed over time, participants described changes including: an increase in population and decrease in connection among community members; the departure of young community members; losing businesses, and the impact of Highway 380 that now bypasses Vinton. Additionally, one community member reflected on how water moves (or doesn't move) through town and the impact of the Coralville Reservoir holding water on farmland and the insufficiency of crop insurance to cover for this.

At a prompt from the IV RC&D team, the group considered changes they hoped to see to make Vinton a better place. A couple participants made comments about flooding related to the city's drainage and the potential to increase the river's holding capacity, but many comments focused on other aspects such as better maintenance of gravel roads, encouraging people to move to Vinton who could commute to Cedar Rapids, increasing business, having protected areas for wild animals, and keeping core services like police and hospital.

Flood scenario game, July 31, 2019 6-8PM. The third workshop was an opportunity for community members to participate in a flood resiliency simulation game (facilitated by Adam Rupe from JEO). Through the game, participants gained a better understanding of community needs during a disaster, shared perspectives, and played out strategies to reduce the impacts of flooding during a heavy rainfall and flooding event. The game involved selecting resource cards based on what they believed their communities would need then simulating a disaster considering the options available to them given their selected resource cards and those of the other communities. Approximately twenty residents were in attendance, most of whom appeared to be of the targeted low- to moderate-income demographic.

After the game, the facilitator guided participants through reflections about the game including how they selected their resources and why they made the decisions they did. The group cited differing reasons for selecting resources including previous experience; more "bang for the buck;" focusing on helping the most people possible, and assuming others had different resources. The group agreed that their game actions were mostly based on the resources available to them and they made trades with people they already knew.

Participants reflected on what they learned from this experience. In general terms, game participants considered the following: "It takes a community"; communication and sharing perspectives (even when it's hard); interesting to see folks come together, especially those who didn't know each other before; looking at the big picture and considering others; compromise can be necessary and productive; there needs to be central communication, and there were similar situations among communities. There was also the suggestion that the game includes an agricultural component.

Other FRAPs

The UI FRT has been in contact with additional local stakeholders or contractors for FRAPs in the other IWA watersheds. The status of each of these projects as of August 15, 2019, as well as highlights from discussions to date, are provided below.

Watershed: Upper Wapsipinicon

Community: Quasqueton

Contractor: Northeast Iowa RC&D (NEIRC&D)

Status: In progress

In January 2019, the UI FRT and NEI RC&D had a telephone meeting to discuss potential FRAP work for the Upper Wapsipinicon WMA with a focus to "put the socially vulnerable into the equation." The discussion

included the specifics of the potential project, the relationship between NEI RC&D, and existing connections within the community.

The original contract was proposed in February 2019, with an anticipated timeline from March 2019 through July 2020. The contract was signed in August and a kickoff meeting was planned for August 22, 2019.

Watershed: Clear Creek

Community: Coralville

Contractor: Astig Planning LLC and Impact 7G

Status: Contracting

In July 2019, the UI FRT met with team members from Astig Planning LLC and Impact 7G to initiate the project for Coralville, introduce team members, and describe the scope of the proposed project. The group was ready to start as soon as the contract was signed.

Complementary to this, in August 2018, a graduate student working with the UI FRT had analyzed selected survey items from urban and rural residents from a larger community assessment conducted by the University of Northern Iowa. These data were going to be available to the Coralville FRAP effort as appropriate.

Watershed: East and West Nishnabotna

Community: Hamburg

Contractor: Golden Hills RC&D

Status: On hold

In January 2019, UI FRT had a call with Golden Hills RC&D to initiate a case study for the two Nishnabotna watersheds and to talk about potential FRAP communities. The group agreed that Hamburg would be the best site for this work, but it is located just outside of the IWA watersheds. In March 2019, the UI FRT sent a letter of intent to IEDA and Department of Housing and Urban Development (HUD) about carrying out resilience programming in Hamburg. Hamburg was approved as a study site for this project. However, in May 2019 catastrophic flooding occurred in western Iowa, and the UI FRT and Golden Hills RC&D decided to put this effort on hold for approximately six months to allow the community time to recover. They planned to reconvene in fall 2019 to discuss next steps. Michelle Frankes (Executive Director of the Golden Hills RC&D) said that in the meantime they can keep in touch with local people about their physical and emotional recovery to have a better grasp on who could be good partners going forward.

Watershed: North Raccoon

Community: TBD

Contractor: TBD

Status: Preliminary discussions

In a meeting with watershed planner, Pat Conrad, from EOR, the UI FRT and Conrad brainstormed some potential sites for this work in the North Raccoon watershed including Storm Lake, Gowrie, and Sac City. There have been no further discussions on this topic.

Watershed: English River

Community: TBD

Contractor: TBD

Status: Preliminary discussions

The UI FRT had a preliminary meeting with Jody Bailey (English River WMA PC) and Ryan Schlabaugh (English River WMA chairperson) about potential sites for a FRAP in the English River watershed. There are no large communities there, and the group agreed that a good approach would be to start with Iowa County and treat it as a community. Just planned to follow up with the county engineer and John Gehring (Iowa

County Supervisor). According to Just, the town of North English was originally proposed as part of IWA, but it doesn't have much potential for this work because of the rural makeup of the county.

Social Vulnerability Information and Visualization

During the spring and summer of 2018, the CEA collaborated with the UI FRT to develop a usability interview for potential users of the mapped social vulnerability information (SVI) available on the IWA information system (IWAIS). This was informed by work in Years 1 and 2 of the IWA to visualize flood resilience and census-based SVI onto maps. The purpose of the interviews was to provide information about the purposes for accessing the system; their ability to find the information they were seeking; whether and how they would use that information; how trustworthy they thought the information was; and any problems they encountered when using the system. The CEA conducted the four interviews during October 2018, and shortly after the interviews, the CEA provided the UI FRT with informal feedback concerning interviewees' experiences using the IWAIS SVI to inform modifications to the site and/or the development of training for potential users. A full report of methods and findings is attached as [Appendix L](#).

The interviewees indicated that they found the information about socially vulnerable populations provided by the site to be interesting, and they were positive about its ultimate utility; however, they strongly indicated the need for additional information to make the site truly useful in their work. Therefore, based on the interviews, the main recommendations from CEA based on the interviews for modifications to the site were:

- *Provide more information about the indicators themselves.* The website would benefit from clear definitions of indicators, well-defined sources for data, and clear direction for action based on the indicators. Links to external sources used to create and compile the indicators is also essential.
- *Provide training on how to use the information effectively.* While additional information about the SVI on the website itself would be helpful to participants, additional professional development (in the form of an on-line tutorial and/or other technical training) is necessary.

During a UI FRT meeting in December 2018, Just described that they had made changes to the SVI maps on IWAIS based on the CEA's feedback. The changes included adding a lay person description of SVI. The published *Data Description and Source* reads: "The social vulnerability Index (SVI) is a combined metric of 12 indicators: African American, language barrier, renters, unemployed, poverty, children, elderly, Hispanic, low education, female head of household, disabled, and no vehicle access. They represent a percent of the population at the census tract level. All data was retrieved from the U.S. Census Bureau using the 2016 ACS 5-year estimates."

Just described that the maps should be a smaller piece of this work, and mostly be used to identify "hot spots" (general areas with high instances of social vulnerability). He wanted the maps to support the FRAP narrative (for the former FRAP documents described in the Year 2 report), not the other way around.

The group discussed the idea of "demystifying" social resilience information for planners or other potential users, citing both complexity and unfamiliarity of information. Tate considered that mapping and indicators are the first step, then the team would consider what to do with that information. He described the importance of linking vulnerability characteristics with "manifestations of vulnerability" and actions to benefits these groups. Johannes and Tate agreed to talk more about how to do this.

The CEA offered to facilitate a review of the next version of the project, and Weber also agreed to review materials. Just said he did not believe that another formal review would be useful outside of the context of the FRAPs (as defined in Year 2). Just described that he wanted to provide guidance for how a planner might use this flood resilience and SVI. The group agreed that there could be resources to describe what information is available in the system and why it would be useful for a community. The conversation about guiding planners to better use this information continues in the How-to Guide section below.

How-to Guide

In December 2018, Just began developing an example to provide guidance to planners on how incorporate social resilience information into their watershed plans in a useful and accurate way. This guide was informed by the visualization interview findings as presented by the CEA, as well as feedback from Weber, Turba, and watershed planners as they integrated existing social resilience information into the watershed plans, he also described that he was now using another group's (The Mitigation Framework Leadership Group (MitFLG)²⁶) paper to inform the discussion of using SVI in a watershed or community context.

As of August 2019, the team was in contract negotiations with Astig Planning LLC to bring a planner's perspective to this idea. In a preliminary version of the scope of work with Astig Planning LLC (still under review as of August 26, 2019), this project was intended to "create a community-scale flood resilience action process guide for planners. The guide will describe planning process steps, in terms familiar to community planners, with a particular emphasis on capturing flood resilience action steps that positively affect socially vulnerable populations... Planners should be able to lead communities through a planning process that will result in actions tailored to people with these vulnerabilities such that their specific flood resilience, and therefore community flood resilience, will increase over time." The scope specified that this work in content review and development should culminate in a white paper on flood resilience planning.

Dubuque Survey

Under the guidance of Eric Tate, the UI FRT collaborated with the Bee Branch Healthy Homes (BBHH) team to develop a survey to be administered to all participants in their program. Building on this collaboration established in Years 1 and 2 of the IWA, the UI FRT has continued to discuss the social resilience surveys (see Year 1 Evaluation Report) with the BBHH team and internally.

During a meeting between the two teams in November 2018, a home advocate reported that they were not getting many surveys, because there was less program buy-in from the multiplex tenants. Sharon Gaul (BBHH Resilience Coordinator) also reported that these surveys were now integrated into the online application form.

During an internal UI FRT meeting in December 2018, the group discussed these low response rates (particularly from tenants) and partial responses to the survey. The group was motivated to think strategically about these challenges and how to increase the likelihood for replicability of the work. Johannes offered to follow up with Gaul about how response rates have changed since the assessment was moved online, and Tate encouraged his graduate students to reach out to the Luther CSC to see if they experienced similar issues.

During a meeting of both groups in February 2019, Gaul reported that the social resilience surveys were continuing to trickle in. One of the home advocates said she talked to people about the survey if she had time after the BBHH assessment [presumably if they did not fill the survey out as part of their BBHH application]. She said the shorter version of the survey made it easier to get people engaged. UI FRT team member Cristina Munoz asked the two home advocates which survey changes seemed to help the most. They cited the customized sections, fewer response options, and better wording.

In August 2019, the UI FRT had preliminary discussions about assigning a new graduate student to analyze the data collected for the social resilience survey.

Outreach and Education

In addition to the targeted activities of the UI FRT, the team regularly interacted with local and national stakeholders who were also engaged in community resilience work. In a team meeting early in Year 3, a team

²⁶ <https://www.fema.gov/community-resilience-indicators>

member recommended attending local events to see how project stakeholders were working together, and to get a glimpse of the culture surrounding social vulnerability and disaster mitigation and response in the state.

Benton County COAD

Similar to previous years, the UI FRT attended three meetings of the Benton County Community Organizations Active in Disaster (COAD) group.

At the October 2018 meeting, Just presented the SVI available on IWAIS. He explained the limitations of working at the census tract level in more rural communities or small towns and showed an example of how the information could be useful in a larger community such as Waterloo. He described that in Waterloo, their top indicator of vulnerability was not having access to a vehicle and the impact that would have on evacuation. Just also described the importance of the impact of flooding on LMI households in the IWA grant. Just also said they would be working with the IV RC&D to increase resilience among vulnerable populations.

Representatives of the UI FRT attended a January 2019 meeting of the Benton County COAD that the CEA was unable to attend.

At the July 2019 meeting, Rilling, and Paul Schmitt (intern with IV RC&D) provided updates to the group about their work with the UI FRT. Just first gave an overview of the IWA to provide the larger context for the Middle Cedar watershed and the work that was being done locally by Rilling and her team, examining how vulnerable populations respond to or recover from flood events. Rilling described how the IV RC&D was tasked with connecting LMI residents to resources. They described taking a dual approach - online and in-person presence – for providing resources and collecting stories from vulnerable populations in Vinton. Schmitt provided a demo of the website (floodresilientvinton.com) that contains information about preparedness for local residents, stories of flooding from historical and current perspectives, maps depicting the projects and resilience efforts that have been going on in the area that are related to flood prevention or resilience, and links to emergency management and coalitions.

Feedback from members of the COAD was positive overall, appreciative of the attention being given to their area and what residents have endured: “Vinton is not being forgotten!” One coalition member commented that the floodplain maps are a valuable resource. Another coalition member asked how they identified LMI individuals for their stories.

Other outreach

Members of the UI FRT mentioned participating in the additional activities, however CEA was not in attendance to document the nature or outcomes of the activities. The activities reported by the UI FRT are listed in Table 3.

Table 3. Additional the UI FRT Activities

Meeting	Self-reported UI FRT Contribution
Iowa Homeland Security Conference: Disaster Lessons Learned (October 2018, Iowa City, IA)	Described the intent to participate.
“FEMA meeting” (Fall 2018, Kansas City, MO)	Just reported that mitigators and planners were also doing “resilience,” but that resilience means different things to different people (e.g., environment, infrastructure). However, he said that no one on the panel talked about social vulnerability. He reported that Jeff Geerts and Shelly Peterson (from IEDA) were on a panel and gave a shout out to social vulnerability, and people asked questions about it. He said the audience was “longing for” something concrete they

	could measure, and Just hopes the UI FRT can do a nice job with social resilience so people can learn from their process.
National Conference of State Legislators (NCSL) Public Private Partnership on Disaster Mitigation and Recovery Summer Convening (August 2019, Nashville, TN)	Just served as a moderator for a session, but also had the opportunity to discuss the Iowa Flood Center and IWA during a Q&A session. He said the NCSL planned to host a webinar in October 2019, featuring the UI FRT. During the conference, Just described building connections with other groups working in disaster.

Watershed Activity, Outcomes, and Reflections

This final segment of the report provides a comprehensive overview of the activities and outcomes of the eight IWA WMAs during Year 3 of the grant, as well as reflections from key stakeholders in each WMA. The first two sections provide abbreviated summaries containing highlights and themes from all WMA quarterly meetings, as well as key informant interviews. Finally, the third section provides individual case studies of each of the WMAs, including details of quarterly meeting activities, an analysis of meeting attendance, and watershed-level summaries of board member interviews.

For the purposes of this report WMA titles have been abbreviated for readability. They are repeated here for reference.

- Clear Creek Watershed Coalition (Clear Creek WC)
- East Nishnabotna River Watershed Management Coalition and West Nishnabotna River Watershed Management Coalition (East/West Nishnabotna WMC)
- English River Watershed Management Authority (English River WMA)
- Middle Cedar Watershed Management Authority (Middle Cedar WMA)
- North Raccoon River Watershed Management Coalition (North Raccoon WMC)
- Upper Iowa River Watershed Management Authority (Upper Iowa WMA)
- Upper Wapsipinicon River Watershed Management Authority (Upper Wapsipinicon WMA)

WMA Meeting Review

In Year 3, all WMAs were making progress toward the goals of IWA; however, individual WMAs were all at various stages in the process of implementation. The first IWA bid package to go out for bid was in the Middle Cedar Watershed Management Authority (Middle Cedar WMA) in spring 2019. At the time of this report, all but one of the watersheds had bid packages already approved by the board or currently under review, and all watersheds were making progress toward environmental review, hiring contractors, and construction. The current section provides an overview of recurring themes from across all watersheds, which is based on a review of all WMA quarterly meeting activities and discussions between August 16, 2018 and August 15, 2019. Accomplishments and discussions are reported for these WMAs in the following categories: planning, outreach, practices, engagement with the Flood Resilience Team, WMA operations, and sustainability.

Planning

Watershed planning efforts were in progress and at various stages for all IWA WMAs. North Raccoon was the last IWA WMA to select their planner and start the process. Two watershed planners presented final versions of their plans (English River WMA, East/West Nishnabotna WMC), three watershed planners made drafts available for the board and public comment (Upper Wapsipinicon WMA, Upper Iowa WMA, and Middle Cedar WMA), and one watershed planner continued to share elements of the plan with the Clear Creek WC with intention to provide a draft for official review in late summer 2019. Planners described the following activities in service of the planning process: integrating data from partners such as the Daily Erosion Project data or hydrologic reports (see below), community and board input sessions, hiring additional contractors for support, and facilitating a flood resiliency simulation activity. Additionally, two watersheds extended their planning contracts during this grant year to allow the planners time to integrate additional data and feedback (some had been formally extended in year 2).

Complementary to the work of the watershed planners, four WMAs (Upper Wapsipinicon WMA, Middle Cedar WMA, English River WMA, North Raccoon WMC) reported results or described the collection of water quality data for their watersheds, and two watersheds described securing (Middle Cedar WMA) or pursuing

(East/West Nishnabotna WMC) complementary services for watershed planning in additional Hydrologic Unit Code 12 watersheds (HUC 12s).

In service of the plans, University of Iowa Iowa Flood Center (UI IFC) provided versions of their hydrologic reports to each WMA board and watershed planners for review. Additionally, in two watersheds (Middle Cedar WMA, East/West Nishnabotna WMC) there was discussion of the Phase II reports and the goal to model the actual impact of the implemented practices on the landscape.

Along with a team of interagency partners and local emergency management coordinators, the UI IFC identified priority locations across the state to expand their stream sensor network to improve flood monitoring and forecasting efforts. New UI IFC stream sensors were intended to be deployed through the Upper Wapsipinicon WMA by the end of 2019.

Outreach

Project coordinators (PCs) or planners in nearly all of the WMAs reported doing some sort of outreach in their watershed including field days, school field trips, picnics, county fairs, meetings with producers, newsletters, and community-based practice installations. Three watersheds (Upper Iowa WMA, North Raccoon WMC, and Clear Creek WC) described specifically engaging or planning to engage woman landowners in these efforts.

Process for Selecting and Constructing Practices

During Year 3, all watersheds were actively recruiting landowners, as well as accepting and approving applications for the implementation of practices. At the time of this report, all the watersheds except North Raccoon WMC had bid packages already approved by the board or currently under review. The Middle Cedar WMA was the first to get a project all the way through the review process, with their first project both out for bids and subsequently under construction in spring 2019.

IWA partners have continued to find ways to encourage the success of landowner participation in the project. Building on a process from Year 2, the last two WMAs, English River WMA and East/West Nishnabotna WMCs, selected additional priority HUC 12s for implementation. Additionally, in Year 3, IWA partners or PCs in all watersheds announced the transition to a 90%/10% cost share (up from 75%/25%), and three watersheds also discussed a program-wide waiver for 10% cost share contributions for projects constructed on public land.

Despite the delays in the process, watersheds were still making progress toward getting their first projects out for bid. In July 2019, the Upper Wapsipinicon WMA announced they anticipated their first bid letting to occur before the end of the summer. Meanwhile, the East/West Nishnabotna WMC, Clear Creek WC, and English River WMA were all anticipating fall 2019 for bid letting. Additionally, three WMAs anticipated starting construction in fall 2019: Upper Wapsipinicon WMA, Upper Iowa WMA, and East/West Nishnabotna WMC.

Watersheds were at very different program stages for allocating their funds for specific projects. In three watersheds (East/West Nishnabotna WMC, Clear Creek WC, and English River WMA), PCs reported that they were close to their maximum budget if they were to complete the projects currently in the pipeline. One of the coordinators described the opportunity to be more strategic with their choices for applicants since they had enough landowner interest. However, in a couple of the watersheds, the Iowa Economic Development Authority (IEDA) has mentioned that they may need to reallocate funds between watersheds where they do not anticipate spending the money currently allotted to them.

Additional challenges reported by PCs during WMA meetings related to defining an IWA process for compensatory stream mitigation for projects and navigating construction in a region with karst topography.

With the Year 3 additions of North Raccoon WMC and East/West Nishnabotna WMC, all watersheds have hired an engineer for their implementation process. Three watersheds (Clear Creek WC, English River WMA, and North Raccoon WMC) were in the process of selecting or selected their archaeologist to provide information necessary for the required environmental review.

UI Flood Resilience Team

A UI FRT team member introduced the Flood Resilience Action Plans (FRAP) in five of the IWA watersheds (Upper Wapsipinicon WMA, East/West Nishnabotna WMC, Clear Creek WC, English River WMA, and North Raccoon WMC). Additionally, results were shared in Upper Iowa WMA, the FRAP process is ongoing in Middle Cedar WMA, and the contract for the FRAP work in Clear Creek WC is under contract negotiations. [More information can be found in the Flood Resilience Team section of this report.]

Sustainability

Nearly all IWA watersheds began to focus on the sustainability of their WMA after the IWA ends. Five watersheds (Upper Wapsipinicon WMA, Middle Cedar WMA, East/West Nishnabotna WMC, Clear Creek WC, and North Raccoon WMC) reported applying for additional funds for practices or planning. Two WMAs have provided letters of support for additional projects in their watershed related to their work. Board members or administrators in two WMAs have described the value of participating in WMAs of Iowa, and one board officially appointed board members to participate in this group. Two watershed plans (Upper Iowa WMA, Upper Wapsipinicon WMA) included a strategy for sustained WMA operations. One watershed (North Raccoon WMC) has encouraged board members to participate in other watershed groups. One watershed (Upper Wapsipinicon WMA) has secured additional funding from the member entities for ongoing water quality sampling.

WMA Operations

During Year 3, five WMA boards held Executive Board elections, four WMAs had discussions about getting more board members involved and the importance of securing a quorum, two watersheds approved mission and vision statements (Middle Cedar WMA, North Raccoon WMC), and North Raccoon WMC continued to add new members.

WMA Board Member Perspectives and Experiences

As a precursor to the watershed-level case studies to follow, the current summary provides a broad overview of the perspectives and activities of all eight rural watersheds that have participated in the IWA. Specifically, it focuses on the past accomplishments, current activity, and future outlook for the collection of watersheds through the perspective of stakeholders in each WMA. Key data sources that informed this summary include observations during WMA board meetings, board member surveys, and interviews with key informants in each WMA. Overall, while there was an array of challenges and situations that were unique to individual watersheds, there was also much consensus surrounding the benefits and challenges of this work, as well as the shared concerns for the continuation of efforts aimed at addressing water quantity and quality issues.

Methods

WMA Board Member Interviews

During May and June of 2019, the CEA conducted interviews with at least two key informants from each of the seven WMAs. The purpose of the interviews was to understand of the WMA board members' perceptions of the activities and outcomes of the IWA at approximately the halfway point of the five-year project. To that end, interviewees were asked to share about the benefits and challenges of participating in the IWA, as well as the unique strengths, weaknesses, and outlook for their WMAs after the grant period ends.

Audio-recorded interviews were transcribed and summarized individually, then shared with each WMA member to allow them an opportunity to review their summary and provide any comments, corrections, or

additions. After verification, the individual summaries were synthesized into watershed-level summaries, which are included in their entirety in each case study below and were shared with the IWA project partners for their use in improving the project over the next two and one-half years. Unlike other sections of this report which each have a corresponding appendix, these are the original findings from the interviews. To view a copy of the interview protocol, please refer to [Appendix N](#).

In addition to describing the findings from the interviews, this section also incorporates relevant findings from the Board Member Survey in order to offer a more complete narrative of the experiences and perspectives of the WMA board members. The survey method is detailed below.

Board Member Survey

In October of 2018, the CEA conducted a survey of all member entity representatives of the WMAs, asking them to share their experiences and engagement in the work of the WMAs. The response rates across the WMAs ranged from 10 to 75%, with an overall average of 37% (Seventy-nine individuals participated in the survey). Respondents represented the following three main membership groups relatively equally: municipalities, counties, and soil and water conservation districts. Approximately half of the respondents indicated that they were elected officials, and more than one third were public employees. The remainder of the respondents described themselves as concerned citizens, producers/farmers, landowners, and business owners. Most of the respondents indicated that the member entity they represent is in an area eligible for IWA funding. Only approximately one in five respondents (19%) owned land that had been directly affected by flooding in the past; however, most indicated they were involved in the WMA because of their concern about flood mitigation, water quality, or both. For a more detailed description of the methods used in data collection and analysis, or to view a copy of the full survey findings, please refer to [Appendix O](#).

Findings

Benefits of Involvement in IWA

In their interviews, board members cited a variety of benefits stemming from their involvement in the IWA project. The benefits reported included increased opportunities for implementation of practices, a heightened awareness of water quantity and quality issues through education and outreach, as well as a fundamental shift in their approach to watershed management.

Measurable impacts

A few interviewees from various watersheds acknowledged the vital role of the financial assistance they received through the IWA, which enabled them to more successfully implement practices in their watersheds. One board member summed up this benefit succinctly stating, “I don’t think we’d be where we’re at now without that funding.” Others focused more explicitly on what that level of funding has produced in terms of the measurable impacts on water quantity and quality throughout their watershed, pointing toward the effects of key projects that have already been installed. Another interviewee expressed appreciation for the fact that they are targeting “projects that can cover the greatest number of watershed acres or have a larger impact on our downstream.” Several others also cited the measurable impact of various practices, describing how they are “reducing instances of flooding” and decreasing the nutrient content not only in that place, but also for other downstream communities.

Engagement in the WMAs

One of the major themes that consistently emerged across nearly all the watersheds was the notion of engagement. For some, this was in reference to the level of interest and activity among board members themselves, as well as the member entities that they represent. For others, engagement was exemplified by the support and guidance of key partners in carrying out the work of the WMA. Meanwhile, still others viewed engagement as coming from landowners and other public individuals and groups.

Throughout the initial formation and ongoing activity of the WMAs, collaboration has become a critical component for a small handful of board members in the North Raccoon WMC and East/West Nishnabotna

WMC. The ability to make connections and network across the different member entities that have been represented in these WMAs has reportedly been of great value to them. As one member stated, the fact that the local and state stakeholders have “all gotten to know each other is a huge [benefit]” because they could always count on being able to bounce ideas off each other. Another board member described that the most valuable piece of the project so far has been in “engaging, having a board that has local knowledge and local relationships.” Conversely, at least one board member from each of these western watersheds also later identified engagement as an ongoing challenge that requires careful attention.

In listing the benefits of being involved with the IWA, members from six of the seven WMAs directly acknowledged the support they received from various partners. Whether this came in the form of sharing expertise and information or providing general direction and assistance as the coalitions were initially forming, several board members expressed deep appreciation for the critical role that their partners have played thus far. Most frequently cited from among the list of partners was the UI IFC, whose contributions have included technical modeling to develop plans and set goals, being “instrumental in education,” providing robust analysis and guidance, and generally, “getting the ball rolling.” Marveling at the quality and type of engagement from partners at their quarterly meetings, some have commented that, “It’s fascinating how it all works together,” and how this level of activity and support has helped “put some life into the organization.” In other words, board members pointed toward the extent to which they have become properly equipped through the support of partners to be successful in establishing and achieving their goals.

Members from six of seven watersheds also described how they have been able to gain attention from different stakeholder groups across the state and increase their awareness surrounding issues of water quantity and quality. For example, a board member from English River WMA stated, “I think to be able to accurately project what our goal is and engage those landowners has been probably the most rewarding part to this point that I’ve seen from our watershed.” Others described their target audiences more generally but pointed toward the increased education and awareness they have facilitated through the selection of high priority subwatersheds, and how they have highlighted the “human impact” of the work being done. One Middle Cedar WMA member offered a personal anecdote of a shift in his own thinking and level of awareness regarding the causal relationship between his practices and water quality. This type of a response provides an indication that, through the work of this project, the WMAs may be able to incrementally build momentum and increase awareness among key stakeholders. Perhaps the most critical manifestation of shifting perspectives would be the bridging of rural and urban perspectives, which both key informants in Clear Creek celebrated as a success in their WMA. One of the Clear Creek WC members, speaking about the collaboration between urban and rural communities and groups in their watershed, stated that “people are getting together and working together to try and come up with some solutions on what we can do to create a better watershed as a whole.” In particular, he cited the benefit of having representation from both Iowa and Johnson counties, whose populations are uniquely different.

[Watershed focus](#)

On a higher level, several board members also discussed or shared evidence related to a heightened focus on the value of the watershed approach, or a stronger recognition of the connections between the upstream and downstream. In Clear Creek watershed especially, the WC members have appreciated the attention being focused at the level of the watershed, looking at issues of water quality and quantity as being a partnership between rural and urban, who each represent different yet interconnected parts of the watershed. They also mentioned a specific opportunity that originated as a result of the IWA, in which they took a closer look at “the runoff and flooding issues associated with Biscuit Creek, which is directly related to the flooding that’s happened in Clear Creek.” Multiple members from other watersheds also demonstrated having internalized a similar approach, advocating for flood mitigation efforts to be devoted to projects that are upstream from where past damage has occurred. One English River WMA board member and farmer described how this level of awareness is particularly important considering that “we here in Grinnell put a bunch of water into the

English, but we don't have to live with the consequences." So, the IWA has brought to light the downstream consequences of their actions, "even though we don't get to suffer them." Each of these examples serves as evidence of the benefits of actively promoting the watershed approach and slowly shifting the mentality toward looking at flooding through the lens of the watershed, "instead of a county by county approach."

Challenges Remaining

As was the case with the benefits experienced by each of the WMAs, there were common themes that emerged regarding their perceived challenges that lie ahead as they continue to execute the goals of the IWA. Many of their concerns related either to the logistical challenges of implementing the practices within the time allotted or the need to maintain or increase engagement among specific stakeholder groups. There were also a handful of challenges that were unique to the geography or context of individual watersheds.

Timeline and implementation

Several board members expressed apprehension about their ability to get projects completed and the money spent within the allotted grant funding period. For some, the process of initially forming their WMA and the steps involved in getting projects through the pipeline has taken longer than anticipated, which has left considerably less time for the actual implementation than they would have liked. This nervousness was exemplified by one interviewee who shared his concern about "the quantity of work that we're asking people to do under a [short] timeframe." Another observed that, "here we are halfway through and, if I understand correctly from the last meeting, we have not moved any dirt yet." In some cases, board members also reported feeling pressure from outside observers to move the process along more quickly and be able to demonstrate the outcomes of their efforts in the form of practices on the ground. A small handful described fielding questions such as, "You've been doing this for how long?" and, "You've spent all this money, what have you got done?" Despite being somewhat dissatisfied with the slow pace of the work, members from multiple WMAs acknowledged that this did not strike them as unusual given the scale of the project, nor were they sure how the timeline could have been accelerated. One interviewee described that the challenge for him has been to effectively interpret and communicate the process, especially to stakeholders from the rural community that are less accustomed to the nature of large-scale grant funded activity.

The sense of urgency to implement practices has been further accentuated by the need to leverage completed practices to attract more landowners to "jump on board." Board member survey results echoed this urgency to showcase successful projects in order to build momentum and increase interest and engagement from a wider base of stakeholders. However, a few key informants expressed doubt that even such incremental increases in buy-in on the part of landowners and producers might not be enough to truly shift the agricultural culture and the practices within this short window of time. To that effect, one interviewee stated, "My biggest concern about time is, there's kind of an inertia in land use practices, and getting producers to change their patterns of production is sometimes pretty hard." Nevertheless, others remained optimistic that they would be able to overcome some of these hurdles and "make an impact to our communities."

One of the persistent hurdles that key informants in three of the seven WMAs explicitly mentioned, was the burden of cost to landowners that want to implement the eligible practices. Two interviewees pointed toward the weak farm economy, which may affect farmers' willingness to incur such costs. One stated, "Even at a 10% match, I think given the farm economy, that's going to be a limiting factor." The other echoed, "Bad times make investment in some of the structures that we'd like producers to build more challenging." Still another key informant shared that financing was currently "the number one challenge" to complete additional projects in the watershed. It appeared that other watersheds were also in similar predicaments, where projects needed to be prioritized based on the amount of funding that they had been allocated.

Three of the seven WMAs also experienced extenuating circumstances that amplified the challenge of being able to successfully implement practices. The East/West Nishnabotna WMC had extensive flooding during the spring and summer of 2019, which turned some attention away from mitigation to focus on recovery. As one of the key informants stated, "We've had so much flooding. We have so much damage on our levy system, our

roads system, our infrastructure, that I think it's going to be difficult to get contractors to work on the things that we want to get done. That's what I see as the biggest [challenge]." She expressed concern that there may also be a materials shortage because of local flooding, further affecting the ability to execute projects. Upper Iowa WMA also experienced natural challenges related to the geology of the watershed, which inhibited the progress they were able to make on some of their projects. One of the key informants in that WMA stated, "We were further in the process of getting actual projects on the ground and then got feedback that they wanted things done differently due to karst topography." As a result, some projects were delayed or abandoned in favor of sites that had less risk of this issue. The second interviewee in this WMA stated, "Our ability to get the storage was limited by those factors. And so, we're still going to try and accomplish storage with structures, but we don't have as many candidates as we'd like to." Finally, the North Raccoon WMA did not organize until after the Des Moines Waterworks lawsuit²⁷ was resolved. As a result, one key informant stated, "We had almost a year where we could have had a watershed coordinator on the ground." She did acknowledge that, having the slower start did allow them an opportunity to learn from some of the experiences of the other watersheds, but it still significantly affected their timeline and ability to get projects through the pipeline. As the second key informant pointed out, this lawsuit also caused the Iowa Nutrient Reduction Strategy to become a large part of the conversation and steered their coalition toward water quality concerns, despite the grant being a flood-first initiative.

Outreach and engagement

Despite their relatively strong agreement that the IWA helped bolster interest and engagement in the WMAs, board members indicated that it has been challenging to both maintain the initial level of board member engagement and entice new landowners to "take land out of production" and install eligible practices.

Board member engagement. As evidenced by meeting attendance data (see case studies below), as well as responses during key informant interviews, it has become increasingly difficult for WMAs to maintain full participation and involvement from the range of entities that together make up the board. The struggle to have quorum at meetings has become a critical challenge as of late and for several reasons. In some of the larger WMAs, the decline in engagement has been attributed in part to the size of the watershed and the distance that members are required to travel to attend the quarterly meetings. As a key informant from the East/ West Nishnabotna WMA stated, "Getting everybody engaged in such a big watershed, in the sense that it encompasses a lot of cities and counties and conservation districts," is a challenge. An informant from North Raccoon WMC echoed the same concern, and then added that a lot of the smaller communities that initially joined the group have found they do not have the personnel to regularly attend the meetings. She also shared that there seems to be a sense of complacency among some board members, or a tendency to rely on the technical experts rather than develop their own agency through the coalition. In a similar vein, the board members in the Upper Iowa WMA have appeared to participate less in the day-to-day activities due to a lack of technical expertise; however, they were reportedly more engaged with the broader planning and goal-setting initiatives. One key informant offered that, due to their role as less of a decision-making body and more of a "liaison between the professional the public," it has been mildly difficult to maintain engagement among all board members. In the Middle Cedar WMA, one key informant described how the identification of high priority subwatersheds may have contributed to a division among the members of the WMA, affecting their disproportionate level of interest and involvement. Regardless of the unique reasons for the waning interest and engagement on the part of board members, the key informants generally emphasized the critical nature of maintaining as much participation and cooperation across all entities as possible to ensure that projects and planning will continue to be carried out to the greatest extent.

Reaching volunteer landowners and the public. Several key informants, especially those in WMAs with significant rural farming populations, shared that the biggest challenge for the remainder of the grant period

²⁷ <https://www.desmoinesregister.com/story/money/agriculture/2017/03/17/judge-dismisses-water-works-nitrates-lawsuit/99327928/>

centers on their “ability to reach out to landowners to get cooperation with on-ground practices.” This ongoing challenge was expressed differently by a handful of key informants. One stated that, “trying to pull in private landowners and get them involved is obviously a big challenge.” Another described the considerable time and effort it takes to “convince some of these people to take land out of production.” Still another mentioned having to overcome the common perception among property owners “that the entire process is cumbersome, lengthy, and in some respects, felt like it’s been overdone.” Even when landowners were engaged and committed to installing practices, one key informant described that there have been “communication gaps between the landowners and the watershed itself on projects.” He reported receiving feedback from landowners indicating that project plans were being changed or denied, which has been particularly frustrating. Taking a higher-level perspective, one board member stated the IWA has laid the groundwork for the fundamental changes in current farming practices necessary to have the desired impact. To that effect, he stated, “This is part of the education process that we have to get to be able to get to landowners in the respective towns to acknowledge that they all have an impact.” Speaking collectively on behalf of state-wide WMAs, another board member stated, “I think that unless we start tooting our horns and boasting of our accomplishments, the public is not going to recognize the value of the WMAs.” In particular, he felt this outreach should be used to convince legislators of the need for continued funding to increase the overall effectiveness of the approach. In sum, public education and outreach on many levels and with various stakeholders has remained a critical challenge to getting projects on the books and building momentum in the various watersheds.

The outreach of the WMAs has been particularly challenging among the rural populations who have been described by one WMA board member as the primary solution for the issues of water quantity and quality in the state. Several WMAs have attempted to be sensitive even in the naming of their organizations in order to be inclusive of and welcoming toward this key stakeholder group and not project an overt impression of authority. These groups have chosen the word “coalition” rather than “authority” in their titles. One board member in Clear Creek WC emphasized that they have paid close attention to their communication, trying to “get the word out that we want to be helpful, we don’t want to be authoritarian. That’s why we don’t call it the watershed authority, because that word instantly turns off rural people. Well, that’s not what we are and that’s not what we’re about.” Regardless of this collaborative approach and positive intent, multiple key informants described that it has still been a challenge to fight the perception of authority that has been ascribed to the WMAs, and instead to find common ground between the urban and rural groups.

Despite attempts to be sensitive to the rural perspective in their outreach and education, there have been a few missteps along the way that highlight the political nature of this challenge. An English River WMA board member and farmer signaled that the IWA needs to be keenly aware of the message they are sending to farmers and landowners. Specifically, in reference to the annual IWA meeting at the end of April, he said, “We already know that [farmers] are the biggest part of the problem, then to effectively not invite them by having it during planting season is horrific.” He feared that, by not being mindful of the timing of the meeting, they may have unintentionally created a level of antagonism among the very stakeholders upon whose willing participation the project depends. A board member from North Raccoon WMC expressed a similar word of caution, saying that when landowners hear discussion about issues of water quality, they get the message that they are “doing something wrong,” that there is a “course correction that needs to happen for that group,” but yet they have no “input at the table.” This lack of voice or representation from the farming community within the WMA is something that struck a chord for a small segment of key informants, who feared that they may unintentionally be isolating the very stakeholders “who could be the solution.” Two key informants in North Raccoon WMC emphasized that, because the WMA “does not allow for landowners to be part of the governance structure,” it is increasingly important to at least make sure they have “space at the table” for those from the rural communities. In Upper Iowa WMA, a key informant expressed regret at a missed opportunity with farmers early on in the grant when they were asking about possible incentives for no-till and cover crops. The board’s response at the time was, “That’s not how we can spend the money.” This may

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have discouraged them from continuing to engage with the initiative, which, “ironically, looking back today, those are some of the major components of our resiliency plan.” Reflecting on how they could have responded differently, he said, “While we wouldn’t have been able to cost share them as part of this program, still keeping those people engaged to help execute the long-term plan of spreading that message and having that be a component, may have been a way to keep the public engaged.” Each of these examples underscores the critical nature of engaging with rural landowners and producers whose goals may differ somewhat from most partners of the IWA.

Strengths, Weaknesses, and Future Goals of the WMAs

Many of the strengths and weaknesses described by board members appeared to parallel the benefits and challenges as outlined above. Themes of engagement and support from partners were complemented by praise for the quality of the staff that play key roles in the WMA, as well as the diversity of perspectives that have been represented on their respective boards. The main area of weakness appeared to be the ability of the WMAs to sustain the initially high levels of interest and engagement. This was coupled with some feelings of insecurity surrounding funding, as well as the overall influence and impact of their WMAs in achieving the goals of the watershed.

Strengths

Overall, survey respondents indicated that being a part of the WMA has been a valuable experience for them. They reportedly understood and agreed with the mission of their WMA, were familiar with its current work, felt informed enough to make decisions on behalf of their WMA, and agreed that they had adequate opportunities to provide input to their WMA. They mentioned benefiting from a range of aspects including but not limited to receiving information about the watershed, having representation in the WMA, networking with others, leveraging previous experience, looking at the big picture outcomes, providing input on projects, connecting with other WMAs, and having a role in reducing flooding. They also expressed a great deal of optimism about the effectiveness of the work of their WMAs, as well as the individuals that have been involved in leadership roles within the WMA. In their interviews, multiple key informants specifically praised the work of their project coordinators, describing how confident they have been in their capacity to successfully carry out the work of the WMA. Others more broadly complimented the caliber and consistency of all those who have been involved in the WMA. For example, one key informant stated, “We’ve had what I would feel is good board interaction. We’ve been able to communicate well with our board; we’ve been able to get through the processes pretty systematically and efficiently.” Still others took the opportunity to reiterate the important role that their partners have played in supporting the overall effectiveness of their WMA. One board member described how everyone has been “willing and able to share all the information and education,” adding that their knowledge has been greatly appreciated. Another specifically cited the contributions of the UI IFC and the benefit of having “access to people with vast amounts of knowledge is wonderful, because I learn something new every meeting that I go to.”

Members from at least four watersheds highlighted the diversity of the individuals and partner groups engaged in their WMA. For some, this level of collaboration across different organizations existed prior to the IWA and was a key strength of their WMA. For example, the Upper Iowa WMA already had “time-forged relationships” and longstanding partnerships among diverse stakeholders in the watershed. As one board member stated, “We’ve had so many groups that have worked together, and so we have this history of doing these kinds of projects.” Meanwhile, for some watersheds, this type of collaboration and diverse representation of partner groups was novel and attributable to the IWA at large. A key informant from Clear Creek WC spoke about the diversity of the urban and rural representatives as being a major strength of their WMA. He stated, “When you combine farmers and soil and water people and city people, you get an entirely different perspective.” Similarly, a board member from North Raccoon WMC mentioned that they “have a good mix of people that represent the geography of the watershed.” She further described their “ability to

come together and be willing to listen and think outside-the-box,” as a strength of their WMA, particularly since they are “such a mix of urban and rural.”

Weaknesses

Turning their attention to ways that their WMA could improve, engagement once again came to the forefront. While several key informants agreed that there was initial interest and excitement related to the awarding of the grant, they noted that it has become difficult for them to sustain that level of interest among stakeholder groups. This was exemplified most overtly in the Upper Iowa WMA where they experienced “a much wider breadth of public participation in the initial meetings,” however, they have struggled in “trying to keep people engaged in the long-term.” This inability to sustain adequate engagement was also cited as a weakness in the Middle Cedar WMA, where they have experienced attendance issues at their quarterly meetings. Although the reason for the decline is not clear, one board member surmised that it may indicate a loss in momentum. In North Raccoon WMA, whose geographical size is similar to Middle Cedar watershed, engagement in the coalition has become a weakness because the coalition grew quickly. In a sense, the surplus of individuals and partners involved in the WMA almost produced a sense of complacency or decreased engagement due to the reliance on others. Related to the challenge of educating the public and outreach, several survey respondents felt they did not have enough landowners and interested citizens who attend WMA meetings. When asked who else should be involved in the WMA, respondents listed: local/county/regional officials; federal entities; agricultural/commodity/farmers groups; farmers/landowners; non-governmental environmental groups; and members of other watershed groups. Thus, the general weakness across several WMAs regarding engagement appeared to center on their ability to continue “getting people to show up,” and playing an active role.

Board members also pointed toward areas in which they felt their WMA could improve moving forward. Survey respondents expressed a desire to see the actual impacts on the watershed, to secure additional sources of funding, to expand the implementation areas for IWA-funded best management practices (BMPs), and to see more conservation practices installed on the ground. They also indicated that they would like to change the way that meetings are organized to allow for more networking time and less technical information, and to do more field trips to see the practices that have been implemented. When asked what they needed to further inform their decision-making, the four most commonly cited topic areas were information about: potential flood mitigation impact of BMPs, how other WMAs have successfully implemented BMPs, the impacts of improved soil health practices, and additional funding sources. This notion of being in a perpetual state of learning and continually striving for greater outcomes was reinforced by multiple key informants, one of which stated, “We’re still learning. I know that we can do better.”

Future goals

Looking ahead, survey respondents were asked to describe both their short- and long-term goals for their WMA. In the short-term, board members said they want to get BMPs implemented, begin to improve flood mitigation, and complete their watershed plan and begin implementation of practices. Additional short-term goals include securing additional funding, having a measurable impact on water quality and soil health, and increasing public engagement in watershed issues. Long-term goals were similar but were more focused on the big picture. Respondents described long-term goals to improve flood mitigation, improve water quality, and establish a future path and funding for their WMA. They also were focused on encouraging the use of better farming practices in general and having a focus on working for the greater good.

Sustainability of the WMAs

While there was a strong consensus among board members surrounding the value and importance of continuing their efforts beyond the life of the IWA grant, they generally expressed concern about being able to secure the necessary funds to support their current level of activity. Without adequate funding, many feared that the level of interest may fall off precipitously, and with it the practices that are critical to achieving the goals for water quantity and quality in their respective watersheds. Several board members discussed the

need to demonstrate the positive outcomes of the current practices being implemented, and the potential for relying on example projects and the watershed plans as a means by which to attract alternative sources of funding.

Replicability and continuation of the model

Building upon the benefits of being involved with the IWA, as well as the individual strengths of their individual WMAs, several board members spoke highly of the potential for the lessons learned through this project to inform the future directions and decisions for others that wish to pursue a similar model. One interviewee affirmed, “We’ve long appreciated the value of the watershed approach in general, but the Iowa Watershed Approach, I think this could be a model for success not just in our own state but around the country. And when you look at the flooding that’s going on nationwide, I think it’s timely.” Similarly, others described the IWA as forging “a path forward for Iowa,” being “a strong talking point for us to develop a replicable model for success,” and serving as a roadmap for “other states to have an impact.” As evidence of replicability even within the span of the IWA thus far, one board member described how the lessons they have been learning from the other IWA watersheds that were ahead of them in the process have been helpful for their own WMA in knowing how to make their “communities within the watershed more resilient and sustainable.” Pointing toward the audience and scale of the project, another board member described how the awareness of the watershed approach should extend beyond those who are directly implicated in the effects of flooding. The survey findings indicated that there was also a strong level of individual commitment to being involved in work related to the watershed in the future. One respondent said, “I hope we can continue these efforts well into the future and help address major issues affecting our state including flood mitigation and water quality improvement.” A similar element of optimism regarding the outlook of the project’s influence was detectable across several key informant interviews. One key informant expressed hope that that these best practices would continue to remain “at the forefront of discussion and considerations from decisions being made” in both urban and rural sectors. Speaking about the momentum they’ve been able to create thus far, another key informant stated, “I know that public support is increasing. And I think as we have more success, we’ll become more confident.” Still another adopted a rather philosophical tone, articulating the need to depend on our intellect as “the greatest renewable resource we have,” in order to “really understand the natural world and put that knowledge to work in harmony with these natural designs and natural processes.” While more than a third of the survey respondents indicated that the IWA was an important reason for their initial involvement in the WMA, most respondents said they plan to stay involved in their WMA after the IWA funding is done. Reinforcing the importance of their continued participation, a survey respondent said, “We have to start small to be able to get somewhere, and I believe this is how we’re going to do that.”

Funding as the linchpin

Despite the overwhelmingly positive regard for the potential impact of the watershed approach and the conviction of the value of their work, the most significant issue affecting the sustainability of the WMAs beyond the IWA grant is their ability to secure additional funding. Stated rather succinctly by a board member from the Middle Cedar watershed, the only way forward for the WMA “is if they are successful in securing funding long-term, funding that is predictable and consistent year to year.” Conversely, in the absence of funding, “it’s hard to get everybody on the same team.” In other words, “on a volunteer basis, I don’t see long-term, ten, twenty years from now we’re still a robust organization.” Hoping to avoid such a scenario, another board member conjectured, “I hope that we haven’t spent all this time and money and effort into nothing.”

The clear and present need to secure a steadier stream of funding, particularly to support the watershed coordinators, was initially documented in the board member survey in February 2019. In it, the majority of respondents indicated that state funding would be their first choice; however, grant funding was a close second. Capturing this sentiment, one of the Clear Creek WC board members offered that if the state votes to fund watershed work, “I will be pleasantly surprised let’s put it that way.” Members from five of the WMAs also indicated that they may need to rely on, or directly ask for contributions from, the entities that currently

make up the boards. To that end, a board member from the English River WMA stated, “There may come a time that we’re going to have to ask members to explore how big of an asset they feel this is, and if there is some financial buy-in to it.” Echoing the call for member contributions, a Middle Cedar WMA board member suggested instituting “some sort of membership fee per capita” among the variety of participating entities to ensure that their WMA is at least minimally funded. Similarly, a board member from the East/West Nishnabotna WMC advocated, “Everybody that’s in the watershed [that] is benefiting should be contributing.”

Regardless of the funding source, most board members agreed that their budget should be applied first and foremost toward maintaining the role of the project coordinator. This way, they would be able to most effectively continue the on-the-ground efforts that have been started. To that effect, an Upper Wapsipinicon WMA board member emphasized the importance of applying for additional grant funding prior to the completion of the IWA project. A North Raccoon WMC board member echoed that seeking funding for a project coordinator would “absolutely” be part of their overall sustainability plan. Meanwhile, a Middle Cedar WMA board member argued that it will be equally if not more important to “have somebody else write grants to keep the funding stream coming to actually do projects that will make a difference.”

Recognizing the importance of funding to the continuation of their efforts, many board members have indeed begun to turn their efforts toward planning and researching potential sources of funding. To that end, a board member from Clear Creek WC stated, “We, the WMA board and staff, need to start planning for the future and looking for opportunities long before the funding stream ends so that we have a plan in place of what’s going to happen.” Representatives from at least four WMAs cited the existing watershed plans as being a critical component of their pursuit of funding. An English River WMA board member described how this foundational document will serve as a strong resource in applying for grant funding. Thus, in addition to identifying areas where they need to improve, it will “allow us to present our best case” when submitting grant applications. Stated in a slightly different way, an Upper Iowa WMA board member expressed optimism that their watershed plan which he described as a “living, breathing, evolving” online plan, could be used “as a communication tool in drawing people in to support it and giving recognition to people for doing the right thing.” Two WMAs reported they are actively pursuing funding or had already been awarded external grants. In the East/West Nishnabotna WMA, one key informant described how their project coordinator has already submitted grant applications, saying, “She gets how it works and knows that you’ve got to get ahead of what the next step is so that you’re ready for that next step.” Additionally, the Middle Cedar just recently received an 18-month grant from Iowa Department of Agriculture and Land Stewardship, which will allow them to continue these efforts, “and then at the end of the 18 months we’re hoping to get another grant to get every project shovel-ready.” Thus, while each WMA may be exhibiting a different level of resolve or action with respect to seeking external funding, they have all recognized the importance of initiating these efforts well in advance of the end date of the IWA funding.

Demonstrating outcomes

Several board members cited the importance of demonstrating the impact of current practices as a mechanism by which to promote the long-term sustainability of the WMAs. By completing projects and highlighting their successful outcomes, the goal to increase engagement and lead to a greater likelihood of attracting additional funding. In other words, the implementation of these practices serves as a proof of concept, or a gateway to expanding the reach and future impact of the WMAs. For this reason, one English River WMA board member said, “right now we’d like to really prove ourselves. And that proof really comes in structures. I’m a big believer that once you build it, people are going to see the benefit.” Similarly, a North Raccoon WMC board member projected that the coalition’s capacity to be sustainable after IWA ends will be more possible once they make decisions on “appropriate projects” and people begin to see projects on the ground. She added, “Once you start seeing success, it will build on other successes... I think a lot of people will just wait and see how something is going to work.”

Reflecting on the future of the Upper Wapsipinicon WMA, a board member mentioned, “If people start seeing what it’ll do, I think it’ll keep moving along.” In the Upper Iowa WMA, another board member described feeling “encouraged by some of the successes that producers have had in pursuing soil health and regenerative agriculture.” He continued by adding, “their success is drawing some attention and some following.” Whereas it may be stereotypically Iowan to say, “If you build it, they will come,” a small handful of board members from various WMAs underscored the importance of actively and strategically publicizing the successful outcomes in order to reach the widest audience possible. Ideally, the goal would be to showcase their progress through a broad array of media and organizational outlets to solicit additional funding to achieve long-term goals. Along those same lines, one English River WMA board member implored that the long-term sustainability of the WMA as an entity ought to be wrapped up in sharing information with farmers to ensure accurate decision-making that ultimately leads to healthier solutions.

Individual Watershed Case Studies

The purpose of this section is to provide a detailed review of the Year 3 activities for each of the following watersheds: Clear Creek, East and West Nishnabotna River, English River, Middle Cedar River, North Raccoon River, Upper Iowa River, and Upper Wapsipinicon River. Each case study contains a thorough description of the various activities, progress, and perspectives as they have unfolded through the year in each WMA.

Methods

Before proceeding with the case study findings, which review the activities and engagement at the watershed level, it is important to provide a context for understanding how the data that inform these case studies were collected and analyzed. Recall that the three primary data sources included WMA meeting attendance, WMA meeting activity, and board member interviews.

Meeting attendance

One indicator of community engagement is WMA meeting attendance. At quarterly meetings for all IWA watersheds, attendees were asked to sign an attendance log and provide their affiliation. The sign-in sheets were provided by the WMA to the UI IFC and the CEA. Attendance data in this report are therefore limited to those who signed the log. All affiliations were coded into the categories listed below (and in the note concerning the “Other” Category). Counties, municipalities, and SWCD representatives are the member entities for the WMA. However, those coded as affiliated with a county include not only the official county representative to the WMA, but also anyone who listed the county as their affiliation, so totals may include representatives of the Board of Supervisors, County Engineers, Emergency Management Staff, etc. The same is true for municipalities, such that totals include the mayor, city administrative staff, storm water management staff, etc. Counties and municipalities who had representation at one or more meetings are listed below in the notes. Total attendance in the attendance report does not include representatives of IWA partner groups given that their attendance was expected as part of IWA and the analysis is meant to focus on engagement at the local level for each watershed. Also note that, in each of the individual WMA case studies, updated versions of their attendance sheets are used; therefore, the number of Year 2 attendees may be different than what was initially reported in Year 2.

Meeting summaries

CEA staff members attended and took notes at all quarterly meetings for all IWA WMAs during Year 3 of the grant. A CEA used evaluator notes, published meeting minutes, and meeting agendas to condense the content of each meeting into concise bulleted lists. The list version provides an overview of the business, announcements, and presentations for each meeting with a brief reference to any related discussion. The purpose of these summaries is to provide a record of the major activities of the board and the contribution of the IWA partners.

Clear Creek Watershed

The self-reported strengths of the Clear Creek WC included the diversity of urban and rural representatives, which has resulted in their adoption of “an entirely different perspective.” Additionally, they have felt strong support from the IWA partners, through which they have developed a sense of agency in carrying out the watershed approach. Looking ahead, the challenges that remain at the forefront are related to funding and sustainability, maintaining interest and clear communication between urban and rural groups, and being able to learn from evaluation of current activities to continually seek to improve their processes and outcomes. The level of urgency “to start planning for the future and look for opportunities long before the [IWA] funding stream ends” was intensifying. (See [Appendix P](#) for a summary of the Clear Creek WC board members’ interview responses.)

Nearly all²⁸ meetings of the Clear Creek Watershed Coalition (Clear Creek WC) were held at the Coralville City Hall in Coralville, IA and were run typically by the Board Chairperson (John Lundell) both the IWA Project Coordinator (John Rathbun) and the head of watershed planning (Jen Fencil) assisting. There appeared to be a quorum at all meetings during Year 3. Because of the small number of member entities, although they take attendance, they do not typically verbally discuss whether or not they have met quorum.

Meeting attendance

During Year 3, the Clear Creek WC had four public WMA meetings. Figure 1 illustrates attendance at the eight quarterly meetings that occurred from October 2017 through July 2019. During Year 2, 45 individuals attended at least one of the Clear Creek WMA meetings, and a total of 32 individuals attended one or more meetings of the Clear Creek meetings during Year 3. A total of 12 and 11 people attended the meetings for the first time in Year 2 and Year 3, respectively. Attendance by IWA partner groups, municipalities, and SWCDs was steady across the meetings, with at least one representative at each meeting. Fewer people attended the meetings in Year 3 compared to Year 2. Overall, IWA partners were highly represented in Year 2 meetings, more so than other categories of attendees. With the exception for the meeting in January 2019, no citizens came to the meetings in Year 3.

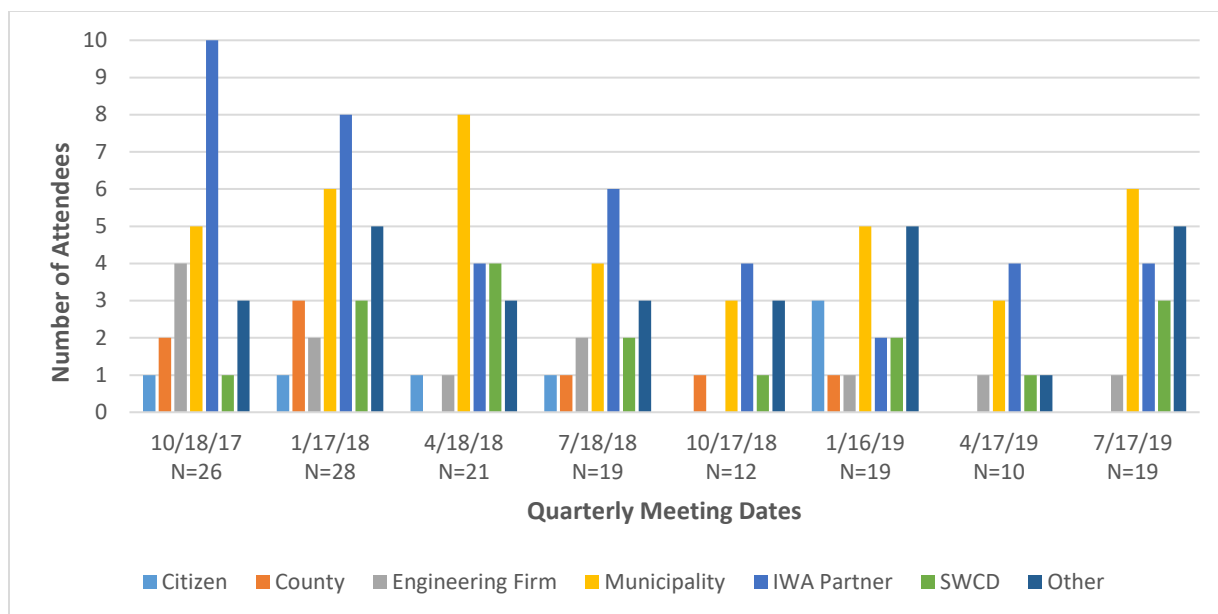


Figure 1. Years 2 and 3 WMA Meeting Attendance: Clear Creek Watershed

Explanation of categories:

²⁸ One meeting was held at the North Liberty City Hall in North Liberty, IA. This meeting was run by John Gehring.
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- *Other category includes the following affiliations:* Colleges/universities, conservation groups, COGs or other regional planning groups, social service agencies, state elected officials, NRCS, federal government agencies, WMA coordinators from other WMAs, and the IWA coordinator.
- *Counties:* Iowa, Johnson
- *Municipalities:* Coralville, Iowa City, North Liberty, Tiffin
- *SWCDs:* Iowa, Johnson

Meeting Summaries

Meeting 1: October 17, 2018

Board activities:

- Vice Chairperson John Gahrning (Vice Chair) ran the meeting. The meeting began with the approval of the agenda and the minutes from the last meeting (July 18, 2018).
- Jennifer Fencil (ECICOG) reported updates about the planning process including the addition of HR Green to the Stream Corridor and Flood plain Restoration Planning effort. She described that she had had two goal setting meetings and described the take-aways from the flood and water quality sessions. She said there would be a stream health and recreation session on January 16, 2019.
- John Rathbun (IWA project coordinator) provided updates about his work. He described that the archaeologist should be lined up next week and he anticipates the first bid letting would be in in Spring 2019. He described that he would be meeting with 4-5 potential landowners the next day. John asked the board to approve the list of applicants for practices. The board approved.
- Rathbun described that there had been excitement about the program, especially in light of the approval for 90% cost share. He also spoke to a landowner about hosting a field day related to a pond installation and he hosted a picnic for landowners in August with 8 in attendance.
- Rathbun also asked the board to officially approve two letters of support for two projects: NDR Clean Water Awareness and Education Campaign and EPA Gulf of Mexico Program. The board approved these letters via email between meetings, but the board formally voted to approve these letters of support retroactively.

Partner presentations and updates:

- Antonio Arenas-Amado (UI IFC) presented about the precipitation patterns, increases in stream flow, crop and property losses in the last 30 years, and the hydrologic assessment (topics, recommended areas for flood mitigation, scenarios)
 - o Meeting attendees asked questions about the strategies to use to reduce peak flow, what property or infrastructure is being protected with the modeled flood mitigation efforts (from the hydrologic assessment), and whether there will be an analysis of the actual impact of practices
- Valerie Decker (CEA) provided up a brief overview of survey findings from the previous CCWC board meeting.
- Jessica Turba (HSEMD) announced the upcoming IWA partner meeting.

Meeting 2: January 16, 2019

Board activities:

- Chairperson John Lundell (Chair) ran the meeting which began with the approval of the agenda and the minutes from the last meeting (October 17, 2018).
- Jennifer Fencil (ECICOG) reminded the group that tonight was the final public input session for the planning process. She said after the meeting, she would review the input with the technical team and planned to share results during the April board meeting.

- Fencl described a collaboration with GeoTREE²⁹ at UNI. This group was looking at land cover and runoff volume in urban areas of the watershed, and their work would inform target areas for implementation.
 - Attendees asked questions about interpreting the maps provided by GeoTREE, the notably high runoff numbers for Coralville, and how funding for implementation will be allocated based on highest need.
- John Rathbun (IWA project coordinator) provided updates about his work. He presented a list of applicants for the board to approve. The board approved the list. John said his highlights included the first oxbow project and a neighbor recruiting another neighbor for practices.
 - An attendee asked about next steps for these projects and whether there were limits to how much money an individual can receive in the program.

Partner presentations and updates:

- Kate Giannini (UI IFC) reported that UI IFC planned to have an update on the 2018 rainfall assessment at the April meeting, hydrologic reports had been provided to the board for review, and Larry Weber was back at IIHR.
- Rathbun presented at LICA in Des Moines and representatives from the coalition will be presenting at the Iowa Waters Conference.
- Rathbun reminded the group that the IWA cost share had increased on 90% and he reported that change has increased applications by 50%.
- Amy Foster (City of Coralville) reported about a Soil Quality Restoration Grant awarded to Coralville and others.
- Foster also said they would be hosting an event for Women Caring for the Land (Woman, Food, and Agriculture Network) event in the coming months.
- Fencl attended a district Iowa State Association of Counties (ISAC) meeting and suggested that this would be a good group to engage with.
- Fencl shared that the WMAs of Iowa hosted a strategic planning session and it provided clarity about what they want the organization to do: raise awareness of WMAs and network (helping other WMAs). Many of the WMAs are thinking about how they can keep a coordinator. She asked the group for input for what Rathbun should take back to this organization.
- Lundell reported that their new Coralville sports complex would have BMPs: roof collection to water plans and a green roof component with public access. They were using some SRF funds to do these practices.

The meeting was followed by the Clear Creek Watershed Plan Stream Health and Recreation Goals Stakeholder Input Session. This session included presentations from HR Green, Johnson County Conservation, and City of Coralville Parks Department and opportunities for community input.

Meeting 3: April 17, 2019

Board activities:

- Chairperson John Lundell (Chair, Mayor of Coralville) ran the meeting.
- Jennifer Fencl (ECICOG) provided a “first cut” summary of the goals for the three major areas based on the input sessions. She described that she would work with the technical committee to refine the goals to be sure they were useful and put the WMA in a good position to pursue additional funding.
 - Lundell asked who the goals were for. Fencl specified that the goals were for the WMA and the WMA would be asked to adopt the goals and work on the plan. She said that input meetings were attended by CCWC board members, members of the technical committee, and members of the public.

²⁹ <https://www.geotree.uni.edu/en/>

- o Board members provided some specific input into the goals specifically as the proposed goals related to work in progress in their communities, measurability of the goals, and considerations of “affordable” or “replacement” housing. Overall, board members reflected that the goals were on the right track.
- John Rathbun (IWA project coordinator) provided an updated list of his projects (currently 26 applications for over 100 projects). He reported that postcards reporting the switch to 90% cost share increased interest. He described the review processes and said he hoped to learn more about the environmental review in May.
- Rathbun said he plans to do another watershed picnic, and he was continuing to work with the engineer and landowners on projects. He anticipated a busy fall with bidding and construction.
- The meeting concluded with the approval of the minutes from the last meeting (January 16, 2019) since they did not have a quorum at the beginning.

Partner presentations and updates:

- Antonio Arenas-Amado (UI IFC) presented the 2018 Rainfall assessment (with a focus on “departure from normal”) along with the factors that contributed to the Missouri River flooding in western Iowa and Eastern Nebraska.
- Arenas-Amado announced 2 upcoming meetings: WMAs of Iowa annual meeting (May) and Iowa Flood Center 10-year Anniversary Party (June).

Meeting 4: July 17, 2019

Board activities:

- Jennifer Fencel (ECICOG) report that she was still working on the plan and she was continuing to discuss the plan with the technical team. She told the group to “stay tuned” for making the plan open to public comment.
- John Rathbun (IWA project coordinator) updated the group on applications (12 new applications since the last CCWC meeting). This new wave of projects included three projects with the City of Coralville. The board approved the list of applications. John reported that they were coming close to reaching their budgets for project work.
- Rathbun presented the proposed plans for bid packages one and two, a combination of ponds, prairies, grade stabilization structures, and rock shoots, and the board approved the bid packages. He said they were in the process of procuring an appraiser and the survey crew’s work is up to date.
- Rathbun said he was looking at putting together the next newsletter.

Partner presentations and updates:

- Craig Just (UI FRT) described the approach to developing Flood Resilience Action Plans and their contract with Impact 7G and Astig Planning LLC. He also described his \$1.1M award from the EPA to build projects in Johnson County.
- PhD students from an NSF funded collaboration between Colorado State, University of Colorado Boulder, Colorado School of Mines, and the University of New Mexico described their work on an NSF-funded project where they looked at groundwater flow and interaction between nitrogen, phosphorous, and carbon uptake in streams. The board was excited to learn more about the best practices to help with nutrient reduction in streams.
- Rathbun announced a watershed picnic on September 21 at Kent Park.

East and West Nishnabotna River Watersheds

Much of the Year 3 activity in the Nishnabotna watersheds was overshadowed by the devastating floods throughout southwest Iowa in the spring of 2019. Despite the potential for setbacks on the implementation side in their WMA, the engagement in the quarterly meetings has remained high with only few instances of quorum issues. The timeline for implementation is viewed as a major challenge, even before the spring

flooding. Being large, predominantly rural watersheds, they experience ongoing challenges with providing education and outreach. Additionally, they have begun to pursue and be awarded supplemental grants to support the adoption of practices in their watersheds, which provides an element of hope for the future sustainability of the WMA. (See [Appendix Q](#) for a summary of the East/West Nishnabotna WMC board members' interview responses.)

Because of common membership in both the East and West Nishnabotna WMAs, their meetings were held in conjunction with each other.

The Nishnabotna meetings were typically conducted in tandem by Sheryl Sanders (Chair) and Cara Maker-Morgan (IWA coordinator for both WMAs). The printed agenda for the Nishnabotna meetings lists "Quorum Check" for each meeting, and Morgan facilitates this check.

Meeting attendance

During Year 3, the East and West Nishnabotna Watershed Management Authorities (East/West Nishnabotna WMC) had four public joint meetings at the Oakland Community Center in Oakland, IA. Figure 2 illustrates attendance at the eight quarterly meetings that occurred from September 2017 through June 2019. A total of 86 individuals attended one or more of the joint Nishnabotna WMA meetings during Year 2, and 76 in Year 3. Among them 38 and 22 were first time attendees of Year 2 and Year 3 meetings, respectively. All but two categories of attendees, *Citizen* and *Engineering Firm*, were consistently well represented at all quarterly meetings during Years 2 and 3.

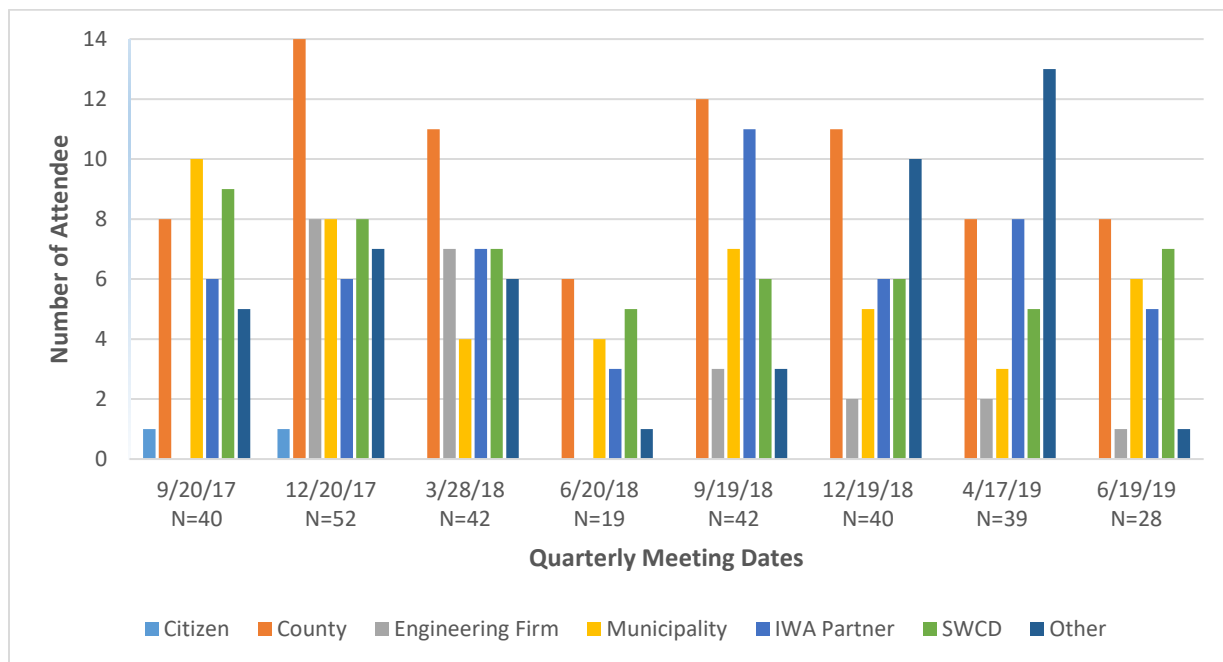


Figure 2. Years 2 and 3 WMA Meeting Attendance: East and West Nishnabotna River Watersheds

NOTE:

- Attendance at the quarterly meeting on 9/19/18 and Nish Fossil Conference on 9/19/18 were combined because most of the attendees overlapped. However, four individuals who attended the conference did not attend the meeting.
- Explanation of categories:
 - *Other category includes the following affiliations:* Commodity groups, COGs or other regional planning groups, ISGS, RC&D staff, state elected officials, media, nature/conservation groups, NRCS, and federal government agencies.
 - *Counties:* Audubon, Carroll, Cass, Fremont, Mills, Montgomery, Page, Pottawattamie, Shelby

- o *Municipalities:* Anita, Coburg, Elliot, Essex, Farragut, Griswold, Hancock, Henderson, Manning, Oakland, Shenandoah, Treynor, Walnut
- o *SWCDs:* Carroll, Cass, Fremont, Mills, Montgomery, Page, Pottawattamie

Meeting Summaries

Meeting 1: September 19, 2018

Board activities:

- Sheryl Sanders (Chair) ran the meeting, which began with a discussion of the importance of getting a quorum and introductions. Cara Maker-Morgan (IWA Project Coordinator) said it was important for representatives that could not attend to have a designee or alternate. The board approved the last meeting's minutes.
- The board approved 5 new HUC 12s for implementation. Maker-Morgan reported that she had interested landowners in these new areas. Someone asked whether landowners who applied for 75% cost share would receive 90%. They would.
- Maker-Morgan asked the board members from West Nishnabotna to approve the coalition's support for a Hazard Mitigation Assistance project for Riverton Road proposed by Craig Just (UI IFC) during the previous meeting. The board approved.
- Rick (JEO) presented on their stakeholder meetings, plans to finalize goals and objectives, ACPF finding, NRCS coordination, water quality, case studies, and next steps. Specifically, he said that the goals were guided by science and local input. The structures most needed in the watershed were grade and bank stabilization, retention basins, and terraces. Someone commented that farmers might not know the term "BMP." Rick reported that JEO would host a Flood Resiliency Tournament in January and finish their open houses in February. They asked the board to provide input on the goals and objectives either today or later.
 - o There was some limited discussion about the goals. JEO received feedback to make the "state standards" language more specific and to add sustainable funding as an objective.
- Rick also described the process for case studies, recognizing that each case study could explore different things and had different goals, but all were considered with the lens of the 5 IWA goals.
 - o Someone asked whether the case studies took into account the rest of the watershed and how they selected these cases. Maker-Morgan said the goal was to have specific projects or areas ready for going after implementation dollars.
- Adam (JEO) reported that his team was working with district conservationists and assistant state conservationist on a PL566 structure. He described the historical Watershed and Flood Program and the opportunities for projects in Iowa. The group discussed what needed to be done to either continue building structures or to maintain ones that were no longer functioning (pond full of silt). He also reported that they were taking into account a lot of data in the watershed plan including ACPF, stream flow, USGS sensors, and water quality data.
- The next quarterly meeting was set for December 19, 2018.

Partner presentations and updates:

- Kyle Ament (IDNR) said Iowa Soybean Association was looking to do planning in HUC 12s with a grant through NRCS/USDA. The group discussed that plans would help them access funding and prioritize projects within the watershed. Maker-Morgan said she would like to see multiple applications for these.
- Dan Gilles (UI IFC) reported that he and his team were working on the hydrologic assessment for both watersheds, and drafts went out a couple days ago. He presented summaries of the simulation results and shared historical precipitation patterns with data from the last year. He also reported the results of a designed storm for the HEC HMS model. The board members were encouraged to look at the report.

- o Attendees asked if the infiltration varied by season or typography. Dan said that it did, assuming summer conditions, but typically soil type and land use dictated runoff (unless the ground was frozen).
- o The group discussed the importance of reporting reduction in peak flow in terms the audience could understand. People were interested in hearing about changes in terms of gallons, inches, or flood stage. Gilles said he could look into this.
- o Gilles also reported that baseflow in the Nishnabotna Rivers was increasing. He said something had increased infiltration, and rainfall frequency and intensity had increased (but not total rainfall). Flashes could cause erosion.
- Julie Kearney (UI CEA) presented survey results from a survey at a previous meeting.
- Ashlee Johannes (UI FRT) reported on the current projects and goals of the Flood Resilience Team. She also provided an update about the interactive social vulnerability information available on the website (lowawatershedapproach.org). She provided an overview of the 12 indicators of social vulnerability and why knowing these are important for mitigation, preparedness, and response.
- IEDA highlighted that Maker-Morgan mentioned their biggest updates related to adding HUC 12s and the increased cost share. At this point they had three years to finish the plan and get the work of IWA done. She encouraged the board to get thinking about landowners to get involved.
- Jim Marwedel (HSEMD) reported that HSEMD would attend the Riverton Road project meeting. He said that the two presidential disasters in Iowa opened funding up for the whole state. He described needing benefit/cost analysis for hazard mitigation projects (which could include ecosystem benefits), and he would work with JEO to get the right information into the plan.
- Shawn (ISU) said they had been working with Maker-Morgan and Lance Brisbois on a presentation about the canoe float. He mentioned the Watershed Academy coming up October 16-17 targeted for watershed coordinators.
- ISU Iowa Water Center was putting together flash drives with Daily Erosion Project data and they would also provide a document about how to use the data. The Iowa Water Conference was March 12-13.

Meeting 2: December 19, 2018

Board activities:

- Sheryl Sanders (Chair) ran the meeting, which began with confirmation of a quorum and approval of the agenda and minutes from the last meeting.
- Alexis provided a financial report for the WMAs. She said they just hired JEO as their engineer, they were approximately half-way through the planning process, and 30% with administration and other costs. Cara Maker-Morgan (IWA Project Coordinator) also described a contract for funding match from the Army Corps. Both financial reports were approved by the boards.
- Maker-Morgan announced that Zach Johannes was in the role of Southwest Iowa Source Water Community Facilitator.
- Lance Brisbois (Golden Hills RC&D) announced a few upcoming float events and conversations with Shelby County to extend the water trail. Brisbois said that most water efforts had been in West Nish since East Nish did not have outfitters for canoes or kayaks. He reported a potential restoration project near Hancock. He also mentioned a few useful resources including Mapillary (<https://mapillary.com/app/>) and <http://www.goldenhillsrccd.org/exploreyourwatershed.html>
 - o An audience member mentioned that there were places to rent kayaks in Montgomery County and Anita.
 - o Maker-Morgan said she would like the board to go out on the river to increase connection there.
- Maker-Morgan reported on potential grants and community outreach. They had done a pre-application for a Water Quality Initiative project to install urban water quality practices and conduct

outreach in four counties. She said she would work on this grant with Potawatomie's education and outreach person, Paige. She also asked the group for additional ideas for grants.

- Rick (JEO) reported updates on the planning process with a specific focus on flood resiliency. He described progress on the different components of the report including flood risk assessments, the HUC 12 plans, and case study plans. He said their action plan starts in January including stakeholder meetings in March and July 2019. He announced two opportunities to participate in the flood resilience tournament in January 2019. He said this was a scenario-based exercise, designed for stakeholders to work in teams and play out potential strategies that would reduce flood risk for the region.
 - o The group discussed generally the process for choosing HUC 12s and case studies. Scott suggested that there be a way to reference which communities are eligible for IWA funds. Someone else asked if they knew what mitigation practices they planned to use. Rick said certainly dams, levees, and urban storm water improvements.
 - o Jeff Geerts (IEDA) asked if JEO had used the ACPF tool. Rick said that the flood center did some and JEO did the rest to cover the whole watershed.
 - o Larry Giofreddi (HSEMD) suggested a way to talk about downstream impact on mitigation projects.
 - o Maker-Morgan suggested that the board provide as much input as they could they owned the plan.
 - o A board member asked whether JEO had been reaching out to emergency managers and engineers. Rick said they had a long list of people to engage including county engineers, emergency management personnel, people at different levels in counties and communities, and state senators.
- For the design and construction of BMPs, Maker-Morgan was identifying landowners and sites. Rick reported that design work would begin in spring 2019 and construction depends on timing, location, and bids. Maker-Morgan described that they would be taking rounds of applications so that people would not have to wait for their engineering work. She also described that there was 90% cost share, which was a "big deal." She said they would try for spring or fall construction but would do what they needed to do to get the money spent. She was not concerned about getting the money spent because of the cost share and the expansion of eligible areas.
 - o A board member asked Maker-Morgan what types of practices people were interested in. She said that people were mostly interested in ponds and a couple other practices. She said that most practices were eligible other than no till and cover crop as long as it was designed to last longer than 5 years. Maker-Morgan clarified that there were 5-20 year agreements depending on the practice (agreements were held by Mills and Freemont counties).
 - o Someone asked to clarify the rating criteria and whether any applications had been rejected so far. Maker-Morgan said no one was rejected so far and often people wanted more than one practice.
 - o Giofreddi asked if there had been any interest in on-road structures. Cara said they had been working on a project.
- The grant administrator reported that up to this point they were only accepting and reviewing claims for the counties and Golden Hills, and following CDBG requirements.
- The next quarterly meeting was set for March 20, 2019 and people were asked to RSVP for the tournament by December 21.
- Scott thanked everyone for participating in the WMAs and requested that if anyone decided to retire or not run for re-election that they pass on information about the WMC to their entities so that they could continue to engage and participate.

Partner presentations and updates:

- Geerts reported that IEDA was working with their grant administrators. He said there was an issue with Army Corp compensatory stream mitigation, but HUD agreed to pay for this mitigation. Responding to a question from the board, Geerts clarified that this was mitigation for potential disruption on a perennial stream.
 - The group discussed strategies for handling this (bundling, self-mitigation, timeframe and scale necessary) and one board member said it was frustrating since the WMA received less “bang for the buck.” Ultimately, Maker-Morgan said that JEO would coordinate with Army Corps, but that Army Corps had the final say. Geerts said that IWA had worked extensively with Army Corps in Rock Island, IL, including to do pre-consultation, to ensure the process ran smoothly. Sanders thanked the partners for their support in this.
- Kyle Ament (IDNR) shared an opportunity for grant funding through IDNR. He said there were HUC 12 watershed planning grants, and anyone in Iowa could apply.
- Geofreddi introduced Colleen Kinney with HSEMD, who commented that Maker-Morgan was very responsive and that she wanted to attend the resiliency tournament. Kinney reported that HSEMD was working with the Iowa Flood Center to look at residential, commercial, and critical facility loss avoidance. Geofreddi said the work Kinney was doing would align well with the work from JEO. One board member said they should pay attention to reservoir floods and Missouri River issues.
- Kate Giannini (UI IFC) said that now all IWA WMAs had engineering contractors and all hydrologic reports had been delivered, except the one for North Raccoon. She said that the next step would be doing phase 2 plans, which modeled the practices actually being installed and their impacts. She also announced that people could now access hydro station data via smartphones. Someone asked a specific question about the hydro stations. Maker-Morgan and Giannini suggested a timeline for comments on the hydro report for the end of January.
- Shawn (ISU EO) said Extension hosted the Watershed Academy. He also described the Cover Your Beans and Water Rocks³⁰ programs through Iowa State. He also mentioned Conservation Station Trailers for water quality information and community outreach. ISU EO was also updating their materials for the program to incorporate the 90% cost share. He announced that Hillary Pierce was joining their team.

Meeting 3: April 17, 2019

Board activities:

- At the beginning of the meeting, Cara Maker-Morgan (IWA Project Coordinator) discussed that there were serious detours for getting to the meeting due to the extensive flooding in the area. She said, as a result (and as a result of a concurrent meeting that conflicts with this meeting) no official actions would be taken. She said their elections would be held digitally, but they did collect nominations.
- Zack Johannes (Source water community facilitator) introduced himself and described that he worked on source water protection plans, which were informed by the IDNR guidebook.
- Maker-Morgan provided a handout with updated budget information for the WMA.
- The boards discussed nominations for the executive committee. The vice chair would be a county supervisor because of the rotation. The group discussed nominations but postponed elections. Maker-Morgan presented Sheryl Sanders (former Chair) with a certificate of appreciation for her service in the position.
- Maker-Morgan announced that the WMA received an urban water quality grant to install rain gardens and bioswales in area fairgrounds and courthouses. Maker-Morgan described that they would work with rural youth to install these urban practices as an opportunity to bridge the urban/rural divide and educate the kids about urban practices. She said the program would include interpretive signage and installing tubes to be able to do water quality sampling. She said this grant should be a

³⁰ <https://www.waterrocks.org/>

springboard for more funding, and people could apply annually for these funds even though this award was 18-months. Golden Hills was happy to help with future proposals.

- Maker-Morgan informed the board that she had an opportunity to speak to a 3rd grade class about water quality—she reflected that it was surprising how much they know.
- Adam Rupe (JEO) presented updates on the watershed management and flood resiliency plan. He said the hydro plan was nearly finished—JEO would review the plan and incorporate the information. He walked through what had been accomplished and what was still to do. Rupe listed the technical documents that informed the plan and said they would be included as appendices. Rupe asked the board members to review specific draft chapters by May 10, 2019.
 - Maker-Morgan said that JEO's role in this would end in June—she invited board members to weigh in if they noticed any issues. The document was for this group. A board member said the plan needed more expert review. He said they needed review from EMAs, SWCDs, engineers, and flood plain managers. Rupe agreed that they would share the plan with those people and asked board members to forward the plan to people they believe should provide feedback. Someone asked for a PDF version of the plan for review because of government computing rules. A board member asked if JEO would be publishing the comments. They did not plan to.
- Rupe announced three upcoming open houses the following week in Shenandoah and Harlan. Rupe asked if anyone would be interested in helping to talk to their neighbors at an event or staff a station. A board member asked how the events were being advertised and made additional recommendations.
- Jake (JEO) provided the engineering status update. He presented a list of what they had done and what was still to do. His report included meeting with landowners, reviewing sites, developing conceptual designs and cost estimates, and the consideration for construction timing.
 - A board member asked if the practices sites were proportional between East and West. Maker-Morgan said the West received more funding from the grant.
 - Someone asked what the options were if someone backed out. Maker-Morgan said, they would move on to the next one. Maker-Morgan said they have had good interest and they were still accepting applications. She also mentioned that neighbors were talking to neighbors.
 - Maker-Morgan specifically walked through the proposed practices. Someone asked who selected the contractor and monitored the day to day work (lowest bidder and JEO respectively).
 - Someone commented that getting contractors would be tough because of the timing of this flood event. He said they would be busy and the work had to be done by September 2021.
- Becky Appleford (JEO) facilitated a planning activity as a way to get final ideas into the plan while they were still fresh from the current flood event. She wanted to explore how the group was resilient to flooding. She asked for responses to prompts like 'What notifications do you use?' 'what preparation was taken to prepare for the flood,' and 'what resources did you use to prepare?' The group was willing to engage and share their experiences. There was one citizen who strongly voiced his perspectives during the discussion. He came to the meeting looking for help and answers for his community. The group discussed at length their perceptions of the causes of the disasters and possible next steps, like talking to elected officials and engaging more closely with the Army Corps. The group settled on the fact that even after the event was over, people needed to remember and keep that in the forefront in the planning and implementation efforts.

Partner presentations and updates:

- Jeff Geerts (IEDA) admitted that the timing of this disaster with IWA was horrible. He said IEDA was considering shuffling funds around based on who would be able to spend the HUD funds. He reported that over 500 practices had been identified so far in the project and Middle Cedar had broken ground. He clarified that the WMC could use federal dollars for compensatory mitigation and they could buy

into banks outside the MID-URN areas. Someone asked about installing practices on CRP land. Geerts said they were working on an answer. Responding to a question from an attendee, Geerts clarified that they could either self-mitigate or buy into a bank and that the IWA covered 100% of these mitigation costs. He and Maker-Morgan described that JEO could work with Army Corps on a site by site basis.

- o A board member asked if there was any possibility to get an exception on the timeline due to the flood event here. Geerts said that by law all of the money would revert back at the end of the grant period. He said, "It would take an act of Congress to get it extended." He thought there was possibly hope of this since New York City was part of the grant program and might also be wanting an extension.
- Grant administrators (MAPA and SWIPCO) gave similar presentations updating the board on the grant funds spent so far.
- Kyle Ament (IDNR) said there was an RFP for IDNR's Clean Water Awareness out right now. These applications would be due at the end of May and can be up to \$75K.
- Larry Giofreddi (HSEMD) said he was working with JEO to provide information on disaster impacted areas. He hoped to be able to share updated information from March in this effort.
 - o Someone asked Giofreddi if additional implementation funds would be made available because of these disasters. He said yes; hazard mitigation funding was proportional to the disaster. He said the governor was also looking at mitigation right now. He encouraged Maker-Morgan and the board to get notices of intent submitted right away for any projects they might have in the works. He clarified that anyone in the state could apply for mitigation funds.
- Kate Giannini (UI IFC) announced several upcoming events, including WMAs of Iowa and UI IFC 10-year celebration. She said hydro station data was now available for smartphones and that field staff would likely be doing on-site sensor maintenance soon.
- Josh (NRCS) announced NRCS emergency watershed protection (EWP) funds. He said he had information about this 75% cost share, which was primarily aimed at protecting infrastructure valued at more than the cost of the repair.
- Golden Hills announced the upcoming water quality float.

Meeting 4: June 19, 2019

Board activities:

- The meeting began with a formal approval of the slate of officers identified during the last meeting and the approval of meeting minutes from December 2018 and April 2019.
- Cara Maker-Morgan (IWA Project Coordinator) updated the group about the grant to build raingardens and bioretention cells in Mills and Fremont County. She said these practices had been built and on July 16, 2019 there would be a ribbon ceremony. She described that the native plants and woodchips came from local sources. She described that there would be a booth at the county fair to demonstrate how water flowed and infiltrated different surfaces.
 - o Someone asked if they could use grant funds to build practices on church land. Jeff Geerts (IEDA) did not think there was a provision preventing it.
- Financials were reported for the project. Nearly all of the planning funds had been expended and the WMA is currently spending on management and administration. The group was waiting for bids to be finalized so construction could begin (likely fall 2019). The grant administrators were reviewing claims, processing drawdowns, and submitting to IEDA per the terms of the grant.
- Maker-Morgan gave updates about the IWA team meeting in Dubuque, the Water Resource Coordinating Council in Des Moines, and the Governor's Flood Advisory Board. She reported that she was continuing to meet with landowners and there were currently 22 landowners in the pipeline all with multiple projects. She said that if all the landowners stayed involved, the WMAs might need to

make decisions about which projects to proceed with based on funds available. Most people were interested in ponds.

- Adam Rupe (JEO) reported that the plan had gone through review and the content would be provided by the June 30, 2019 deadline. He asked for the board to approve a change to the distribution plan to include printed copies of the executive summary and action plan with digital versions of the whole plan. The board approved.
- Rupe described the outstanding changes to the goals in the watershed plan. The board reviewed the goals for the plan and approved the changes to the language as proposed. He also provided an overview of the strategies JEO would recommend for implementing the plan (outreach, policy, soil health, BMPs, and intentional use of fertilizers).
 - o An NRCS team member commented that local districts could accept these projects as their own.
 - o A board member was worried about adding workload to understaffed county offices mentioning that Soil and Water Conservation Districts were already overworked. Maker-Morgan commented that there was a demonstrated need for these practices and a project coordinator.
 - o There was a brief discussion about the potential impact of pushing the use of cover crops, even though they are not funded through the IWA project. One board member suggested that, by emphasizing cover crops so heavily in this plan, it might shift the culture and language around this practice so that it would eventually become implemented to the degree that no-till already was. There were modeled benefits of wide-spread cover crops for the region.
- Rupe wrapped his discussion about the plan summarizing the projected cost of doing all the recommended practices (\$122 Million (East), \$100million (West)). He also presented the vision for major key players in future efforts: watershed coalition, cities, counties, and landowners.
- Jay (JEO) presented an engineering update describing progress so far (JEO had done site visits with 22 landowners) and current plans for BMPs (ponds, terraces, bioreactor, prairie strips, buffer strips, sediment basin, bank stabilization, and grade stabilization). He anticipated construction starting this fall and outlined next steps.
- MAPA reported that they would be starting the bid process this fall and would have quarterly updates to IEDA by the end of June.
- One board member emphasized the opportunity from this flood disaster to describe a need for flood mitigation work to FEMA, which would be even stronger since they had a watershed plan. Maker-Morgan said it was important to get the voices of the cities from West Nishnabotna to be able to inform a discussion on whether to prioritize mitigation or recovery.

Partner presentations and updates:

- Dan Gilles (UI IFC) presented on the extreme weather of the last year. He talked specifically about the conditions leading up to and during the recent flood events. His presentation described departures from normal, satellite imagery from rivers in the watershed during March, and the impacted areas.
 - o A board member asked about using 1980-2010 as the baseline for “normal.”
 - o A board member asked what the options were for mitigation to prevent things like this happening in the future. Gilles said there would need to be a radical solution. He suggested 100% cover crop or taking farms along the Missouri River out of production.
 - o There was a brief discussion about how to consider an event like this in the future.
- IDNR reported that there were small changes to WMA code.
- UI IFC described that phase 2 of their involvement would mean taking the projects Jay (JEO) described and modeling their impacts at the HUC 12 level.

English River Watershed

During Year 3, the English River WMA has maintained consistent representation from “both ends of the watershed.” Representative board members reflected that their board continued to be very inclusive and transparent in their approach, and as a result they maintained a robust level of engagement from participating stakeholders. Despite coming into the IWA with somewhat of a “head start compared to some other watersheds,” the board expressed some concerns about the timing and overall cost of implementing the projects currently in the pipeline. They were also reportedly anxious about the ability to “quantify the benefits that we have downstream,” which they viewed as being critical for building momentum and ensuring the long-term sustainability of their WMA. Furthermore, there was a strong desire to have a greater and more lasting impact on water quantity and quality through fundamental changes in farming practices, while also being sensitive about the messages being sent to farmers and rural landowners in the process. (See [Appendix R](#) for a summary of the English River WMA board members’ interview responses.)

Meetings of the English River Watershed Management Authority (English River WMA) during Year 3 were held at the English Valleys History Center in North English, IA. Meetings were typically run by the board chair or vice chair with active support from Jody Bailey.

Various board members ran the meetings in Years 2 and 3. Possibly due to the relatively small size of the WMA, they do not usually conduct a verbal check for quorum. The board typically sits at a table with other attendees seated separately so it is easy to see who is on the board.

Meeting attendance

Figure 3 illustrates attendance at the eight quarterly meetings that occurred from August 2017 through August 2019. A total of 38 individuals attended one or more of the English River WMA meetings during Year 2 and 40 in Year 3. Among them 10 and 12 were first time attendees of Year 2 and Year 3 meetings, respectively. Attendance by IWA partner groups and county was somewhat steady across the meetings, with at least one representative in each meeting. Engineering firm representatives joined less than half of the meetings. In general, attendance at Year 3 meetings remained quite consistent and included primarily board members and IWA partners. More *Citizen* attendees showed up during the first meetings of the year for both Years 2 and 3.

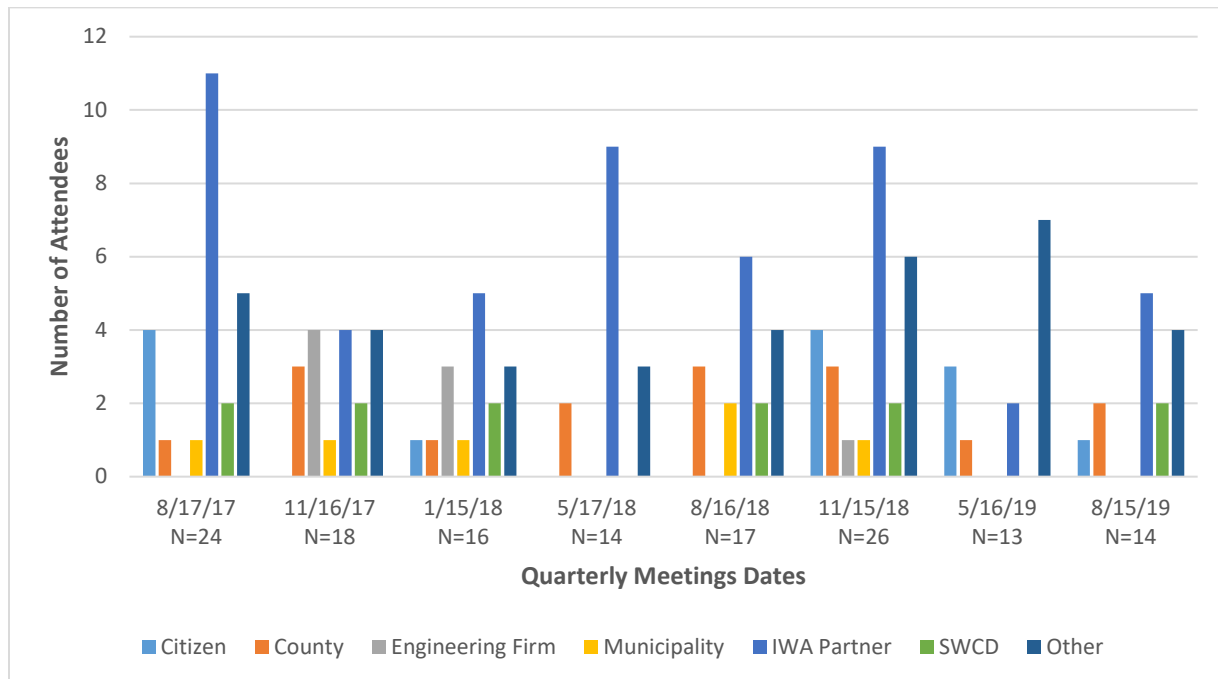


Figure 3. Years 2 and 3 WMA Meeting Attendance: English River Watershed

Explanation of categories:

- *Other category includes the following affiliations:* Other category includes the following affiliations: Colleges/universities, commodity groups, nature/conservation groups, state elected officials, ISGS, NRCS, federal government agencies, WMA coordinators from existing WMA, and the IWA coordinator.
- *Municipalities:* Grinnell, Kalona
- *Counties:* Iowa, Keokuk, Poweshiek, Washington
- *SWCDs:* Iowa, Poweshiek, Washington

Meeting summaries

Meeting 1: August 16, 2018

Board activities:

- Ryan Schlabaugh (Chair) ran the meeting, which began with the approval of the agenda and the minutes from the last meeting (May 17, 2018).
- Ben Curtis (City of Kalona and Watershed Planner) presented about the English River Sub-watershed Planning Effort including the 2018 Conservation Survey. Sub-watershed plans existed for 14 of the 20 English River sub-watersheds. His presentation described practice adoption and willingness to consider new practices.
 - o Discussion of the findings included consideration that this type of survey could have limitations (e.g., oversampling people invested in conservation and oversampling of landowners who farmed), comments from survey responders that people who didn't do conservation were "lazy" or "greedy," opportunities to leverage trusted sources like IDALS and NRCS for building connections, and next steps for the plan.
- Jody Bailey (IWA Project Coordinator) presented on the updates to the IWA cost share (soon to be approved at 90%) and the requested the addition of Devil's Run to the selected HUC 12s for implementation since she saw interest there.
- Bailey presented the cost share applications for review and approval. The list was approved.
- Bailey requested the board members convene a review committee for incoming archaeological proposals. Five attendees volunteered to serve on the committee. She made a motion that this

committee be allowed to make this determination and enter into a contract with the selected firm prior to the next board meeting. The motion passed.

Partner presentations and updates:

- Allen Bradley (UI IFC) presented about the hydrologic modeling for the watershed which included an ACPF comparison against already implemented practices for nutrient reduction wetlands and WASCOBs. He summarized that the data suggested that ponds needed to be larger than recommended at the recommended site for additional flood benefit.
 - Discussion following the conversation included discussion of the effectiveness of WASCOBs over time and that the current landowners were interested in multiple WASCOB structures on their property.
- Bailey reported that with the 12 preliminary designs for practices, they were projected to spend \$500K on construction since the people interested was a series of practices.
- Valerie Decker (CEA) provided up a brief overview of survey findings from the previous board meeting.
- Announcement about an upcoming Contractor Informational Meeting on September 13, 2018. This would be an opportunity to walk the contractors through the bid package process.
- Someone asked whether there could be a project which would benefit secondary roads and qualify for cost share in Poweshiek County. Bailey said on-road structures were eligible for the program and Bradley said they were very effective. The group discussed next steps and who to reach out to for considering a project. Tom Oswald (HSEMD) volunteered to work with the secondary roads people.

Meeting 2: November 15, 2018

Board activities:

- The board approved the meeting agenda part-way through the meeting since they did not have a quorum at the beginning.
- Jody Bailey (IWA Project Coordinator) reported that they had 32 applicants to date and structures had been designed for 19 of those (totaling 267 structures). Construction estimates were currently about \$1.6M.
- Jody asked the board to approve the 14 new applications for cost-share.
- Ben Curtis (Watershed Planner, City of Kalona) presented detailed information about the English River Sub-watershed plans. He described that the plans would be primarily available on the web. For each watershed, there was a set of tools to find the best locations for practices including, but not limited to, Conservation survey, soil erosion runoff potential modeling, water quality monitoring, and historical damages as reported for disaster recovery funding. Curtis reported that the plan would be out for public comment until November 30, 2018. Once that feedback is incorporated, the plan would be distributed to the members and partners.
 - During Curtis' presentation, audience members asked about how the tools available for English River compared to those being used in Clear Creek, how the sub-watersheds were ranked based on water quality data, and what factors were included in the section about land use.
- Bailey provided an update about archaeological services. The WMA has a contract with UI. There was some discussion about the possible timing for the Phase 1 archaeological review, given the weather and planting season. They also discussed the implications of those timelines on construction.
- English River WMA board officers election (2 members' terms due to expire in November 2018). Ryan Schlabaugh was chosen to be Chair and Mark Kennett was selected for another 2-year term on the executive committee. There was a group discussion about how to get board members that were less active more involved, especially if they were getting the cost share in their community. They encouraged all board members to attend meetings even if they were not on the executive committee.

- The Contractor Information Meeting scheduled for September 13, 2018 was rescheduled for December 5, 2018. Jody planned to invite 225 contractors.

Partner presentations and updates:

- Allen Bradley (UI IFC) provided a quick update about the hydrologic modeling. He described that the final report was a little delayed. He described additional analyses they had done or would be doing to inform work in the English River Watershed.
- Craig Just (UI FRT) commented that Curtis referenced some of the work the Flood Resilience Team had been doing. He described additional opportunities to use HAZUS and flood plain maps to calculate loss avoidance as a result of proposed practices. He also said that his team was still working to develop a document describing how watersheds could use social vulnerability information. Craig invited discussion about where their team could work to develop a Flood Resilience case study (now Flood Resilience Action Plan).

Meeting 3: May 16, 2019

Board activities:

- Jack Seward (Washington County) ran the meeting. The group was one executive committee member short of a quorum.
- Jody Bailey (IWA Project Coordinator) had copies of some sub-watershed plans for people to review and described the good information related to the Conservation Survey, water quality monitoring, and soil erosion monitoring. She planned to mail these out to the appropriate adjacent entities for the plans.
- Bailey reported that they now had 57 applicants for cost share and had a least preliminary designs for 34 of them (totaling 434 structures). She said that with construction estimates (not the 10% match), estimates were nearly \$3.1M. Jody reflected that the review processes had been slow for all coordinators due to the processes themselves, hard winter, wet spring, and getting the crops in the ground.
 - One board member asked what the “waitlist” category meant on the list of projects in the pipeline.
- Bailey said she would try to get formal board approval of the new list of applications for cost-share with the executive committee over the phone.
- Bailey reported the results of the English River water quality monitoring effort for 2018. Members of the water quality sampling team were in attendance. She described their processes and described the findings for the different measures of water quality (nitrate, e coli, dissolved phosphorous, and total phosphorous). She also described “the good, the bad, and the ugly” that the sampling team saw during their work. Jody said they had funding for sampling in 2019 since they had money left over after the planning.
 - When someone asked if there was enough funding for 2020, Jody said no. She said it was \$10-15K annually for the lab fees. A volunteer commented “somebody find us a grant!”

Partner presentations and updates:

- Complementary with Bailey’s presentation about English River water quality data, Chris Jones (UI IIHR) presented information about the history of IIHR, Iowa’s geologic and agricultural history, and the implications for water quality in the state.
 - Jones’ presentation was followed by an enthusiastic discussion about water quality in Iowa and the English River Watershed. The discussion included (but was not limited to) Jones’ blog, enforcement of regulations, the scale of farms, the appropriate scale for actionable watershed plans, recommended amounts of fertilizer per acre, and farming in the flood plan
 - Bailey shared where the English River water quality data was available on the web.
- In response to a question, Bailey said all HUC 12 watershed plans would be available on the web.

- Bailey also reported that the WMA hired a second archaeology firm to speed up the process for phase I reviews.
- Kate Giannini (UI IFC) announced the upcoming Iowa Flood Center 10 -year anniversary celebration.

Meeting 4: August 15, 2019

Board activities:

- The meeting began with the approval of the agenda and the minutes from the last three meetings (November, May, and July). The July meeting was a call to approve applicants into the cost-share pipeline since there was not a quorum in May.
- Jody Bailey (IWA Project Coordinator) reported that as of August 6, 2019 there were 59 applicants for cost share and there were engineering designs for 34 of these. She described that the design process was moving slowly because of negotiations between the engineering firm and the landowners. She also said Bid packages 1 and 2 were in progress and she hoped that package 1 is approved by the end of August.
- Bailey asked for preliminary approval of 2 additional applicants. This would give them a place in line if funds were still available. The board approved.
- Bailey distributed copies of the sub-watershed plans to relevant board members.
- The action items were followed by discussion of where the applicants were located and what types of practices they were requesting and the timeline and processes for construction. There was a general sense that there might not be enough time to build all these planned projects by September 2021 especially since contractors would have to be given a flexible timeframe for construction because of potential bad weather. Jeff Geerts (Iowa Economic Development Authority) and Tom Oswald (Iowa Homeland Security and Emergency Management) suggested options for allowing for a summer building season if the timeline became tight (planting oats to allow for later planting or renting land from the farmers).
- Geerts said he would like to work with Tom Gruis at ECICOG and Bailey to modify the bid package process to bring it more in line with what their regional HUD representative was expecting for the environmental review.

Partner presentations and updates:

- The next meeting was scheduled for November 21, 2019 and would be the annual meeting for the WMA. All board members were encouraged to attend since they would be holding elections.

Middle Cedar River Watershed

The Middle Cedar WMA has set the curve for the implementation of practices during Year 3. At the time of this report they were the first WMA to have active construction, which some board members attributed to the stellar work of their project coordinator. This high level of activity within specific subwatersheds has produced a good deal of buy-in from residents in those areas. Meanwhile, there has been a recent decline in engagement, most notably from board members in smaller communities outside of the designated high priority subwatersheds, which has resulted in attendance and quorum issues at their quarterly meetings. Beyond the primary challenge to maintain stakeholder engagement, the combination of high costs and the negative perception of the work that has been done thus far are the two biggest challenges to overcome in this watershed moving forward. (See [Appendix S](#) for a summary of the Middle Cedar WMA board members' interview responses.)

Meetings of the Middle Cedar Watershed Management Authority (Middle Cedar WMA) during Year 3 were held at several different locations throughout the watershed. The November 2018 meeting was at the Grundy Center Community Center in Grundy Center, IA, the February 28, 2018 meeting was held at the Wickiup Hill Learning Center in Toddville, IA, the May 9 and August 15, 2019 meetings were held at the Hartman Reserve Nature Center in Cedar Falls, IA. The Middle Cedar WMA meetings were typically led by the chair or vice chair

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of the board. A count is taken at the beginning of each meeting to determine if they have a quorum. In Years 2 and 3, it appeared that, in general, there was a challenge obtaining quorum at the meetings.

Meeting attendance

At quarterly WMA meetings for all IWA watersheds, attendees were asked to sign an attendance log and provide their affiliation. Attendance data in this report are therefore limited to those who signed the log. All affiliations were coded into the categories listed below (and in the note concerning the *Other* Category). Counties, municipalities, and SWCD representatives are the member entities for the WMA. However, those coded as affiliated with *County* include not only the official county representative to the WMA, but also anyone who listed the county as their affiliation, so totals may include representatives of the Board of Supervisors, County Engineers, Emergency Management Staff, etc. The same is true for municipalities, such that totals include the mayor, city administrative staff, storm water management staff, etc. Counties and municipalities who had representation at one or more meetings are listed below in the notes.

Figure 4 below reports attendance to the eight quarterly meetings that occurred from October 2017 through August 2019. A total of 64 individuals attended one or more of the Middle Cedar WMA meetings during Year 2 and 62 in Year 3. Among them 23 and 27 were first time attendees of Year 2 and Year 3 meetings, respectively.

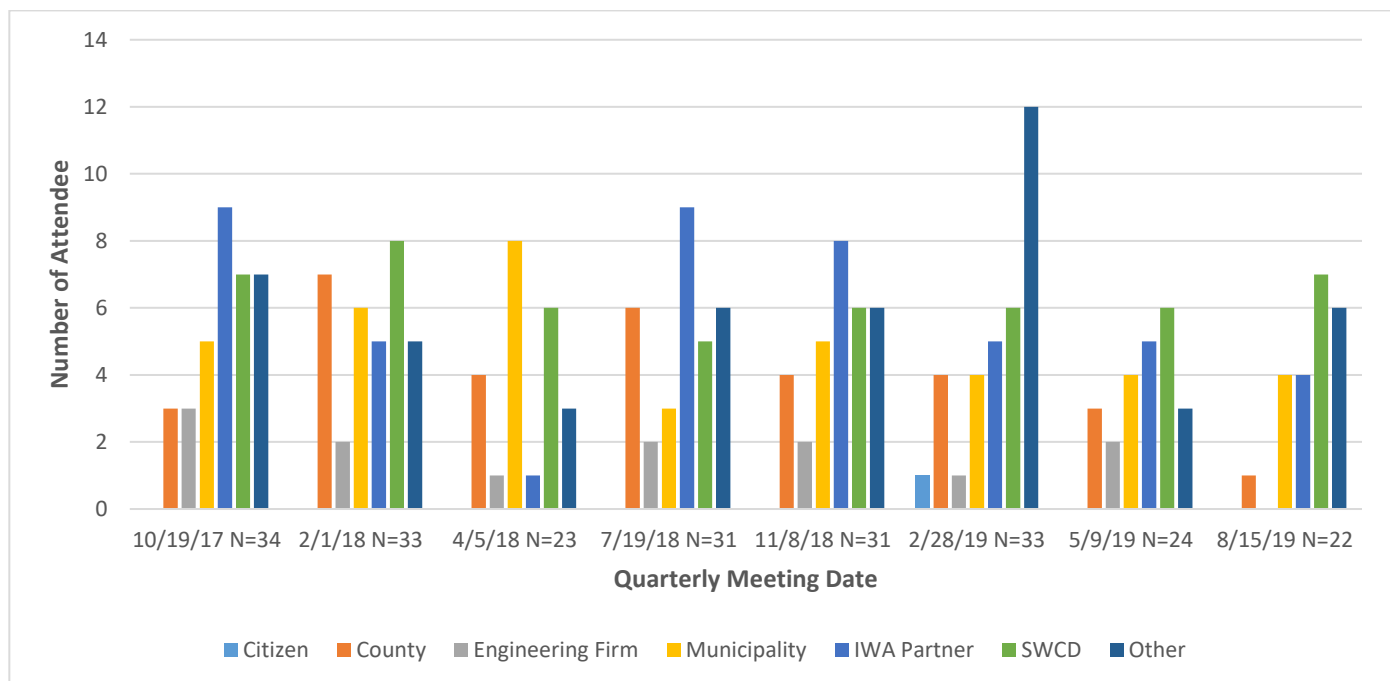


Figure 4. Years 2 and 3 WMA Meeting Attendance: Middle Cedar Watershed

Explanation of categories:

- *Other category includes the following affiliations: Colleges/universities, commodity groups, conservation groups, COGs or other regional planning groups, IAWA, social service agencies, state elected officials, NRCS, federal government agencies, and the IWA coordinator.*
- *Counties: Benton, Black Hawk, Buchanan, Butler, Franklin, Grundy, Iowa, Linn, Tama*
- *Municipalities: Cedar Falls, Cedar Rapids, Evansdale, Grundy, Hudson, Jessup, La Porte, Raymond, Shellsburg, Vinton, Waterloo*
- *SWCDs: Benton, Black Hawk, Butler, Franklin, Grundy, Linn, Tama*

Meeting summaries

Meeting 1: November 8, 2018

Board activities:

- Todd Wiley (Board Chair and Benton County representative) ran the meeting, which began with the approval of the previous meeting's minutes (July 19, 2018).
- After some discussion the board approved mission and vision statements for the Middle Cedar Watershed Management Authority (MC WMA).
 - Mission Statement: "The Middle Cedar Watershed Management Authority will enable collaborative management of watershed challenges by serving as a platform for planning, education, research, strategic initiatives, funding, projects, and policy formation"
 - Vision Statement: "Water will be valued as a shared resource to be nurtured and managed for the long-term benefit of the people living in the Middle Cedar Watershed and the ecosystem upon which they rely"
- Adam Rodenberg (IWA Project Coordinator) updated the board on the process for implementation in the watershed. He described that he had been meeting with interested landowners and working on project designs with IGA.
- Rodenberg described a current issue with stream mitigation and the Army Corps of Engineers. He said he was working with the IWA partner and HUD to find a solution.
- Related to outreach, Rodenberg said he had not had any landowner meetings because of the weather and harvest conditions. He anticipated increasing landowner engagement in January and February including the additional HUC 12s. He said he had sent a mailing to all qualifying properties in the watersheds (1,400) and from there he will work with ISU Extension and Outreach to organize some meetings.
- Rodenberg said their first bid package was ready to move forward. It was being submitted to the state for final approval which would start a public comment period. He asked the board to approve the first bid package. The board approved.
- Rodenberg presented a second group of applications for consideration. The group reflected that interest had been pretty good, but Rodenberg said there was still room to improve. Board members asked about cost share (90%/10%), the process for developing bid packets, and clarifications on specific structures (asked what an oxbow restoration consisted of). The board approved the list of applicants.
- Rodenberg shared an opportunity for urban watershed project through the Water Quality Initiative. He said he could put board members in contact with the facilitator if anyone was interested but that he could not be directly involved because it was not related to the HUD funding.
- Jason Gomes from the North Iowa Agronomy Partners provided a technical assistance update to the board. They were doing outreach to farmers encouraging them to use cover crops and edge of field practices. They developed a website (<https://www.cedarriversolutions.com/>) and hoped to be able to reach resident and absentee landowners in this work.
- The WMA would work with Iowa Agricultural Water Alliance (IAWA) to finalize the details of the agreement to work with North Iowa Agronomy Partners and Iowa Soybean Association for additional planning in the coming weeks. [The specifics of this discussion were very technical and it's possible the CEA team member did not catch everything.] The board voted to allow the executive committee to fine tune the contract and sign it. The motion carried.
- Pat Conrad (EOR, Watershed Planner) provided an update on their watershed plan. He described that during their last session he asked them to show their priorities by spending a fictional million dollars and he showed a graph of the results. He said that cost-share and advisors were the highest. The group discussed the importance and role of a project coordinator. He also described opportunities for

flood avoidance analyses based on the work from UI IFC, sub-watershed case studies, and opportunities for urban BMPs.

- Conrad led the group in an exercise to define where they wanted to focus their efforts in the plan. Conrad and Wiley described the importance of concentrating effort for measurable benefit. Conrad distributed maps of where there was highest need based on different factors.

Partner presentations and updates:

- Rick Cruise (ISU IWC) presented information about the Dailey Erosion Project and the information that were available through this effort. He provided information to the WMA about their watershed, and Rodenberg said he could share it with anyone who was interested.
- Antonio Arenas-Amado (UI IFC) presented about the precipitation patterns, increases in stream flow, crop and property losses in the last 30 years, and the hydrologic assessment (topics, recommended areas for flood mitigation, scenarios). The group asked questions about what was increasing, modeling impacts of BMPs, and specifics of the modeled scenarios (type of cover crop and funding). Arenas-Amado said the presentation was meant to help a group make decisions based on their own data, but, since this was a voluntary program, people would only build what they wanted to build. He also said he could do any additional analyses they were interested in.
- Valerie Decker (UI CEA) let the board know that she had copies of the results of the survey from the last meeting and asked them to complete the online WMA board members survey.
- Wiley reminded everyone that this was his last official meeting as a county supervisor and that they would hold an election next meeting.
- The group would continue to discuss rotating the meetings. They planned to have this on the agenda for the next meeting.
- Next meeting was the annual meeting on January 24, 2019.

Meeting 2: February 28, 2019

Board activities:

- The meeting was run by Cara Matteson (vice chairperson). The group decided to delay official actions since they did not have a quorum at the beginning of the meeting. Toward the end of the meeting, the group approved the minutes from the previous meeting (November 8, 2018) and the list of new applications. A board member was frustrated that they could not get a quorum and said there should be a solution.
- Jeremy Sills from North Iowa Agronomy Partners presented an overview of the planning work they did. He described specifically the work they were doing with producers to improve soil health and reduce erosion. He also described that they could make recommendations for tillage, cover crops, and fertilizer application (explaining that producers can save money with strategic application). He said they typically described how practices were cost effective for them.
 - o Nick Longbucco (TNC) asked a line of questions about who spread the word about cover crops, who helped them implement the practice, and how partners could support this effort. Sills said the Iowa Agronomy Partners did most of this work and they would prefer that partner not attend outreach meetings because people could be intimidated to ask questions in front of this particular audience.
 - o Larry Weber (UI IFC) asked whether people were doing strategic application of nitrate (not unless they have an NRCS management plan) and Jim Jordal (IAWA) commented that this was “gold standard stuff” to incorporate both environmental and economic factors in the strategy.
- Adam Rodenberg (IWA Project Coordinator) reported that the first project went out for bid in January and Shrater Tiling and Terrain would be ready to work when the ground thaws. He said he needed approval from the board to move forward with new applications. He also reported that they had a good plan for permitting, they would have their next package out for bid in June, he was exploring

work in the watershed for point source solutions, and they had been working with Cedar Rapids utilities department for credits.

- Pat Conrad (EOR) presented on the draft Middle Cedar Watershed Management Plan. He described that this plan would help them access funding in the future. For each section he described in the content of the plan and the sources of information. Comments from MCWMA Board Members and IWA Project Partners on the draft watershed plans should be sent to Adam Rodenberg no later than March 8th.
- EOR was hosting a community open-house immediately following the meeting.
- At the end of the meeting the board held an election of officers. The following officers were elected: Fred Ables (Chair), Cara Matteson (Vice Chair), Chris Schwartz (Secretary and Treasurer).
- The next meeting was set for May 9, 2019 at a location to be determined.

Partner presentations and updates:

- Tony Seeman from Iowa Soybean Association provided a water quality sampling snapshot for the Middle Cedar Watershed. He described characteristics and concentration for nitrate, phosphorous, and suspended solids. When a board member asked about plans for sampling in the future, Tony said they planned to do something similar for this year.
- Rodenberg reminded Board members that Daily Erosion Project flash drives were available for those interested.

Meeting 3: May 9, 2019

Board activities:

- The meeting was run by Fred Ables (Chair). There was not a quorum at the meeting. The group could not vote on action items.
- Adam Rodenberg (IWA Project Coordinator) reported that they approved their first bid packet at the last meeting and the work was underway. The shared lists of additional bid packets with the projects out for environmental review. The group moved and seconded to hold an electronic vote for the additional bid packets pending environmental review. He also shared the list of new applicants. Rodenberg offered to take board members on a tour of the ongoing projects if they were interested.
- Jason Gomes (North Iowa Agronomy Partners) presented that they had upcoming field days in May, and they were expecting about 20 people. He described that through their work with John Deere and Iowa Corn Growers, they had the ability to incentivize participation in practices for farmers. Additionally, Gomes presented about the imagery on the website, past and upcoming field days, and practices they were talking to people about (cover crops, bioreactor, saturated buffer). There was a little discussion about the best ways to engage with Hertz Farm Management, if at all. Someone asked if they asked people who were already engaged to talk to invite their friends. He said they did but they also must be attentive to cycles of funding.
- MaryBeth Stevenson (IDNR) provided Jennifer Fencel's update on the watershed plan that was presented at the last quarterly meeting. After they received all the feedback (almost 500 comments), the Executive Committee met to discuss the biggest edits. She anticipated another work session in June to continue this process. Stevenson recommended that people attend the meeting and provide their input about what really mattered to them. She also encouraged them to focus on being aligned to FEMA requirements for funding. She described that there were HUC 12 plans and two case studies in this effort.
 - Someone asked about Homeland Security and Emergency Management requirements for planning. Stevenson explained that including those components was part of the original contract.
- The next meeting was set for August 15, 2019 location TBD.

Partner presentations and updates:

- Antonio Arenas-Amado (UI IFC) presented on the extreme weather events of the last sixty days and the last year. He explained that scientists were seeing general increases in extreme weather events over time. Someone asked how the flood center used all the data to make predictions about the future given how much weather fluctuates, and Arenas-Amado said he could identify someone to present the information to this group. There was an additional discussion about recovery time and the concept of a “new normal” defined by NOAA.
- Becky Ohrtman (IDNR) presented on source water protection for northeast Iowa (www.iowasourcewater.org). She described that in Iowa source water can be streams, lakes, or aquifers. IDNR wanted to prevent contaminants from entering drinking water. The community should care about this issue because of public health and the economic costs of treating the water or establishing workarounds (new wells or hooking up to an alternate system). She described the Iowa framework and potential funding to do the source water protection project. She recommended the following actions: be aware of where drinking wells are located, notice if anything looks out of place, develop and implement source water protection plans.
- Jim Jordal (IAWA) presented an update. IAWA and Houston Engineering were working on supplemental planning for the watershed. The goal was to provide information to planning boards on how much nutrient reduction could be achieved. This should help inform upstream investment and make deliberate decisions. Someone asked if these plans would be integrated into the watershed plan. Rodenberg said supplemental plans should be complementary with the watershed plan.
- Rodenberg announced that Craig Just (UI IFC) was tentatively awarded an EPA grant to work in Mud Creek. They would be using those funds to install monitoring sensors and build flood reduction wetlands.

Meeting 4: August 15, 2019

Board activities:

- There was not a quorum at the meeting, so the group could not approve last meeting’s minutes (February 28, 2019), the bid packages, or the new project list.
- Jeremy Sills (North Iowa Agronomy Partners) presented about their projects in various stages of implementation. He reported that they had done outreach including having multiple field days, meeting with producers to discuss practices, having a presence at the Benton County Fair, and meeting with large and small retailers to talk about cover crops. He also alluded to a big project on the horizon to incentivize producers to do practices. He said a public announcement would follow soon.
- Jennifer Fencel (ECICOG) reported that the WMA extended EOR’s contract for the watershed plan to allow them time to finish their work. She asked EOR to do a work session with the City of Vinton to discuss storm water issues and make them aware of resources available. This session was scheduled for August 22, 2019 at 6PM).
- Fencel also discussed plans for funding beyond the IWA grant. She said they were looking for base funding of approximately \$300K/year. She suggested that the board or the executive committee convene to define a plan for funding. The executive board would meet in advance of the next quarterly meeting. MaryBeth Stevenson (IDNR) said other WMAs were focusing on keeping staff on board at a level of \$100K.
- Adam Rodenberg (IWA Project Coordinator) reported that bid packages 2 and 3 were with the engineers for final permitting and approval and he expected them to be approved in the next couple days. He was hoping to send the package out for bid in early September. Rodenberg reported that the new project listed only had 2-3 more people. For the projects in progress, he thought if the weather was good, the current projects should all be completed by November.
 - Someone asked to have a field day for the board to see the different practices that had been installed. He said that was his intent after the sites were finished.

- Rodenberg shared a request for a letter of support for restoration and construction of a wetland [no additional details, not on the agenda]
- At the end of the meeting Cara Matteson (Vice Chair) brought up their issue securing quorum and suggested reaching out in writing to people who had not been attending. They discussed coming up with a strategy that fit with their vision of the WMA, including the possibility of removing groups that had not been attending the meetings at the expense of reducing engagement throughout the watershed. Rodenberg said the people who were not attending represented small communities and might have additional responsibilities. Cara M. wondered if someone could engage this group about why the work of the WMA was important for them and the watershed.
- The next meeting was set for November 28, 2019.

Partner presentations and updates:

- Will Myers (IDALS) presented on the EPA funded Middle Cedar River Targeted Wetland Project. This would build on existing efforts for targeted wetland installation and improve nutrient removal. In addition to talking about the traditional wetland structures, he also talked about a new concept of “tile zone” wetlands.
- Craig Just (UI IFC) described his Mud Creek Watershed EPA grant with a goal to reduce nitrate by 5% in three years and prevent damages to property and crops downstream. Attendees asked questions about the reduction goal, time period for tracking, and whether they would be tracking nitrogen application in the watershed.
- Kate Giannini (UI IFC) reported that there would be modeling reports of the water quantity and a demonstrated benefit of possibly quality improvements following IWA project implementation (Demonstrated benefit). Giannini also reported that there was an upcoming meeting with colleagues from North Carolina interested in learning more about the Iowa Watershed Approach.
- City of Waterloo requested a letter of support for water sanitation projects and upgrades of their system. Applications would be due September 3, 2019 for this opportunity.

North Raccoon River Watershed

One of the more prominent strengths of the North Raccoon River Watershed Management Coalition (North Raccoon WMC) reported by representative board members has been their “ability to come together and be willing to listen and think outside-the-box,” which is commendable since they are “such a mix of urban and rural.” The board members noted that they have representation from a wide range of counties and organizations; however, at the same time, they noted that board engagement is one of their primary challenges, which is made more difficult by the size and make-up of their coalition. Like the Middle Cedar, there has been a notable lack of engagement and attendance at the quarterly meetings from those in smaller communities. Looking outward, they also noted the challenge of how to effectively “reach out to landowners to get cooperation with on-ground practices,” while also trying to give farmers “space at the table” to make sure they feel welcomed at their quarterly meetings. For the North Raccoon WMC, their ability to demonstrate positive outcomes, combined with the need for a “more solid funding source,” is the key to their future sustainability. (See [Appendix T](#) for a summary of the North Raccoon WMC board members’ interview responses.)

The Board Chair typically runs the meetings. The chair (either Mark Hanson or Keri Navratil) and the Board Secretary (Katie Rock) check to see if there is a quorum at each meeting by going through the list of member entities. They use an inner circle of tables and chairs to keep track of who the member entities are. During Year 3, they used telephone to allow people to join the meetings remotely.

Meeting attendance

While attendance information was collected during Year 3, the CEA was not able to obtain these records by the time of this report.

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Meeting summaries

Meeting 1: August 24, 2019

Board activities:

- The meeting was run by Mark Hanson (Chair) and began with confirmation of quorum (members attended both in person and via teleconference) and approval of the last meeting's minutes (2nd quarter meeting).
- The group formally approved adding the City of Adel and Palo Alto County to the coalition.
- Keri Navratil (Chair of the Planning Committee) thanked the members of planning committee and executive committee for their extra time in the last three months reviewing and interviewing proposals for the RFP and RFQ. After applications and interviews, the planning committee selected EOR/RDG/WHKS/EcoSource to develop the watershed plan. \$200K was earmarked for planning services in the HUD grant for this contract. EOR was approved by the board.
- Navratil also reported that after proposals and interviews, the committee recommended WHKS for engineering services for IWA practice implementation. WHKS was approved by the board.
- Pat Conrad (EOR) provided a general overview of the process and described the importance of this watershed. He said his team planned to help people find common ground on issues and emphasized the importance of participation in the process by the coalition. A project kickoff meeting would be planned for September. Conrad encouraged the board to participate and emphasized, "This is your plan."
- Marius Agua (IWA Project Coordinator) reported that since the last meeting in June, he had been working with IDNR and ISU Extension and conducting site and field visits focusing on specific HUC-12s at the headwaters of NRR. These sites included potential wetland restoration and management at Swan Lake; water and sediment detention, Pickeral Lake and Prairie Creek; oxbow restoration in Outlet Creek. He also provided updates on other process pieces like interviewing for planning and engineering services.
- Agua reported that a proposal was made to HUD to provide cost share at 90%, a rise from current 75% cost share. This was due to a lack of response from landowners seen in other watersheds across the state at 75% cost share. He explained that since other cost share programs were set at 75% cost-share, increasing the cost share would give the funding pool a competitive advantage. HUD funding must be spent by September 2021 and terms of the grant dictated the regions where the money must be spent. UI IFC knew from research that to make a measurable impact in a HUC-12 would take a minimum of \$1-1.5 million, so to add more HUC-12 regions was discouraged. Tom Oswald (HSEMD) reported that the current farm economy added a lot of uncertainty for landowners.
- Agua highlighted the perspectives that needed to be taken into account in the plan, such as the need for stakeholder involvement, connection between upstream and downstream, flood control, sustained funding for this work, and the ongoing role of the coalition. Agua stressed that the WMA had the tools to answer the technical questions, but could use more time and attention for the social questions.

Partner presentations and updates:

- Hanson announced that the hydrology assessment was complete and Dan Gilles (UI IFC) would present at the next meeting.
- Ashlee Johannes (UI FRT) presented on the Flood Resilience Program, a new effort within the IWA. Flood resilience is the ability of a community within a watershed to plan and act collectively using local capacities to mitigate, prepare for, respond to, and recover from a flood. This program had a special focus on community building, especially vulnerable low- or moderate-income (LMI) populations, and including flood resilience in watershed planning. UI IFC had new tools online for towns to estimate flood damage (<http://iwa.iowawis.org/>). Flood damage maps could be overlaid with social vulnerability maps to identify key regions for community-level flood resilience with this tool.

- Julie Kearney (UI CEA) provided a new survey to assess the boards views on the Flood Resilience and Social Vulnerability presentation just given. Mark allowed time for the board to fill out the survey (more than 10 minutes).
- Jeff Geerts (IEDA) reported that after this meeting 8 WMAs with Iowa Watershed Approach now have engineering firms hired. Three of the eight also had landowners and on-farm practice locations started. Middle Cedar was leading the way and would be the first to have a bid packet for an engineering project. IEDA was expecting an audit in mid-September. The audit would include a visit to Buena Vista county.
- Alan Wedemeyer (LT Leon) announced that his firm had funding available through Regional Conservation Partnership Program (RCPP) for landowner outreach and education. Wedemeyer had an office in Lake City and had been working with farmers and landowners to create farm-level conservation plans.
- During the public comment period the group had a good discussion on engaging farmers and especially absentee landowners in the watershed.
- A board member commented that the group was still struggling with IT and communications. He recommended the group try Zoom video conferencing.
- Melissa Miller (ISU IWC) announced that she had been working with Storm Lake High School for project-based learning on the watershed. <https://www.thewatershedprojectiowa.org/> She asked people to let her know if they were interested in working with them.

Meeting 2: October 26, 2018

Board activities:

- Mark Hanson (Chair) ran the meeting which began with the Pledge of Allegiance. At the beginning of the meeting there was not a quorum. A board member joined on the phone during the meeting so the previous meeting's minutes were approved and the City of Des Moines was added as a member near the end of the meeting.
- Pat Conrad (EOR) presented on the watershed management plan process. This meeting was the beginning of the early phase that focused on stakeholder engagement. The second phase involved drafting goals for the watershed, and the final phase was implementation. Then Conrad facilitated an activity asking the group to reflect on how people interacted with the water in their watershed. People wrote their ideas to the prompts on post-it notes, discussed the ideas, and grouped the post-its thematically. At one point they had groups categorize the responses from another groups.
 - Tom Oswald (HSEMD) commented that they should no comingle water quality and water quantity in this flood-first grant. Jeff Geerts (IEDA) said they could do both in the plan.
 - The group indicated appreciation for the conversation and the opportunity to share ideas.
- There would be an annual meeting in January; likely the 3rd Friday at the Dallas County location from last annual meeting. The meeting would include electing officers. Hanson invited the group to consider the election (whether any members reps will change) and entity types on the executive committee.

Partner presentations and updates:

- Dan Gilles (UI IFC) presented the history of Presidential Disaster Declarations in the last 30 years, some content from the hydrologic assessment, and an example of a project from the Iowa Watershed Project. North Raccoon has 150 million dollars in crop losses which is roughly 4% of the statewide total of 4.1 billion dollars. Gilles showed how the amount of rainfall experienced this year was far outside the norm dating back to the 1940s. Gilles shared that streamflow had changed from 1970-1990 due to changes in baseflow, likely due to more heavy cropping systems and artificial (man-made) drainage (field tile).
- Gilles shared successful wetland projects from other watersheds around the state that were part of the Iowa Watershed Project (HUD 1.0). The information he presented included the costs of such

projects, the benefits in reducing flood risks, and the appropriateness for the North Raccoon's typography. He also showed data from the major statewide LiDAR project recently completed that identified potential sites for wetlands and small ponds in the watershed.

- Valerie Decker (UI CEA) shared survey results from the Iowa Flood Center's community resilience presentation at the August meeting. The next survey would be an online survey to all board members.
- During the public comment period discussion covered the following topics: impressed by the exchange of ideas, how previously collected SWOT analysis was shared with Conrad, interest in participating on the planning committee, how the planning committee could leverage quarterly meetings for board member engagement, and the possibility to engage more with agriculture and environmental groups to bring different perspectives into the discussion.

This meeting was followed by a meeting with Pat Conrad and the IWA partners about what they were going to contribute to the plan.

Meeting 3: January 25, 2019

Board activities:

- Mark Hanson (Board Chair) ran the annual meeting which started with a group photo from the last annual meeting and the fact that he would serve on the executive board for the next 2 years after these elections. There was a quorum, so the meeting began with the approval of the last meeting's minutes (October 26, 2018) and approval of West Des Moines as a member.
- Elections were held to fill the positions of the executive board for two-year terms. After discussion of the roles and duties of the executive board, the following nominations were given and formally approved: Keri Navratil, City of Storm Lake, Chair; Fred Long, Greene county SWCD, Vice Chair; Katie Rock, Polk county SWCD, Secretary; Paul Mertens, Buena Vista county, Treasurer.
- The board was approached by the Iowa Ag Water Alliance to apply for an open RFP with IDALS-Water Quality Initiative for a planning grant in additional HUC 12s in the headwaters of the North Raccoon. The proposal would be incorporated with existing planning efforts in the watershed. There were 10 HUC 12s in the upstream portion of the North Raccoon River watershed. Currently, the coalition had targeted funding for practices in 2 HUC 12s (Outlet Creek and Headwaters Cedar Creek) through 2021. These planning grants would allow for an expanded scope of work of the upstream region. The board consented to apply (not a formal vote).
- Marius Agua (IWA Project Coordinator) provided an overview of the watershed, update on IWA efforts and discussions on engineering designs (specifically focusing on water impoundment). Agua said he asked farmers what their local drainage problems were and used that to form his approach to engagement. He provided an overview of a potential 324-acre wetland project under research.
- Agua reported that Tony Manriquez (a local graduate student) was doing voluntary water quality monitoring. He described the proposed sites for monitoring and asked the board to consider supporting Manriquez's important work.
- The WMAs of Iowa, a statewide functioning non-profit organization for all WMAs in Iowa, had a recent meeting. The group's purpose was to share best practices and lessons learned across all WMAs, and to offer administrative support towards their goals. Katie Rock, Fred Long, and Alan Wedemeyer were formally approved as representatives or alternates to the WMAs of Iowa organization.
- The next quarterly meeting was scheduled for Friday, April 12, 2019 in Lake City.

Partner presentations and updates:

- Larry Weber (UI IFC) presented comments thanking Chair Mark Hanson for his leadership and gave an update on the IWA and the work of IIHR-University of Iowa. He commented that applying for additional grant funding was exactly in line with the vision of long-term success for the IWA. He reported that Iowa was seeing more intense rainfall and had experienced 951 flood disaster declarations in the last 30 years. Other states, like South Carolina, were looking to what was happening in Iowa as a way to deal with flooding.

- o Tim Palmer, Madison county SWCD, asked a question for his district. He was working with a group to establish a protocol with major brands to help them meet their corporate sustainability goals through practices for soil health, water quantity and quality. They were working to draft protocols towards these goals and was interested in working together. Weber agreed that industry could play a greater role in promoting sustainable practices that could impact flooding in Iowa.
- o Don Etler, Palo Alto county, asked a question on stream mitigation methods. Allen Bonini (IDNR) and Weber answered that the Army Corps of Engineers oversaw this process through permits in coordination with state agencies and other partners.
- Iowa Water Conference would be March 12-13, 2019 in Ames, and all were encouraged to attend.
- All board members and partners were encouraged to attend and participate with the Raccoon River Watershed Association, a longstanding non-profit group covering the North, Middle, and South Raccoon Rivers.
- IEDA was successful in adapting rules around cost-share and requirements for local match. Jeff Geerts congratulated the board on their leadership and streak of good attendance and encouraged board members to drive local engagement in their jurisdictions.
- Etler was still concerned about the expense of mitigation wetlands in the headwaters. Geerts said IEDA was working with the Army Corps to consider innovative solutions to this issue.
- Bonini (IDNR) commented that IDNR's role was to help the coalition organize. Bonini commented that this is exciting to see what is happening here. This work has been on the radar for a long time, and now it has some momentum.

This meeting was followed by a Watershed Planning Workshop facilitated by EOR. During the workshop, attendees were invited to consider how well they knew their watershed with a HUC 12 quiz and define their top 5 metrics for demonstrating improvement in the watershed (creating a dashboard). The workshop also included presentations about hydrology, water quality, groundwater, historical efforts in watershed planning, and conceptual ideas of what they needed to do. All of these topics were described in the context of the North Raccoon Watershed.

Meeting 4: April 12, 2019

Board activities:

- Keri Navratil (Chair) ran the meeting and began with a confirmation of a quorum and the approval of the previous meeting's minutes. Navratil reported that the coalition did not receive the IDALS WQI grant. They would get feedback to improve the next application.
- Greg Pierce and Pat Bodie (Watershed planning team) facilitated updates on planning services. Pat Conrad (EOR) was unable to attend, so he provided a pre-recorded presentation. Related to the watershed assessment report, Conrad described the land use in the North Raccoon and the implications on the high amount of Nitrate in the waterways. He presented data on water quality in the watershed from Chris Jones at IIHR (and emphasized a couple of Chris's blog posts^{31,32} on the IIHR website). He described that the term "impaired" for lakes and streams means that waters were not able to be used for their public intended uses (recreation, drinking water), and these uses determined how much of a contaminant to tolerate (Total Maximum Daily Load (TMDL) targets defined by EPA and IDNR). EOR would come up with a plan at the HUC 12 scale to meet the water quality goals. Conrad pivoted to talk about flood reduction and said EOR is coordinating with IIHR to establish flood reduction goals and strategies.
 - o Someone asked about using TMDL versus Iowa Nutrient Reduction Strategy, and Pierce said the TMDL goals were typically higher. There was additional discussion about the use of TMDL

³¹ <https://www.iihr.uiowa.edu/cjones/this-is-what-happened/>

³² https://www.iihr.uiowa.edu/cjones/iowas-real-population/?doing_wp_cron=1566399215.7962069511413574218750

including the standards and the time frame for action. Allen Bonini (IDNR) clarified that having an impaired water system could affect the community's ability to get a permit to build a wastewater plant.

- Dan Gilles (UI IFC) presented on the spring 2019 flooding in Iowa and streamflow and precipitation patterns in the watershed. At a question about potential pond placement and size, Gilles said he was using ACPF where available (northern areas) and would use basin size and slope to digitally place ponds through the rest of the watershed. A board member said there were good locations for ponds and that large ponds were good for flooding and recreation. Another board member asked if they were doing strategic placement of these ponds and the anticipated scale. Gilles said they were not, but that they could run the model to see anticipated reductions.
 - Pierce said that the team at EOR was working with Gilles to make recommendations for placement. The goals would be established with the board. When asked what size ponds they were looking at, he said it depended on the outlet structure and opportunities in the landscape.
 - Jim Marwedel (HSEMD) encouraged board members to tell the planners about damages to roads and bridges and other damages that happen as a result to flooding so that they could be considered in the plan. Marwedel also emphasized that the current flood disaster would result in a significant amount of funding for mitigation in Iowa and that this plan would help them define where to take action and get funding. Navratil asked Agua to be a point person in working with Marwedel on this task.
 - Don Etler commented that he thought these \$96M from the HUD grant were supposed to solve all the flooding problems in Iowa. Dan asked whether Don was joking.
- Pierce asked the board members to provide their emails so that they could share materials as they became available.
- Bodie described the strategic framework for the plan and described what informed the strategic framework (SWOT analysis, input exercises). As an example, there was a handout about education for absentee landowners and shifting goals from productivity to profit. Pierce invited board members to contact him if anything important was missing. Bodie and Pierce also walked through the plan structure including elements (with discussion of modeling contributions of UI IFC), short term, and long-term goals.
 - Vision statement: One watershed, one community charting its own destiny through shared responsibility and common goals.
 - Mission statement: Working together for reduced flooding, improved water quality and soil health, enhanced education, and strengthened community.
 - Etler commented on the flood reduction by improving the drainage of the land. He commented that if a pothole was left wet that there wouldn't be flood storage. There was no follow up to this comment.
- Marius Agua (IWA Project Coordinator) provided a brief update on the Swan Lake project since Nate Anderson was unavailable.
- Navratil commented that Cara Elbert is working on appraiser and archaeological services. These services must be procured through the federal procurement process.
- Someone announced a proposed change to the definition of Waters of the US and its potential impact on field tile and drainage districts. The group was encouraged to comment.
- Agua described the prioritization framework of BMPs. He described that they were relying on water impoundment (with the main criterion for selection being the surface area of the impounded water) because typography was a limitation in this watershed. He also emphasized that the focus of this effort was to address flooding, with secondary water quality goals. He described his process for engaging landowners about prospective sites, which included collecting letters of intent and engaging

with local ISU team members and engineers. He described that their number one priority was the Swan Lake restoration project. He described that he had six private parties who had signed letter of intent. He said that contentious issues in this discussion had been tile drainage, intensive agriculture, and CAFOs. He wanted to address conservation farming, improving water quality and enhancing soil health. This focus was on profit rather than production.

- o Navratil followed up about other potential projects and reminded the group that the money needed to be spend by September 2021. There were no other projects to approve. She said they needed to move projects ahead.
- o The group approved the joint planning committee and executive committee to approve projects forward to keep the project moving.
- o There was some discussion about whether it was appropriate for Swan Lake to account for all the HUD money. There was discussion that a few landowners necessary for this project were still undecided whether to participate. Navratil asked for more updates from the engineers surveying and collecting more information on this potential project.
- o Allen Bonini (IDNR) asked about what a “letter of intent” was. Agua said it meant they could go ahead with surveying and the design on the landowner’s property.
- The board decided to have a check-in conference call in advance of the next board meeting. They could get progress updates from Agua on the status of the projects.
- The coalition now has a Facebook page³³.
- A couple board members asked questions about the design budget and process.

Partner presentations and updates:

- Jeff Geerts (IEDA) had two comments based on the discussion. First, he said there needed to be project ranking criteria. Second, he said next spring IEDA would be looking to reallocate money to other watersheds if it was not accounted for. He said there were over 500 projects under review for IWA and Middle Cedar had some projects in progress.
- Geerts also described that there was a waiver on the 10% cost share for public and non-profit lands. IWA would be working on education about this.

Meeting 5: July 19, 2019

Board activities:

- Keri Navratil (Chair) ran the meeting, which began with the approval of the previous meeting’s minutes.
- Pat Conrad (EOR) gave an update on progress with the plan, including a handout the board could use to share with their communities, and a focus on the strategic framework (political landscape, cultural, social, and economic issues impacting this watershed). The planning team had finished the watershed assessment and borrowed heavily from the work of UI IFC. He described that this watershed was a working landscape (agricultural and urban uses) and that meant it functioned differently than a natural landscape. He said there were problems, and EOR wanted the plan to focus on solutions and priorities for the next 20 years. Conrad invited Pat Bodie to present on what she heard during the input sessions. She gave a fast and very detailed update.
 - o Mark Hanson asked what percent of the watershed has ACPF: Approximately one third (21 of the 75 HUC 12s). The others had a method applied to approximate.

³³ [https://www.facebook.com/NorthRaccoonRiverWMC/?hc_ref=ARSIntOGkuCs-gYKuoXoNSTSnk9ArBVilcY1K90dY5r37jumQpHN-LBPDAlRmtMyTtY&fref=nf&xts__\[0\]=68.ARDBcJa6nDt6G7Spl22BuATChF-7NrbWRvnj1zBlGoOFWr69MU322zdm6OVngdpccEfabZzSsqQwcUjuJNa0li5giFcUPhGhBS-Ql-fbBBt8clbF_gg4hJy42bfErKGZ9mW-OyvN6np35z_XKv6q3ByMLmEc9mYvg2aH3WkBw-6qPbN5jGOyU9zCyxFTJsp6pp0N4LIFBBHGS7jMSBAWVZmukvvLtKITTwlS7D2dRlpiUNPeSit9ixGzfrFWp7RP33kXUtUJQH21CQ5f06I9TG1tlkxJBvjuQCY4PCmCnGEFtvrkteufsk5p9d99vj83-ctTiMLvwxyzUQ7_lrc9hm08yHq&_tn_=kC-R](https://www.facebook.com/NorthRaccoonRiverWMC/?hc_ref=ARSIntOGkuCs-gYKuoXoNSTSnk9ArBVilcY1K90dY5r37jumQpHN-LBPDAlRmtMyTtY&fref=nf&xts__[0]=68.ARDBcJa6nDt6G7Spl22BuATChF-7NrbWRvnj1zBlGoOFWr69MU322zdm6OVngdpccEfabZzSsqQwcUjuJNa0li5giFcUPhGhBS-Ql-fbBBt8clbF_gg4hJy42bfErKGZ9mW-OyvN6np35z_XKv6q3ByMLmEc9mYvg2aH3WkBw-6qPbN5jGOyU9zCyxFTJsp6pp0N4LIFBBHGS7jMSBAWVZmukvvLtKITTwlS7D2dRlpiUNPeSit9ixGzfrFWp7RP33kXUtUJQH21CQ5f06I9TG1tlkxJBvjuQCY4PCmCnGEFtvrkteufsk5p9d99vj83-ctTiMLvwxyzUQ7_lrc9hm08yHq&_tn_=kC-R)

- o In response to a question, Conrad reported that they will focus on implementation at the HUC 12 scale since it needed to be locally focused.
 - o Conrad described that the workshop this afternoon would have three information and input sessions: Flooding, water quality, and funding.
 - o Conrad said the plan would be available in January 2020, then would go through a review process with formal adoption in May 2020.
- Nate Anderson (phone, WHKS) and Pete (WHKS) reported that after several months of hard work, the Swan Lake project would not go through because at least one key landowner did not want to participate. Pete asked the group for their thoughts. Someone asked what percent of the land the unwilling participant owned (5-10%).
 - o A board member (Clarence) who represents the area said this landowner was unwilling from the beginning and they still had a few landowners on the fence. He said they should have factored this in before they went through all this time and effort. Anderson agreed with this board member, but they tried to answer their questions and address their concerns.
 - o Another board member was clearly frustrated that one landowner could derail a project with so much value to the state, but he could not stop a CAFO from going up in his backyard.
 - o Someone asked about stream channel mitigation and whether that would also have been a barrier to the Swan Lake project. Anderson said they had been working with the IWA partners and the Army Corps to find a solution. He said that with this project they would have been building a wetland, which was self-mitigating.
 - o A board member asked who talked to the landowners. He asked whether a trusted person spoke to the reluctant landowner. Anderson explained that for this project, the first contact came from Agua, and then from the county conservation. Agua agreed and said they did work with their local representatives. He said the social component would always be important and they needed to forge a path forward with water storage (in lakes or soil). Clarence said there was not a lot of trust because they had a bad experience with a conservation practice.
 - o Navratil asked if Marius Agua (IWA Project Coordinator) could write a statement for the coalition about how the landowner meetings went.
- Anderson pivoted the conversation to focus on next steps since there was still funding for construction. Agua asked for the case study reports and would begin meeting with prospective landowners next week. Anderson reassured that there were still viable projects and funding.
 - o Navratil asked about the timeline for knowing if a project would be completed by the September 2021 deadline. Anderson said they would be pressed for time but should be okay with willing participants. He said that the environmental review process was getting more efficient.
 - o The board decided they needed to get their contractors for archaeology on board. Cara Elbert would start the process.
 - o A board member asked about another potential project in Clayton. They said they were trying to find a site which would work.
 - o Allen Bonini (IDNR) said that part of IDNR's duty in this grant was to document lessons learned. He asked them to share a copy of the case study report to help tell this important story in the context of the statewide initiative.
 - o Susan Judkins said she just came from a meeting of the Clean Water Alliance and people were wary to take their land out of production until they understood the impacts for their land. She described that they could probably do something with more consistent money like Iowa Water Land Legacy. She also commented that things were voluntary now, but if people did not choose action, it might not be voluntary forever. She said it was important that everyone stay educated on this process.

- Elbert reported that they had spent 15% of their total funds for the project.
- The next meeting would be on October 18th from 10-12 at Steward Memorial Hospital.

Partner presentations and updates:

- Dan Gilles (UI IFC) reported on the key findings and highlights of the hydrologic assessment. He reported on the hydrologic model that informed the work, the topography of the watershed (specifically the prevalence of prairie potholes), and land use in the watershed (77% cultivated crop). He also described the simulations that he ran for the watershed if different practices were on the ground. He described that if all row crop was prairie (simulation of pre-settlement conditions), it would reduce runoff by 20-30%, the highest reduction possible. He also showed the modeled results of practices to improve soil health (cover crops and no till) and distributed ponds and wetlands. He explained that any potential strategies would involve a combination of practices. He also reviewed index locations as a way to discuss upstream pond storage with the smallest drainage areas being at the headwaters and the largest at the confluence with the next river—this was important as they were discussing why modeled practices had such little impact on the main stem of the North Raccoon. He provided storage amounts necessary to have a 10% reduction in flow on the main stem of the North Raccoon (would need 250,000 acre-ft storage for a 100-year rain event). Gilles described that broad changes would need to be made to see impact, but the UI IFC team was only looking at the model, not feasibility related to landowner interest. He said the solutions used would depend on opportunities and interest.
 - o Don Etler asked about the specifications for pond design. Gilles said they were simulated to NRCS standards.
 - o Another board member asked if they were wanting to do larger dams rather than a collection of small ponds. Gilles said that would give you more bang for your buck, but it depended on feasibility.
 - o There were additional questions related to the specifics of modeled flow reduction, the impact of water infiltration related to tile and pavement, increase in rainfall in the future, the site and placement necessary for impact, and halting the initial surge of water.
 - o Pat Conrad (EOR) said this afternoon they would dig deeper into flooding in the watersheds and look at losses and solutions related to the watershed plan.
- Jamie Benning (ISU EO) said there was a session on women landowners at the Watershed Academy, and she wanted the coalition and the plan to consider how woman landowners were engaged in the process. Benning reported that she had a phone call with Agua, Katie Rock, Susan Judkins, and Navratil to talk about strategies for engagement. They identified groups that need to be engaged with the watershed. She reported that women often did not feel welcome at traditional events, and they wanted to be sure there are ways for women to engage.

Upper Iowa River Watershed

The value of the natural resources in the Upper Iowa River watershed, as well as their record of success and history of doing this type of work was self-reported as resounding strengths of their WMA by representative board members. There has been a collective and active interest in preserving the landscape of the watershed, even among producers who speak of regenerative agriculture and soil health as high priorities in their practice. Nevertheless, the natural beauty of their watershed has also slowed the pace of activity, with the karst topography serving as a barrier to the timely implementation of practices. Like several of the other WMAs, the Upper Iowa River Watershed Management Authority (Upper Iowa WMA) has also begun to experience a relative decline in board engagement, which they hope will be remedied once some of the projects are installed and they have successful outcomes to share with stakeholders. There is also a growing hope that they will be able to build enough momentum during the IWA in shifting the agricultural culture and

practices, that it may become more sustainable in the long-term. (See [Appendix U](#) for a summary of the Upper Iowa WMA board members' interview responses.)

The Upper Iowa WMA Board Chairperson (John Beard) typically runs the meetings which are held at the Winneshiek County Courthouse Annex Building in Decorah, IA.

Meeting attendance

Figure 5 illustrates attendance at the eight quarterly meetings that occurred from August 2018 through June 2019. During Year 2, a total of 34 individuals attended one or more meetings of UIRWMA meetings and during Year 3, 36 individuals attended at least one quarterly WMA meeting. Among them 5 and 12 were first time attendees of Year 2 and Year 3 meetings respectively. Attendance by county representatives, SCWDs, and IWA partners was relatively consistent across the meetings. Engineering firm representatives did not attend any of the meetings.

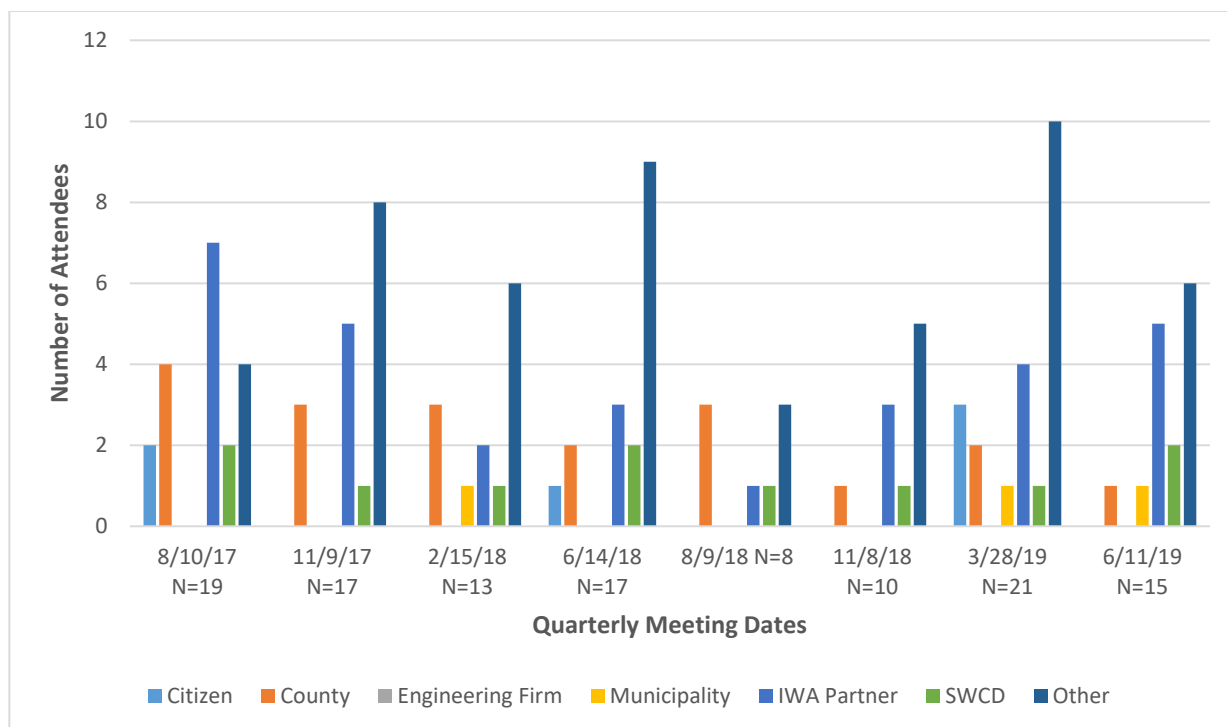


Figure 5. Years 2 and 3 WMA Meeting Attendance: Upper Iowa River Watershed

Explanation of categories:

- *Other category includes the following affiliations:* Colleges/universities, commodity groups, conservation groups, COGs or other regional planning groups, RC&D staff, state elected officials, NRCS, and federal government agencies.
- *Counties:* Allamakee, Howard, Winneshiek
- *Municipalities:* Decorah
- *SWCDs:* Winneshiek

Meeting summaries

Meeting 1: November 8, 2018

Board activities:

- John Beard (Chair) ran the meeting, which began with the approval of the meeting minutes from the previous meeting (August 14, 2018). They also set the date for the next meeting: March 21, 2019 at 7PM. The group discussed that they could meet earlier than 7PM if action was required for the plan.

- Ross Evelsizer (NEI RC&D) presented an update on the Upper Iowa River Watershed Plan. Evelsizer said it was good that the WMA extended NEI RC&D's planning period so they could take into account the good information from Luther and from University of Iowa's hydro report. He described that their plan would be in a digital format to make it more dynamic and engaging. Related to the plan, Evelsizer said his organization had been in contact with partners in Minnesota to layer in their data, though they were more focused on water quality. He said that soil health was getting more and more popular and that he became interested in multi-cropping (a form of regenerative agriculture with soil health and economic benefits). He also said they were working with Winneshiek County to consider the resilience of their landscape including considering the right data sources and how they wanted to manage the flood plain.
- Matt Frana (IWA Project Coordinator) shared site prioritization and concerns with building water retention structures in the karst bedrock. He talked about challenges to doing built practices in the karst typography with issues related to bedrock and sandstone. He listed the partners they could work with in order to avoid this issue: Iowa NRCS, Iowa Geologic Survey, IDNR, Minnesota Department of Agriculture, Luther, and private engineers.
 - o The group had questions about anticipating a sinkhole, bedrock, or limestone based on elevation and the types of structures that could be effective (ponds that only hold water for 24 hours), and the types of bedrock that can have sinkholes.
 - o The board was using this information to decide whether they wanted to proceed with different projects.

Partner presentations and updates:

- Julie Kearney (UI CEA) presented the results from the meeting attendee survey in August 2018.
- Rachel Brummel (Luther College) presented preliminary survey results and themes from the Freeport Case Study. She explained that they did a survey of the whole watershed and an in-depth case study in Freeport. She described what they saw related to direct and indirect impacts of flooding.
 - o When Brummel asked for input, she was asked questions related to extrapolating the cost of damages, whether the Luther College team crossed damages with annual income, and how they approached private versus public losses (this survey focused on private).
 - o Beard was happy with their response rate (21.5%) and that they offered to share their findings with the WMA.
- Jon Jensen (Luther College) presented about the Freeport Case Study. He explained that they chose Freeport because they had higher social vulnerability and they had recently experienced a major flood event. Jensen said they conducted 16 semi-structured interviews with residents (14) and emergency management personnel (2). He reviewed the major themes that emerged from the interviews in four categories: impact, response, resilience, and challenges.
 - o Someone asked about their sampling strategy and response rate. Jon described that they started with people they knew were impacted and then asked them who to contact (snowball sample). They stopped when they hit saturation (started hearing the same story).
 - o Ashlee Johannes (UI FRT) noted that the social vulnerability maps were now live on IWAIS.

Meeting 2: March 28, 2019

Board activities:

- John Beard (Chair) ran the meeting.
- Ross Evelsizer (NEI RC&D) facilitated a conversation with the board members about specific objects for the plan. They seemed to be continuing a discussion about the ongoing function of the WMA and how it was written into the plan. They discussed how often they would want to evaluate the progress on the plan.
- Evelsizer described that he had met in advance with the WMA board to discuss the plan so that they could provide feedback. He reviewed the contents of this digital plan with the group. He described

their methods for data collection, how the information was presented, and what additional information was available to the WMA through the plan (partner sites, past plans). Each goal was aligned to action steps and strategies, and he reported that he would work with the board to quantify the goals. He said that NEI RC&D had agreed to update the plan for the next five years.

- NEI RC&D has asked the board members to fill out a survey on behalf of their entities about what responsibilities they would be willing to take on in service of the plan. Ideally the surveys would be returned by April 15, 2019.
- Ross described the different options for the goal quantification effort. These included: HUC 8 scale, HUC 12 scale with all equal, HUC 12 with specific watersheds factoring into the decision, and goals based on strategy, not geography. The group agreed to tailor the goals to each watershed and planned to convene the technical committee to define these for each. The board voted to approve this. They asked the group to approve the draft of the plan which includes feedback tabs during the 30-day public comment period. The draft was approved by the board.
- Matt Frana (IWA Project Coordinator) presented a proposal for service with the Iowa Geologic Survey (IGS). He said they needed geologic evaluation to approve some marginal sites because of sink hole issues. He said that Shive-Hattery (their engineering firm) could do it, but he thought the Iowa Geologic Survey would be better. Beard provided strong support for having IGS support.
 - o The group discussed how much commitment they would need to trigger this review and whether they could make an inference on a nearby location based on a first analysis. Matt said he would not move on the analysis unless he felt sure the landowner was on board. One board member really wanted a stronger commitment, something signed. The board formally approved IGS to do this work for the WMA.
- The next meeting was set for Tuesday, June 11, 2019 at 5PM.
- After the business part of the meeting ended, many people, including several board members, left. Partner presentations followed the formal meeting.

Partner presentations and updates:

- Antonio Arenas-Amado (UI IFC) presented departure from normal data for 2018 with a snapshot from Lawler, IA. He reported that there were 56 disaster declarations in March 2019 due to many factors: wet fall, snow, frozen ground, and ice dams. Arenas-Amado provided an overview of the hydrologic assessment including the following: rainfall simulator, calibration, scenarios explored in the model (native vegetation, 100% cover crop/no till, and 735 distributed storage ponds in headwater catchments). One person asked how they determined 735 ponds; it was based on ACPF and best judgement. At this point, Arenas-Amado layered in climate change. He described that the scientific community in the federal government concluded that heavy downpours were increasing, but they were not sure how much (dependent on co2 emissions and other variables). The model used a 10% increase on the rainiest days to explore this. One goal of IWA was to maintain the agricultural economy, but the prairie scenario was an idealized goal. However, prairie might be more impactful than they thought in smaller amounts based on STRIPS data. Antonio said he would be happy to do more analyses if people had questions.
 - o After the presentation, the group discussed the following: strategic application of prairie, the increasing impact of soil health on flooding (takes time to build up the organic matter), the fact that frozen ground could not have been prevented with cover crops in this spring's event, and what percent was actually needed to see a reduction.
 - o There was a discussion of the focus on first order streams and what was "enough" for observable benefit. The group wanted to think about impact based on geography.
 - o Lora Friest (NEI RC&D) asked how long Arenas-Amado would be willing to work on scenarios. She also asked him to do a video presentation for them to share on the website and to present to the technical committee.

- o There was a discussion of how the UI IFC was modeling to make estimates based on reality. Someone followed-up asking how the IWA watersheds were different. Arenas-Amado said Upper Iowa had the lowest percent row crop stream adjacent. He also said that flood prevention was more focused upstream of population centers; water quality as more dispersed. Friest said this was important to share with the technical committee
- Frana provided his project overview. He had 12 committed landowners and those projects were likely going to happen. He showed photos of the anticipated projects. There was some discussion of potential road structures to protect Freeport- all but one landowner that would have to buy-in were excited. Frana shared those sites with the county engineer. He said that public entities received 100% cost share (which included on-road structures). He said they would ask the landowner for fill material and they had to take into account that water backs up onto a landowner's land. \$1.2M allocated for the current practices.
 - o The group asked about how much of the funding would go to local businesses, interest in before and after footage, and whether they were working with fisheries.
 - o Friest said she would like to interview producers to include on the website.

Meeting 3: June 11, 2019

Board activities:

- John Beard (Chair) ran the meeting. He asked for suggestions for the next meeting and amended the agenda to include a vote about the plan goals. Next meeting: Thursday, September 12th from 5-7pm @ Courthouse Annex.
- Ross Evelsizer (NEI RC&D) presented about their watershed resiliency plan. His presentation addressed each of the following five objectives including goals with measurable outcomes: Detention Structures, Soil Health, Perennial Cover, Water Quality Improvement, and Floodplain Management. He said these plans were considered to be Version 1 and could/should be adapted on an ongoing basis as the resiliency plan was carried out. Hazard mitigation plans were prepared and approved every 5 years and this could be incorporated into the next formal plan.
 - o Someone asked, "If funding were available, how long would it take to do all of this?" Evelsizer said it was hard to know. He said even with interested landowners the process was time consuming. Beard explained that there were things they could do that cost money (built practices) and things they could do that didn't (soil health). Evelsizer described the progress in Soap Creek where they set a goal in the 1980s to build 157 ponds and they had built around 130 to date. He said it was important to set a lofty goal to make progress.
 - o The board approved to adopt the goals as presented by Evelsizer.
- Matt Frana (IWA Project Coordinator) provided updates on his work. He reported that he was finalizing paperwork for the tier 2 evaluation to get projects out to bid—3 project sites (2 ponds, 2 waterways, and a sediment basin); he hoped to begin moving dirt in August. Frana and DNR wanted to focus their attention on protecting the hatchery, which was fed by Trout creek (and one other), each that have swallets (sinkholes in streams) transporting a fair amount of sediment. Frana was identifying spots and meeting with landowners and DNR, evaluating sink holes and swallets throughout summer to design a strategy and come up with funding. The objective was that slowing down water before it got to a sink hole could help with reduction in sediment in the water. Recent outreach—7th grade field day: they went to a prairie and they had microscopes. Frana talked to the students about soil health and microbes. They were excited to see the creatures. Frana talked with conservancy group that focuses on protecting coldwater streams, and with a woman landowners group about soil health, IWA, and conservation practices. The hope there was that the more landowners knew about conservation practices and could spell out in their leases, the more chance they had to influence farming practices for the better.

Partner presentations and updates:

- Beard described 50 cent microscopes out of Standford, made out of paper. He said that if you make citizens their own scientists (they can take a slide and see the microbes) it could be an effective tool to get landowners energized about knowing what was going on at a microscopic level, driving them to care more deeply and possibly become more eager to implement practices to encourage soil health, etc.
- Jon Jensen (Luther College) reported that his group at Luther had interviewed people in Freeport. This summer they would be hosting a meeting to share that work back with the community. They would be sure the invite went out to the WMA board members so that all interested parties could attend.

Upper Wapsipinicon River Watershed

Like several of the other watersheds, the representative board members in the Upper Wapsipinicon River Watershed Management Authority (Upper Wapsipinicon WMA) praised the level of participation from a range of stakeholders and expressed appreciation for the support they have received from IWA partners. Looking ahead, the timeline and ability to get projects on the ground remains the biggest challenge for them to overcome. This challenge is accentuated by the fact that they are a predominantly rural watershed, where it can be difficult to “convince [farmers] to take land out of production.” Like other WMAs, they are hopeful that the successful completion of some initial projects may also attract more landowner interest and buy-in. However, overshadowing the difficulties associated with implementation, they have also experienced acute challenges related to the management and supervision of their project coordinator, who has had competing demands placed on her time and efforts. (See [Appendix V](#) for a summary of the Upper Wapsipinicon WMA board members’ interview responses.)

The Board President (Don Shonka) typically runs the meetings. There appeared to be a quorum at most meetings and Elaine Hughes (UWRWMA secretary) took official count during meetings in which a quorum vote was required. During Year 3, the Upper Wapsipinicon WMA had four public meetings held at different locations in Independence, IA. The October 2018 meeting was held at the Buchanan County Public Health Building, and the February, May, and July 2019 meetings were held at the Buchanan County Courthouse.

Meeting attendance

Figure 6 illustrates attendance at the nine quarterly meetings that occurred from August 2017 through July 2019. A total of 71 individuals attended one or more of the Upper Wapsipinicon WMA meetings during Year 2 and 50 in Year 3. Among them 17 and 11 were first time attendees of Year 2 and Year 3 meetings respectively. Attendance by county, IWA partner, and municipality representatives was quite consistent across the meetings. In general, attendance at Year 2 meetings remained consistent and included primarily board members and IWA partners. Attendance among those included in the “Other” category was also relatively consistent due in part to the attendance by planning team representatives from the NEIRC&D.

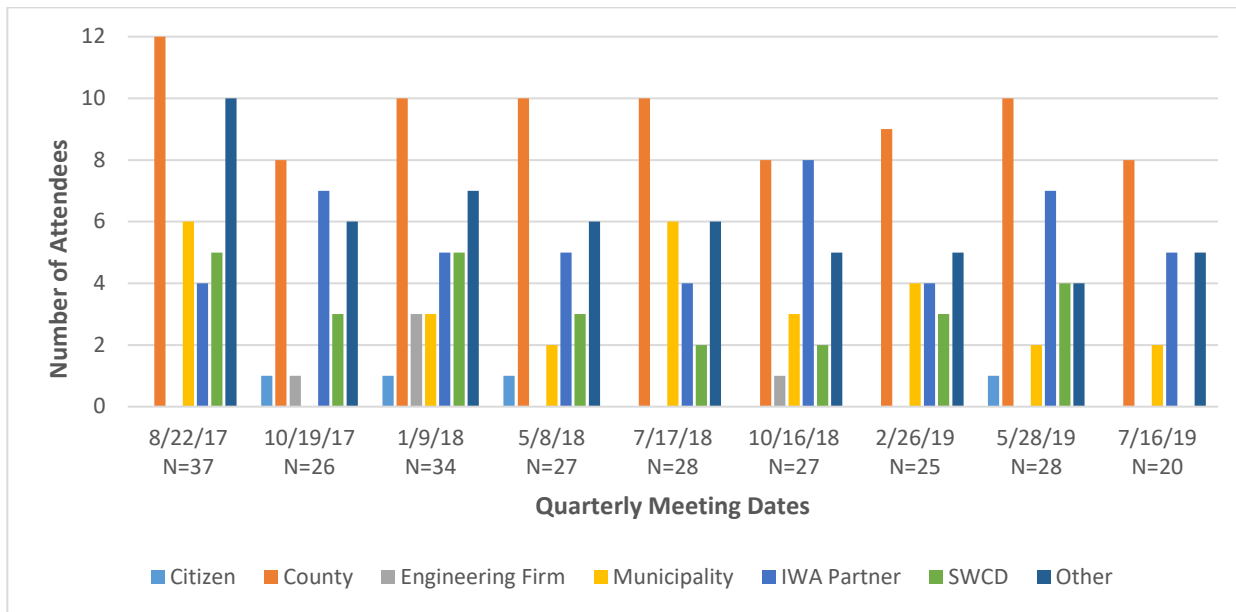


Figure 6. Years 2 and 3 WMA Meeting Attendance: Upper Wapsipinicon Watershed

Explanation of categories:

- o *Other category includes the following affiliations:* Colleges/universities, commodity groups, conservation groups, COGs or other regional planning groups, IRVM, RC&D staff, state elected officials, NRCS, and federal government agencies (National Weather Service, Army Corps of Engineers).
- o *Counties:* Black Hawk, Buchanan, Chickasaw, Fayette, Howard, Jones, Linn, Mitchell
- o *Municipalities:* Dunkerton, Elma, Frederika, Independence, Oelwein, Sumner, Tripoli, Winthrop
- o *SWCDs:* Black Hawk, Bremer, Chickasaw, Delaware, Fayette, Linn

Meeting summaries

Meeting 1: October 16, 2018

Board activities:

- The meeting was run by Don Shonka (Chair) and the agenda and minutes from the previous meeting (July 17, 2018) were approved by the board.
- Ross Eversizer (Northeast Iowa RC&D) reported that they were looking at land use, cover crops, ponds, etc. using Antonio Arenas-Amado's analysis at the Iowa Flood Center for development of the Watershed Plan. 76% of the land in the watershed was agricultural, which was 10% higher than the rest of the state. The long, narrow shape of the watershed was a problem. NE Iowa RC&D was looking at practices and understanding field areas. Some farmers were expressing interest in multi-cropping scenarios throughout the world in conjunction with no-till. NE Iowa RC&D held a meeting on the topic at the request of a Fayette County farmer, who currently was doing some multi-cropping. They had received grant to measure the economics, marketability, and soil health. Eversizer announced the Northeast Iowa Regional Urban Stormwater Demonstration Site in Postville was now open. It was an outdoor classroom for community leaders, teachers and students from around the region, and provided real-life examples of several different urban stormwater conservation practices. The RC&D had also developed correlating lesson plans and hands-on learning for teachers and students visiting the site.
- Angie Auel (IWA Project Coordinator) announced that qualifying flood-reduction practices could be eligible for up to 90% cost-share assistance to implement small-scale practices. Cost estimates for 8 concepts were priced with 4 a go.
- Shive-Hattery is working on 11 more. \$2.7 million would be available for construction. Next steps included: entering practices into the Best Management Practice Tracker, contacting Earthview

Environmental to begin Archeological Review, and application approval by the WMA Technical Committee. Steps to complete over the winter included: clearing Archeological Review or a Phase 1 Review; having the engineer complete a preliminary survey, investigation, & design; and beginning environmental evaluations.

- o Lora commented that Auel reviewed education and outreach component of plan and gave good input. Auel would be helping Readlyn and Winthrop with educational component of their projects.

- The next meeting was anticipated for January. Date and location TBD.

Partner presentations and updates:

- Antonio Arenas-Amado (UI IFC) presented on the hydrological model for the Upper Wapsipinicon River Watershed, which had been completed. An analysis of the benefits of various flood reduction practices could be completed to estimate the reduction in rain transferred into stream flows. He described that scenarios illustrated what was possible and the fact that a combination of practices would be necessary to see change. Rainfall/stream flow data was available for the years 2002-2016. 1/3 of the rainfall ran into the streams annually with the average on the increase. It was expected that there would be increases in the heaviest precipitation events in the future. Money lost due to flooding in the last 30 years was 13.5 billion in property loss and 4 billion in crop loss with 951 disaster declarations. In the last 30 years, Iowa had ranked 4th in the country for disaster declarations due to flooding. According to climate scientists the heavy downpours will continue to get heavier. The annual rainfall amount would remain the same (30"-40" annually) with fewer but heavier rainfalls and stretches of drought.
- Dan Wedemeier (Mayor of Readlyn) reported that Readlyn received two grants equaling \$405,000.00 to improve Malone Street water quality run-off after heavy rains. The money would be used to purchase 7.1 adjoining acres for a wetland development project with a walking path around the wetland. An education/outreach component would be developed upon completion.
- Luke Monat (Shive-Hattery) gave a presentation on the engineering, construction, and costs of the wetland project. Construction was expected to begin the end of October or beginning of November, with June 30th as the completion date.

Meeting 2: February 26, 2019

Board activities:

- Don Shonka (Chair) ran the meeting, which began with a confirmation that the WMA were two people short of a quorum. Shonka distributed copies of the bylaws for the board members to review and Elaine Hughes (Secretary) was going to send them via email as well.
- Lora Friest (Northeast Iowa RC&D) presented a survey for Upper Wapsipinicon WMA Board members to review with their boards, councils, or commissioners. NE Iowa RC&D was asking each entity to discuss and fill out the survey, and return the completed survey by mail to them for inclusion in the Upper Wapsi River Watershed Resiliency Plan. The goal of the survey was to collect information from each entity about capacity, funding, or personnel they currently had or were willing to provide in respect to the strategies to be implemented as part of the Upper Wapsipinicon River Resiliency Plan.
- Ross Eversizer and Tori Nimrod (Northeast Iowa RC&D) presented about the interactive Resiliency Plan that would be housed on the UWRWMA website, upperwapsi.org. The online format would be available to the public and serve all the residents in the Upper Wapsipinicon Watershed. The interactive components included StoryMaps containing an interactive map with written information, and interactive maps and videos, all of which could not be included in a traditional printed plan document. The online Plan would also include a variety of other data that would allow the viewer to understand the characteristics of the Upper Wapsi River Watershed. Videos included in the plan would add another feature not included in paper plans. One example shown by the RC&D Planning Team was a 3D map of well depths in the Watershed that was transformed into a video, which

provided multiple views of the same map allowing information to be fully understood. The online format will also allow for more connection between partner organizations websites and online reports.

- o Friest commented that this plan was a good way to see how Arenas-Amado's analysis about practices translated to the watershed. The WMA could set goals based on observed values.
- o Rick Wulfskuhl said he had historical flood photos to go into the StoryMap. Evelsizer asked that any board members with photos send photos to him.
- Angie Auel (IWA Project Coordinator) reported that 15 concepts had been approved by the Technical Committee (Buchanan and Delaware Counties). Property owners were only required to pay 10% of the costs (and HUD covers 100% of costs for public land). Five projects had been approved for spring bidding once the archeology reviews had been completed after spring thaw. She said there were a few hiccups with federal requirements and bat survey. A project for the City of Quasqueton had been approved. The project would hold back water to reduce flooding in the City of Quasqueton. She anticipated that this whole process would get smoother after the first one went through.
- Elaine Hughes (Secretary) plans to contact of the counties who participated in water sampling in the Upper Wapsipinicon Watershed from 2015-17 to see if they are willing to fund this work. There was no sampling in 2018. The WMA would try to begin sampling in May if counties wished to participate. Coe College agreed to do the analysis again. The cost for each sample would be \$18.00, which was an increase of \$2.00 per site over 2017. Each county would be responsible for the cost for their sites. It was suggested the WMA sample the same sites as in previous years. Evelsizer commented that there were phone apps for water quality testing and someone else asked how frequently they planned to test.
- Election of officers was tabled until the next meeting at the beginning of June. Shonka said that there were ways the board had not been following the by-laws and they needed to review before the election.
- The next meeting was tentatively set for the beginning of June. Date TBD.

Partner presentations and updates:

- Antonio Arenas-Amado (UI IFC) presented an analysis of 2018 rainfall data and how unusual it had been. Normal average rainfall based on the years 1981-2010 is 40 to 50 inches annually. Precipitation for Iowa was 38% above normal with precipitation was 58% above normal in the Upper Wapsipinicon River Watershed. Rainfall in the City of Tripoli was the highest at 71% above normal, receiving the most rainfall ever. There were concerns about spring flooding due to high precipitation this winter and groundwater. Infrastructure had been designed based on data from the past. Arenas-Amado reflected that infrastructure needed to be designed based on future projections, not past data.
 - o Arenas-Amado presented the disaster declarations for 2018, which there were not many for 2018. A representative from Bremer County commented that events might have been overlooked because of hurricanes and wildfires.
 - o Someone asked if there were plans to change the flood stage levels soon. Arenas-Amado said there were no plans that he knew about, but he would recommend it.

Meeting 3: May 28, 2019

Board activities:

- Don Shonka (Chair) ran the meeting, which began with the approval of the agenda and the approval of the minute from the previous meeting (February 26, 2019). Shonka also reviewed the section of the bylaws that dictated who was on the executive committee. He said the committee must have at least one representative from each municipality, county, and SWCD.
- The following slate of officers were nominated and approved unanimously: Don Shonka - Chairperson, John Kurtz - Vice President, Gregg Eschweiler - Secretary-Treasurer, and Kip Lagade, Chad Staton, Chris Eiby, Duane Meinhost - Directors at Large.

- Shonka invited the attendees to speak up if they wanted to have meetings in a different location. Someone suggested that they saw practices as a group. Ladage suggested they did that as a separate event. After discussion, it was agreed that the watershed meetings should continue to be held in Independence. Elaine commented that they had issues with communication because people did not read email.
- Ross Evelsizer and Tori Nimrod (Northeast Iowa RC&D) lead the discussion on how the Upper Wapsipinicon River WMA would like to develop goals for the Watershed Resiliency Plan. Four options were outlined by the NE Iowa RC&D as a suggestion on how goals could be developed. Option 1) was to set goals based on the entire watershed area. For example, cover crops on 40% of row crop acres in the Upper Wapsipinicon River Watershed. Option 2) was to choose the same goals for each HUC 12 Subwatershed. For example, cover crops on 40% of row crop acres in each HUC 12 Watershed. Option 3) was to choose specific goals by HUC 12 based on its location, land cover and land use, geology, soils, etc. Lastly option 4) was to develop goals based on each best management practice. After discussion the Board voted on Option 3 as a means to develop watershed Goals for the Upper Wapsipinicon River Watershed. The NE Iowa RC&D Planning Team would be gathering the technical committee to develop the quantitative goals and would provide materials to inform the goals setting discussion. Evelsizer commented that these goals were not fixed; they could be updated on the digital plan as new issues arose.
 - There was a brief discussion about ACPF and the ability to do a cost benefit analysis with the information available. Jessica Turba (HSEMD) said their team could provide some information. Evelsizer said they have access to HAZUS.
 - The group discussed the importance of being able to make a case for a dollar amount needed to tackle a problem. It would help to demonstrate to the legislature and decision makers the impact they could have.
- Evelsizer asked the WMA board members to fill out the entity survey discussed at the previous meeting. The survey would help the Planning Team determine who had the resources needed to complete watershed goals and what resources entities needed to complete the goals. NE Iowa RC&D also asked the board and meeting attendees for pictures in the Upper Wapsipinicon River Watershed. Pictures of flooding, damage caused by flooding, and pictures of the beautiful watershed in general were needed for the Watershed Plan.
- Angie Auel (IWA Project Coordinator) provided an update on the IWA project work. A bidding packet with 5 projects had been put together. She was currently working on a list of contractors who would receive the packets. She hoped to have packets out for bidding by the end of June, with the plan to begin moving dirt this summer. The grant administrator was working on putting together a bidding packet with 5 projects by fall. There were 405 landowners in HUC 12s. Auel assisted the Readlyn wetland project with their education package. Teachers received \$5,000.00 to purchase plants for the wetland. Fairbank received \$1,000.00 for a rain garden.
- Auel was coordinating the water sampling program for 2019. Ashley Sherrets was overseeing 2 volunteers who were obtaining the water samples in Buchanan County. All the counties that participated in the past was participating again this year. Next meeting TBD.

Partner presentations and updates:

- Antonio Arenas-Amado (UI IFC) presented on extreme weather between Jun 2018 and May 2019. There had been a 10-20% increase in annual rainfall in Iowa as compared to normal. Bremer received a full year's rainfall in 3 months in 2018. Very cold temperatures, snow accumulation, accumulation of ice layers in the rivers and highly saturated soils created conditions for flooding. The group discussed the strangeness of these high sub-surface moisture: "This is nuts." Arenas-Amado also mentioned that people were putting things they cared about in the flood plain (like houses). Ladage considered the implications of this on FEMA funding.

- Iowa Flood Center is celebrating a birthday on Thursday, June 13th. Friends, partners, and the general public were invited to participate in a day-long celebration reflecting their achievements over the past 10 years.

Meeting 4: July 16, 2019

Board activities:

- Don Shonka (Chair) ran the meeting, which began with the approval of the meeting agenda and past minutes.
- Ross Evelsizer (Northeast Iowa RC&D) discussed the Upper Wapsi River Watershed WMA Resiliency Plan Goal #2 Quantitative Actions the Technical Team discussed on morning of July 16, 2019. He described the four categories for goals: distributed storage network, infiltration practices, water quality improvements, and flood plain management. Plan would go out for official public comment during a 30-day period, but would be open continually to adapt to changes in the future.
- Evelsizer also presented on infiltration practices. He said that cover crops and no till had a measurable benefit. He said right now it was not financially viable to do cover crop cost share. He said that producers needed to understand the economic benefit of this. He mentioned the project Multi-cropping Iowa³⁴. EVELSIZER started this initiative to enable producers to grow and sell (as opposed to kill) the cover crops. Interest was expanding rapidly. He announced a Field Day on September 17 to demonstrate what was going on through this initiative.
- Angie Auel (IWA Project Coordinator) shared that 17 projects were in some stage of the process right now. Four or five were close for bidding but the WMA was waiting for Tier II to be completed. There was still hope to get projects built by early fall. Auel was working with the Iowa DNR on a few larger projects. One was an oxbow restoration by Cedar Rock where a lot of dirt work would need to be completed to get to the original river bed. Two other larger wetlands were in the works for the Iowa DNR in Delaware County.
- Auel said she did not have water quality data right now but would have data to share at next WMA meeting.
- The next meeting was tentatively slated for October or November 2019.

Partner presentations and updates:

- Craig Just (UI FRT) shared an update on the Community Flood Resilience Action Plan (FRAP) for the city of Quasqueton. The UI FRT had partnered with the NE Iowa RC&D on an 18-month contract to complete a FRAP that would determine social vulnerability challenges, flooding and water quality issues, and would focus on community engagement activities and partnership building strategies to increase resiliency. Quasqueton was selected based its location within the IWA project implementation area, flooding history and impact, community interest, and other contributing factors. The contract was still being processed through the UI systems, but the work was expected to begin soon. There was interest from the board as to what would be learned through this research
- Breanna Shea (UI IFC) shared an update on the UI IFC's 10-year anniversary celebration on June 13th, and thanked partners for their participation and ongoing support. Shea announced that four new UI IFC steam sensors would be deployed through the Upper Wapsipinicon River Watershed by the end of 2019. UI IFC and a team of interagency partners, including Iowa Homeland & Security Emergency Management, U.S. Army Corps of Engineers, Iowa Department of Natural Resources, National Weather Service, and local emergency management coordinators, had identified priority locations across the state to expand the UI IFC stream sensor network to improve flood monitoring and forecasting efforts.

³⁴ <https://www.facebook.com/Multilowa/>

Dubuque Evaluation Activities

In alignment with the Bee Branch Healthy Homes Resiliency Program Evaluation Plan (included in CEA's Year 1 report), the CEA conducted interviews with Bee Branch Healthy Homes (BBHH) clients and team members. The purpose of these interviews was to document and describe the processes, experiences, and outcomes of the program from multiple perspectives in order to inform ongoing program improvements. Additionally, the CEA attended and documented two BBHH and UI FRT coordination meetings, which provided context for the current activities and future plans. The CEA also conducted a survey of project contractors to understand the nature of their work, any challenges they experienced, and how BBHH team could improve the project for contractors. Based on the collection and synthesis of these data sources, the BBHH project appeared to be in full swing and achieving their benchmarks with limited setbacks.

Summary of activity

The following meeting notes from two BBHH and UI FRT coordination meetings provide a lens through which to understand the needs of the Dubuque area related to flood mitigation, as well as the progress made during Year 3 in completing projects and providing services to meet those needs.

November 13, 2018

Attendees: Cori Burbach, Valerie Decker, Sharon Gaul, Terri Goodman, Kristin Hall, Ashlee Johannes, Amanda Josvanger, Krista Lawless, Cristina Munoz, Misty Rebik, Amy Smith, Eric Tate

Meeting Notes

Design and Resiliency Team (DART)

- DART focuses on sustainable design and aims to provide a report that communities can use in planning (e.g., Dubuque designed a 2-page checklist).
- The Flood Resilience Team wants to adapt some strategies from this design.

Existing Needs in Dubuque

- Sharon Gaul shared a list of issues that the team has encountered in the homes and with the families, and how well Dubuque has been able to address the issues.
- Amy Smith stated that sometimes the needs are clear and other times they are more nebulous (counseling or substance abuse).
- Gaul said that they try to meet people where they are, but they don't always want support.
- Gaul described that outcomes are being measured by client interviews with CEA at 6 months (with incentives to participate) and follow-ups with home advocates at 12 months. There are also social resilience surveys that are now filled out as part of the online application.

Status Updates

- Gaul stated that they have completed 57 units and have 81 contracts.
- They took on multiplexes to increase their numbers, but the multiplexes have ended up being more work on the qualification, inspection and environmental sides. Moving forward, they plan to stick more to individual properties because they are more straightforward.
- The group discussed the demographics of the multiplexes and engagement from large complexes versus single family residences.
- Gaul said that the contractor survey provided an opportunity to get an outside perspective.

Other Updates/Issues

- Gaul reported that Smith and Amanda Josvanger are working to build rapport with the Marshallese population in Dubuque, helping with things like guardianship papers and healthcare.
- There have been issues in aligning the BBHH work with the offerings from Operation New View because they have income qualifications which are lower than those specified by HUD.

- Other topics covered at the meeting included: how to share the press release story at the Iowa Water Conference; Gaul's upcoming presentation at the National Hazards Conference in Boulder, CO; and any feedback Gaul gets about the BBHH program as she is presenting it to people.

February 28, 2019

Attendees: Valerie Decker, Sharon Gaul, Kate Giannini, Amanda Josvanger, Craig Just, Cristina Munoz, Amy Smith, Eric Tate

Meeting Notes

Iowa Watershed Approach

- Discussed progress in the rural watersheds with the cost-share implementation.
- Flood Resilience Team shared about the resilience game and the purpose of the Flood Resilience Action Plans.
- Craig Just and Eric Tate discussed options related to the social vulnerability maps the team created (additional information, develop worksheets). Specifically, Tate suggested they use the language "groups likely to have unmet needs" so people are not being defined as vulnerable.

Status Updates

- The home advocates have met with approximately 120 families to date.
- The home advocates reported that tenants in apartment complexes have different experiences and require different services than participants living in single family homes, which has added different challenges (paperwork, turnover, etc.).
- Home advocates described building their networks with different resources to be able to support these participants. They had 20 people at their last coalition meeting.
- All contractors are now getting intercultural training.
- Gaul reported they have received 375 applications for renovations and 229 units have been approved. They are encouraging people to apply to demonstrate a need in the community.
- 63 units were finished and 28 were in progress, and the multiplexes will double these numbers.

Other Updates/Issues

- Gaul is looking at trends from the first 100 units. They are establishing a baseline and looking at differences between tenants and owners to inform planning.
- Gaul reported that the social resilience surveys are continuing to trickle in. The home advocates reflected on improvements to the survey which make them more approachable for participants: customized sections, fewer response options, and better wording. Related to the low response rates, Tate said that the more responses they get, the more factors they can look at.

BBHH client experience

Over the course of Year 3 of the program, a total of 17 clients were interviewed following the completion of projects designed to improve the flood resilience of their homes. Of those, 12 were homeowners, three were landlords, and two were tenants.

The feedback from most participants about their involvement in the BBHH program was overwhelmingly positive. Recurring themes that arose throughout the interviews were a deep and sincere appreciation for the financial assistance to complete the flood resilience projects on their home, as well as the safety and security they experienced as a result. Additionally, several respondents gave glowing reviews of the BBHH program team, describing how helpful they were throughout all stages of the process, ensuring that everything ran smoothly from start to finish. See [Appendices W](#) and [X](#) for full reports of each set of interviews.

Ratings of program components. Interviewees were asked to rate how they felt about four aspects of the BBHH program using a one to five scale (where five was most the most positive and one was the most negative). As illustrated in Table 4, participants' responses were mainly positive regarding all aspects of the

program, apart from the ease of working with contractors. Despite the varied response to this item, participants still reported a high likelihood of recommending the BBHH program to others. Thus, even minor complications with completing the application and interacting with contractors did not preclude participants from being satisfied.

Table 4. Client response to various aspects of BBHH program

Item	1	2	3	4	5	Don't know/ No answer	Mean
How helpful was it for you to work with the Home Advocate?	0	0	0	1	12	3	4.92
How likely are you to recommend the BBHH to friends or neighbors?	0	0	2	1	13	1	4.69
How easy was it for you to complete the application for the BBHH?	0	0	1	3	11	2	4.67
How easy was it for you to work with the contractor on the construction work?	0	0	3*	3	8	5	4.36

*Note: One respondent indicated 3.5 in their answer. This has been classified as 3 for this table.

Best part of working with the BBHH program. The most frequently cited “best part” of participants’ involvement in the program was the actual work done on their homes. One interviewee stated pointedly, “We have no water in our basement and that was the goal, so that’s a plus.” Several others echoed similar sentiments about the benefit of the projects. Two interviewees specifically pointed toward the financial benefit. One recalled, “When I first bought the place, I was scratching my head [saying], ‘How am I going to get this done or that done?’” So, the availability of direct financial support in accomplishing those home improvement tasks was critical. In similar fashion, a second participant described how he had recently been trying to save up for some “things that I wanted to fix, and this gave me the ability to do that.” Another participant, who is both a homeowner and landlord, reported that this project “really made me feel a lot safer” for her family and her tenants.

More than one third of interviewees shared that the best part of their participation in the program was the effectiveness of the team and the quality of their communication. Multiple participants described how impressed they were by the coordination efforts of the team. For example, one participant shared, “They arranged for all the contractors and the work and basically, it was worry-free for me.” Particularly, as changes in the construction plans occurred, effective communication was an essential component in ensuring positive outcomes. As one participant exclaimed, “It’s been a really good experience as far as communication between the contractor, the Bee Branch people, and myself. When things came up, they were dealt with and addressed as they happened.” Another participant stated, “The staff were great, they always made sure to contact me and let me know what was going on.” Finally, one summed up the experience saying, “I couldn’t believe the efficiency of the personnel of the program overall.” Thus, the human element and connections that team were able to make with participants appeared to have a positive impact on their experience.

Challenges working with the BBHH program. While nearly half of the participants interviewed reported having no problems whatsoever, the remaining nine participants expressed varying levels of frustration with the overall quality of the contractors’ workmanship and the timeline of the project from start to finish. Six participants voiced dissatisfaction with either the contractors themselves or some aspect of the work that was done on their homes. Issues ranged from simple lack of attention to detail and miscommunication, to

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more alarming safety violations. Examples included being unsatisfied with the cement work, windows being improperly installed, cheap supplies being used to cut corners, windows and stairs being unnecessarily sealed off, exposed electrical wiring, damage to personal property, the exterior of the home being left without siding for months, and debris and other materials being left on site. Some clients were able to have their problems remedied through intervention of the home advocates; however, others either felt reluctant to reach out to their advocate or were unaware of the scope of their role in the program. As one client described, “I was just so grateful to be having this work done that I was afraid to say anything if I felt it was sub-par.”

A few participants also expressed disappointment with the length of time that it took from when they initially applied to the program to when the work began on their homes. One recounted how “it took a very, very, very long time to get the process rolling.” Still, this person expressed a great deal of understanding regarding the nature of large-scale projects taking time to get underway, and ultimately the delay in the projected timeline was not of great consequence.

Overall, most participants were forgiving of minor nuisances and remained grateful for the work that had been done on their home. Their comments included, “That’s no big thing,” and “We never complained. I mean we were grateful that we even were able to get it done without paying for anything.”

BBHH team member experience

During the summer of 2019, the CEA conducted telephone interviews with six BBHH team members. The purpose of the interviews was to learn more about team member roles, the successes and challenges of the program, their interactions with BBHH participants, and their perceptions of the impact on participants’ lives.

Overall, the team members said that the program is going well, and they are satisfied with being part of a program that brings positive changes to the Dubuque residents who take part in the BBHH. The team members indicated that the program is making a difference to the community in general, and that community members are pleased with the program and proud of their homes. See [Appendix Y](#) for the full report.

Roles in the BBHH program. The roles of the six interviewees included two home advocates, a rehabilitation specialist/inspector, a grant administrator, and the project coordinator. The two home advocates are contracted for their work on the project through the Visiting Nurses Association (VNA) and the other team members work either for the City of Dubuque or the East Central Intergovernmental Association (ECIA). All interviewees had been interviewed during Years 1 and 2, and they all said that their roles were largely unchanged from prior years. A few team members cited some slight differences in their roles due to staffing changes rather than changes in how the work of the program is accomplished.

Improvements due to BBHH. *Primary construction improvements.* According to BBHH team members, the main flood mitigation improvements that have been completed as part of BBHH were installing sump pumps, basement dehumidifying fans, and drainage tiles, gutters and downspouts, as well as tuckpointing foundations; replacing or moving furnaces and water heaters; and replacing leaky roofs.

Primary home advocacy benefits. The home advocates supported participants through referrals or resources for weatherization assistance, medical and dental insurance, and food assistance, budgeting, employment, legal assistance, mental health services, and energy assistance.

When asked to identify any gaps in available programming to meet Dubuque residents’ needs, team members said that Dubuque does a great job in general, however, one or two team members mentioned a few areas in which there continue to be unmet needs including assistance with pest control, public transportation, and access to mental health services.

Difficult interactions. When asked to describe any difficult interactions with participants, the interviewees emphasized that most interactions have been extremely positive. One team member said that problems occur in “one in six or maybe ten” cases.

Impact of BBHH on participants’ lives. *Effectiveness of structural improvements.* All six BBHH team members said the improvements have had a great impact on participants’ lives. While they highlighted the actual

physical improvements in keeping water from the homes, especially during the past year when there have been numerous heavy rainfall events, they also emphasized the power of the improvements to decrease stress among the families, lighten the burden of financial difficulties, and improve the health of the residents. An example of a typical comment is that the BBHH program, "...takes the weight and burden off their shoulders and I think it does give them some kind of relief." Team members also mentioned that receiving forgivable loans for flood-related repairs allows BBHH participants to use their own money to do other improvements to their homes. One team member said, "I think it's been a huge positive effect throughout the town."

Effectiveness of home advocacy. Both the home advocates themselves and the other team members said that the main contribution of the home advocates has been to provide up-to-date information about services available to residents that they did not know existed. One home advocate said that often residents "live day by day" and do not know how to go about finding resources to meet their needs. Another team member said that the home advocates give clients valued information about programming to meet educational, financial and health needs. The team see the home advocate role as building relationships with the clients so that they can both help them through the construction process and help them access other programs to meet long-term needs. One team member said, "If we can fix their little things like leakage, and the advocates can fix some of their other things, I think it goes a long way. Yeah, it gives them a better life."

Program challenges. Team members were asked to describe any challenges that they experienced in their BBHH work. While team members were largely positive about the program, two ongoing challenges were identified: the need for additional contractors to best meet the program's construction goals and issues with internal communication.

Contractor shortage. All four of the City of Dubuque and ECIA team members interviewed identified as a challenge the limited numbers of contractors who are bidding on the BBHH work. They said this problem exacerbates itself because most of the contractors who work on BBHH projects are quite small operations and this has led to contractors not having the capacity to get the work done on a timely basis. A couple of the interviewees said that although they'd like to have a few more contractors bidding on projects, the positive side of the small number of contractors is that those who work with BBHH have become very familiar with the specific needs and processes of the flood mitigation work, and that makes it easier to work with them on subsequent projects.

Internal communication. There were different opinions within the group as to whether communication was a problem. Most team members from the City of Dubuque and ECIA were pleased with the way they work and communicate with each other and with the home advocates, with two team members describing internal communications as "really good." The home advocates, however, described weaknesses in internal communication that leave them feeling that they don't know what is going on with clients and that, consequently, they cannot provide the best service to clients. They suggested more frequent meetings and a structured method for updating the home advocates on the status of construction projects and any issues that may arise during the construction phase.

Other challenges. Staffing issues were also mentioned by several interviewees, but these were described as issues typical to any organization. Additional challenges described include issues with scheduling (also a communication issue), seeking additional resources for clients, and finding time to use the data being collected as part of BBHH to really understand and strategize how to address the needs of Dubuque residents.

In an item asking about difficult interactions with clients, one problem that several team members identified as challenging was the need to "manage expectations." Three main areas were described in which they need to work harder to manage client expectations: *time* – the length of time it will take to complete the work; *eligible improvements* – definitions and limitations on the type of work that can be done based on the project's goal of flood mitigation; and *reduction of water flow* – making it clear that work will reduce but may not eliminate water entering clients' homes.

Recommendations for program improvement. The main recommendations for improvement made by the interviewees were aligned with the main challenges identified. The team members sought to improve internal communication so that home advocates can more effectively meet clients' needs. They are also seeking ways to increase the number of contractors submitting bids so that they can expand the amount of BBHH construction done in the program's final two years. One team member suggested modifying the bid process to allow BBHH to allocate work to a pool of approved contractors to effectively distribute the work across willing contractors with the capacity to complete the work. Finally, team members continue to work on managing expectations so that clients completely understand the BBHH process and expected outcomes. Although there were challenges identified in the BBHH process, the overall sentiment among team members is that good work is being done to great effect on the Dubuque community. As one team member said, "We've made a difference, and we've just got to remember that."

BBHH contractor experience

On September 11, 2018, the CEA invited 14 contractors or sub-contractors who had previously bid on and carried out construction for the BBHH program to complete an online survey about their experiences. Among the seven participants (a response rate of 50%), one indicated that they were a general contractor and the remaining six were sub-contractors. More than half of the respondents (N=4) had completed more than five construction projects through the BBHH program. The survey responses are presented in Table 5. See [Appendix Z](#) for the full report.

Table 5. Contractors' satisfaction with and preferences related to BBHH bidding process (N=7, except where indicated)

Item	Yes	No
I am satisfied with the current bidding process.	4	3
I would prefer that multiple projects be bid together.	5	2
I would prefer that trade work bid on its own.	4	3
Currently, there are requirements of the contractor bid specifications that deter me from working on some of the BBHH projects.	0	7
I plan to bid on future BBHH projects. (N=6)	5	1

As illustrated in Table 5, despite some differences of opinion in the bidding process, the contractors overwhelmingly agreed that they did not feel deterred from bidding on BBHH projects and planned to continue bidding on future projects. Some subcontractors reported challenges or dissatisfaction in working with general contractors. Some subcontractors reported not receiving payment on time or at all from their general contractor; meanwhile, others pointed to a lack of leadership and organizational structure resulting from the use of general contractors. Three respondents explicitly suggested that either the BBHH team should act as the general contractor or that there should be no general contractor at all. For example, one subcontractor encouraged the BBHH team to "be the general. You would save tons of time by bidding this out with subs and having BBHH act as general." Another echoed this sentiment by stating, "You need to get this project restructured. There should be an in-house or third-party GC for all projects. You are already putting the project together, then you have to babysit the GC's, who hire the subs, who usually are left in the blind until the last minute." Finally, another subcontractor stated their opinion as follows, "Most things that are being bid on are very separate from other trades. Again, have better generals or bid the work out to the sub with no general. A true general contractor is not needed." Although they were not asked to provide direct feedback about the BBHH team members, the fact that the contractors placed enough confidence in the team members to suggest that they also serve as general contractor, serves to underscore the quality of the work put forth by the BBHH team.

Appendices

Appendix A- IRB Exemption



Human Subjects Office/ Institutional Review Board (IRB)

105 Hardin Library for the Health Sciences
600 Newton Road
Iowa City, Iowa 52242-1098
319-335-6564 Fax 319-335-7310
irb@uiowa.edu
<http://research.uiowa.edu/hso>

January 17,

2019 To: Julie

Kearney
College of Education

FROM: Janet K. Williams IRB
02 Chair

RE: Not Human Subjects Research Determination

I have reviewed the information submitted with your project titled IRB# 201606786 *IWA Evaluation*. I have determined that the project described in the application *does not* meet the regulatory definition of human subjects research and does not require review by the IRB, because the project does not involve obtaining identifiable information about living individuals.

We appreciate your care in submitting this application to the IRB for review. If the parameters outlined within this Human Subjects Research application request change, re review and/or subsequent IRB review may be required.

Please don't hesitate to contact me if you have any questions. The Human Subjects Office can be reached via phone (319)-335-6564 or email irb@uiowa.edu.

Appendix B- Iowa Watershed Approach Process Monitoring Evaluation Plan

The purpose of the Iowa Watershed Approach (IWA) Process Monitoring Evaluation is to document the activities of the IWA and collect information related to the merit and worth of program activities and deliverables. The Center for Evaluation and Assessment (CEA) is an IWA partner and will implement a collaborative and participatory evaluation designed to explore, support, and monitor the processes undertaken by the IWA to increase Iowa watershed communities' resilience to flooding. The evaluation will be conducted in adherence with *The Program Evaluation Standards* (Yarbrough, et al., 2011).

To carry out the process monitoring evaluation of the IWA, the CEA will observe and document IWA activities and engage with a diverse body of stakeholders to provide evidence of the roles and contributions of people participating in the IWA as a whole, and the Watershed Management Authority (WMA) work in particular. Findings will be reported on a rolling basis to the IWA team and collaborators to inform program improvements. Written reports will be submitted quarterly to the Iowa Economic Development Authority (IEDA) and the US Department of Housing and Urban Development (HUD) following the protocol established by the IEDA/HUD for reporting. More extensive annual written reports and a final written evaluation report will also be submitted to the IWA team, IEDA, and HUD.

[Two components of the IWA, the Bee Branch Healthy Homes Resilience Program (BBHH) and the work of the University of Iowa Flood Resilience Team, while existing under the umbrella of the IWA, are somewhat self-contained and have their own evaluation plans that are appended to this plan as [Attachment A](#) and [B](#), respectively.]

Brief Description of Iowa Watershed Approach (IWA)

The IWA is one of 13 projects funded in January 2016 under the National Disaster Resilience Competition (US Department of Housing and Urban Development, 2016). According to the IWA grant proposal (Iowa Watershed Approach, 2015), the IWA will accomplish six specific goals in the 8 project areas:

7. Reduce flood risk
8. Improve water quality
9. Increase resilience
10. Engage stakeholders through collaboration and outreach/education
11. Improve quality of life and health, especially for vulnerable populations
12. Develop a program that is scalable and replicable throughout the Midwest and the United States.

The IWA calls for the WMA, with the support of the HUD NDRC funds and the IWA partners, to be the agent of change in eight designated watersheds across the state of Iowa.

Stakeholders

The stakeholders in any program are defined as those who benefit from, are affected by, or who have an interest in the program or its evaluation (Yarbrough, et al., 2011). The IWA involves three main categories of stakeholders.

The first group of stakeholders are the IWA partners. These groups receive IWA funding and are key in supporting the project across the state. The IWA partners are:

- The University of Iowa (Iowa Flood Center, IIHR, the IWA Flood Resilience Team)
- Iowa State University, (Iowa Water Center, Extension and Outreach, and Iowa Nutrient Research Strategy)
- The University of Northern Iowa (Tallgrass Prairie Center)
- Iowa Department of Natural Resources
- Iowa Department of Agriculture and Land Stewardship
- Iowa Homeland Security and Emergency Management Department
- Iowa Economic Development Authority
- The Cities of Dubuque, Storm Lake, and Coralville
- Benton, Buena Vista, Fremont, Iowa, Johnson, Mills, Winneshiek, and Howard Counties

The second group of IWA stakeholders are the leverage partners. Leverage partners are a diverse collection of entities from across the state of Iowa who wrote letters of support for the IWA grant proposal and indicated their willingness to provide assistance to the IWA in a way consistent with each of the groups' expertise and mission. Leverage partners include public and private agencies including (but not limited to): conservation non-profits, agriculture industry groups, water quality interest groups, city and county associations, state and federal entities related to water quality and/or quantity. [A complete list of the IWA leverage partners is included in the grant application.]

The third category of stakeholders are those within each watershed. According to Iowa Legislation regarding 28e agreements required to form Watershed Management Authorities, all eligible political subdivisions must be invited to be part of the WMA. Eligible political subdivisions include: municipalities, counties, and Soil and Water Conservation Districts (SWCDs). In order to carry out the work of the WMA, each WMA will also employ a project coordinator and enter into a contract with a planning entity to formulate a watershed plan. WMAs will also engage with various other local and/or regional organizations to support their work including: RC&Ds, USDA/NRCS offices, conservation non-profits, etc. The WMAs will also interact in some cases with elected officials at the local, state, and federal level. Finally, in order to install best management practices (BMPs) as part of the IWA, WMAs will seek the involvement of landowners and any other interested community members in each watershed. Project implementation will in turn involve engineers and contractors.

Finally, by extension, the IWA will potentially have an impact on all Iowa residents, and the country at large.

Evaluation Questions

The IWA is a complex project supported by many IWA partners whose goals are both discrete and collaborative. Each IWA partner submitted a Scope of Work document that describe their planned responsibilities and deliverables to the IWA. Despite the somewhat specific goals of each of the IWA partner groups, the IWA is also, to a great extent, a project that is developmental in nature and as a

result the evaluation employs an iterative process. The course and progress of the IWA is dependent on factors both physical (hydrologic factors, weather, geology) and human (project coordinators, planning staff, consultants, and landowners) and the ways in which these physical and human factors combine to affect progress toward the project goals will be different in each of the eight different watersheds.

To design a process monitoring evaluation plan that would be sensitive to these factors and responsive to the developmental nature of the IWA, the CEA met with members of the UI IFC staff to identify and prioritize what was to be examined by the evaluation. During the discussion, following in the spirit of the watershed as the key entity for change, the WMA emerged as the focal point for the evaluation, with the emphasis on how IWA partners interact with, and support the WMAs.

The CEA began to focus on the evaluation questions to be addressed by evaluation activities. The CEA generated these evaluation questions based on discussions with the UI IWA program team. Because of the developmental nature of the IWA, these questions may be supplemented during the course of the project by emerging questions. The evaluation has been designed to address the following evaluation questions:

- What does the overall implementation of the IWA actually look like?
- What does the work of the WMAs look like? (In what ways does the formation (for new WMAs) and the work of watersheds differ?)
- What are the characteristics of WMAs? (Who are the official members? What is the structure (committees, leadership, boards, etc.)? What kinds of participation is there by other non-voting groups (e.g. non-profits, conservation groups)?)
- How does the planning process differ between WMAs? (Who are the planners? How do they work with the project coordinators? How do they make use of data and other support from the IWA partners?)
- How does the role of the coordinator vary from WMA to WMA? (How do they interact with the WMA? How do they make use of data and other support from the IWA partners?)
- What are the roles of the partners in the IWA and how does that differ between WMAs?
- What is the level of landowner interest in best management practices relative to available funding?

Additional evaluation questions will emerge as the planning and implementation processes evolve.

Evaluation Design and Data Collection Methods

In order to monitor and document the IWA program, Table 1 shows the evaluation activities the CEA will conduct (proposed frequencies for data collection events are listed in parentheses).

Table 1

CEA IWA Evaluation Activities

1. IWA Kickoff Meeting Survey (Once, Year 1)
2. IWA Flood Resilience Kickoff Survey (Once, Year 1)
3. IWA Watershed Key informant Interviews (Biennial (Years 1,3,&5)) (Extended in Years 3 and 5 to IWA partners)
4. IWA WMA Project Coordinator Surveys (Annual (at least))
5. IWA WMA Board Surveys (Annual (Years 2-5))

6. IWA Watershed Planner Interviews (Biannual during planning years (Years 2-4))
7. IWA WMA Meeting Attendee Surveys (Biannual)
8. IWA Advisory Board Surveys (Annual)
9. IWA Partner Surveys (Annual)
10. IWA Leverage Partner Surveys (Annual (Years 2-5))
11. Visualization and Information System User Surveys (TBD, Beginning in Year 2)
12. Ongoing documentation of program activities (ongoing)
13. BBHH Home Advocate Interviews (Annual)*
14. BBHH East Central Intergovernmental Association (ECIA) Interviews (Annual)*
15. BBHH Client Follow-up Surveys (Annual)*
16. Evaluation activities focused on the work of IWA Flood Resilience funded partners (TBD)*
17. Other evaluation activities as needed

**Note: Evaluation activities 13-16 are described in the individual evaluation plans for the BBHH and the IWA Flood Resilience Program Evaluation Plan appended to this plan as Appendices A and B, respectively.*

Table 2 demonstrates the ways in which CEA evaluation activities align with IWA activities and topics of interest. Topics of interest have also been aligned to the evaluation questions and/or to the IWA partner scope of work documents. Some of the activities (and their associated evaluation events) have already occurred or, if part of a series of events, have already been initiated. The CEA will embed formative evaluation into all evaluation activities. [For a timeline of evaluation events, see Appendix C.]

Table 2

IWA Topics and Activities and Evaluation Data Collection Activities

IWA Topic/Activities of Interest	Evaluation Activity
IWA Kickoff Meetings (Q2 2016)	1, 12
H&H Focused Quarterly Meetings (Q3 2016)	7, 12
Hiring Watershed Coordinators	12
Flood Resilience Focused Quarterly Meetings (Q4 2016)	2, 7, 12
Local key informant views of watershed health and water management at three points in time	3
IWA Advisory Board Meeting	8, 12
Visualizations and Information Systems (IWA Specific)	11, 12
Ongoing Watershed Coordinator Duties	4, 12
Watershed Planning	6, 12
Ongoing IWA Partner Service Provision	4, 5, 12

Ongoing IWA Leverage Partner Service Provision	4, 12
Watershed Coordinator Training and Support	4, 12
Collaboration among partners	8, 9, 10
Landowner interest in practices compared with available resources	4

Metaevaluation

Annual written evaluation reports and the final evaluation report will include an internal metaevaluation. The purpose of an internal metaevaluation is to demonstrate that the evaluation design, procedures information collected, and outcomes abide by *The Program Evaluation Standards* and other relevant standards (Yarbrough, et al., 2011). Questions addressed by the metaevaluation may include whether the evaluation was practical, responsive to stakeholder needs, and resulted in materials that were useful to the stakeholders.

References

- U.S. Department of Housing and Urban Development. (2016, January 21). *National disaster resilience competition grantee profiles*. Retrieved from <http://portal.hud.gov/hudportal/documents/huddoc?id=NDRCGrantProf.pdf>
- The Iowa Watershed Approach for Urban and Rural Resilience. (2015, October). *HUD National Disaster Resilience Competition*. State of Iowa.
- Yarbrough, D. B., Shulha, L. M., Hopson, R. K., & Caruthers, F. A. (2011). *The program evaluation standards: A guide for evaluators and evaluation users (3rd ed.)*. Thousand Oaks, CA: Sage.

Attachment A: Bee Branch Creek Healthy Home Project Evaluation Plan

Bee Branch and Healthy Homes Resiliency Program Evaluation Plan from the Center for Evaluation and Assessment

Points of contact for Center for Evaluation and Assessment: Valerie Decker & Julie Kearney

Points of contact for Dubuque: Sharon Gaul & Cori Burbach

Points of contact for IIHR: Larry Weber & Breanna Shea

The Center for Evaluation and Assessment (CEA) will be providing program evaluation guidance and services to the Bee Branch and Healthy Homes Resiliency Program¹ (BBHH). The CEA will be centering its evaluation activities on the role, accomplishments, and effects of this home advocate service and flood resilience program as components of the Iowa Watershed Approach Project (IWA). In addition, in the IWA proposal, CEA is charged with documenting progress toward the following metric related to BBHH: Home improvements will result in increased opportunities for resilient, affordable housing for these populations and home improvements will result in reduced mental stress associated with the life disruptions common during flood events.² All of these purposes will be addressed in CEA's evaluation activities.

Primary program evaluation activities

0. CEA BBHH Evaluation plan (June, 2017)
1. BBHH Home Advocate Data Collection: CEA will provide guidance, where requested, related to the BBHH Home Advocate Client Interview and Flood Resilience Survey.
2. CEA BBHH Home Advocate Interview² (Annual): CEA will interview home advocates annually to inform program improvements and document processes.
3. CEA BBHH East Central Intergovernmental Association Interview² (Annual): CEA will interview team members from the East Central Intergovernmental Association (ECIA) annually to inform program improvements and document processes.
4. CEA BBHH Client Follow-up Survey² (Rolling, after construction has been completed for each client): CEA will survey or interview BBHH clients about their experiences with the home advocate and outcomes related to recommendations received. This activity informs improvements and documents outcomes.
5. CEA Formative Report to BBHH Team and IWA Project Team (Annual, Years 1-4)
6. CEA Final Report to BBHH Team and IWA Project Team (Year 5)

This evaluation plan is based on the current project plan. If the project implementation plan changes, the evaluation plan will be revised.

¹ <http://www.cityofdubuque.org/2339/Bee-Branch-Healthy-Homes-Resiliency-Prog>

² The Iowa Watershed Approach for Urban and Rural Resilience. (2015, October). HUD National Disaster Resilience Competition. State of Iowa.

³ If anything particularly noteworthy emerges from the evaluation, CEA will provide a brief quick-turnaround report for the BBHHRP team. Otherwise, evaluation findings will be reported annually (activities 4 & 5).

Project Year	Evaluation Activity
Year 1: October 2016- September 2017	0. Design evaluation plan
	Conduct BBHH program evaluation activities 1. Assist in developing the BBHH Home Advocate Data Collection 1. BBHH Home Advocate Resilience Survey developed by BBHH team 2. BBHH Home Advocate Client Interview developed by IWA Flood Resilience team 2. Develop CEA BBHH Home Advocate Interview protocol and Interview home advocates 3. Develop CEA BBHH ECIA Interview protocol and Interview ECIA Team Members 4. Work with home advocates to determine format, develop, and administer CEA BBHH Client Follow-up Survey
	5. Deliver first year formative report to BBHH— <i>Due September 30</i>
Year 2: October 2017- September 2018	Conduct BBHH program evaluation activities 2. CEA BBHH Home Advocate Interview 3. CEA BBHRP ECIA Interview 4. CEA BBHH Client Follow-up Survey
	5. Deliver second year formative report to BBHH— <i>Due September 30</i>
Year 3: October 2018- September 2019	Conduct BBHH program evaluation activities 2. CEA BBHH Home Advocate Interview 3. CEA BBHRP ECIA Interview 4. CEA BBHH Client Follow-up Survey
	5. Deliver third year formative report to BBHH— <i>Due September 30</i>
Year 4: October 2019- September 2020	Conduct BBHH program evaluation activities 2. CEA BBHH Home Advocate Interview 3. CEA BBHRP ECIA Interview 4. CEA BBHH Client Follow-up Survey
	5. Deliver fourth year formative report to BBHH— <i>Due September 30</i>
Year 5: October 2020- September 2021	Conduct BBHH program evaluation activities 2. CEA BBHH Home Advocate Interview 3. CEA BBHRP ECIA Interview CEA BBHH Client Follow-up Survey
	6. Deliver final report to BBHH— <i>Due September 30</i>

Attachment B: University of Iowa IWA Flood Resilience Team Evaluation Plan

Iowa Watershed Approach Flood Resilience Evaluation Plan³

The purpose of the Iowa Watershed Approach (IWA) Flood Resilience Evaluation is to document the activities of the IWA Flood Resilience Team and collect information related to the merit and worth of program activities and deliverables. Findings will be reported on a rolling basis to the IWA Flood Resilience Team and collaborators to inform program improvements. Reports will be submitted quarterly to the Iowa Economic Development Authority (IEDA) and the US Department of Housing and Urban Development (HUD). The IWA Flood Resilience Evaluation activities are nested within the program evaluation of the IWA program.

Need⁴

According to the plan of work put forward by the IWA Flood Resilience Team, the following needs drive the IWA Flood Resilience program.

- When communities are making decisions for response and mitigation, the financial and displacement burdens on watershed residents living in less valuable structures are often neglected. Additionally, these burdens are more difficult to quantify, measure, and communicate than information about built infrastructures.
- Since hazard mitigation plans must account for all hazards, they are rarely completed at the watershed scale since that scale is only relevant for floods. Furthermore, hazard mitigation plans are static with limited ability of use for planning purposes. Complementarily, plans developed at the watershed scale rarely include people-centric flood hazard mitigation information.
- Social service organizations who provide services before, during, or after floods are interested in improving their processes for providing information and social resources to their clients.

IWA Flood Resilience

The IWA Flood Resilience program strives to address these needs through three goals:

1. Measure, visualize, and communicate flood resilience resources
2. Enhance flood resilience content in formal watershed plans
3. Improve social resources for flood resilience

In the IWA Flood Resilience program, special attention will be paid to communicating the needs of low- or moderate-income residents to community and state decision-makers and providing these residents with support⁵ to prepare for, respond to, recover from, and mitigate the impacts of floods. Information will be collected at different scales based on feasibility and need.

Evaluation Activities

³ The format for this plan is based on the Center for Disease Control's evaluation plan outline https://www.cdc.gov/asthma/program_eval/appendixf_evaluation_plan_outline.doc

⁴ Need and IWA Flood Resilience sections are adapted from notes provided by the IWA Flood Resilience Outreach and Engagement Coordinator

⁵ This plan refers to Cohort 1 social service partners. A similar plan will be pursued when IWA Flood Resilience begins work with Cohorts 2 and 3 with different partners.

In order to monitor and document the IWA Flood Resilience program, the University of Iowa Center for Evaluation and Assessment (CEA) will conduct the following activities (proposed schedules for data collection events are listed in parentheses).

1. IWA Watershed Key informant Interviews (annual)
2. IWA WMA Project Coordinator Surveys (annual, starting in year 2)
3. IWA WMA Board Surveys (annual, starting in year 3 per cohort)
4. IWA Watershed Planner Interviews (bi-annual starting in year 2)
5. IWA WMA Meeting Attendee Surveys (annual)
6. Ongoing documentation of program activities (ongoing)
7. Evaluation activities focused on the work of IWA Flood Resilience funded partners (TBD)
8. Other evaluation activities as needed

Table 1 displays the topics of interest related to IWA Flood Resilience aligned to the evaluation activities which will be used to collect information related to that topic. Most topics of interest have been extracted from the IWA Flood Resilience program logic model ([Attachment B2](#)). CEA will embed formative evaluation into all evaluation activities.

Table 1

IWA Flood Resilience Topic of Interest	Evaluation Activity
Local perspectives on flood resilience and progress toward improving flood resilience	1
Utility of data visualization tools (e.g., IWAIS)	2, 4, 5
Utility of Financial and Displacement Burden Assessment data	2, 4, 5, 6
Utility of Comprehensive Flood Resilience Assessments (Case studies)	2, 4, 5, 6
Development of a community-wide flood resilience action plan ⁴	2, 4, 5, 6
WMA boards' awareness of flood resilience information embedded in the watershed plan	3
WMA boards' interactions with IWA Flood Resilience Team	3
WMA boards' intentions to use the flood resilience information included in the report	3
Planning teams' interactions with IWA Flood Resilience Team	4
Planning teams' intentions to integrate flood resilience information into watershed plans	4
Communication of flood resilience-related services and information available to watersheds through IWA	5, 6
Communication of FEMA elements of flood mitigation plans	5, 6
Programs to promote awareness ⁶ : IWA Flood Resilience Team (metric from proposal); Communicate Flood resilience and the role of the IWA Flood Resilience Team Programs to promote awareness ³ : IWA Flood Resilience funded partners (metric from proposal); information presented about flood resilience either at WMA	5, 6, 7

⁶ Resilience-focused metrics from the IWA proposal are listed in [Attachment B1](#).

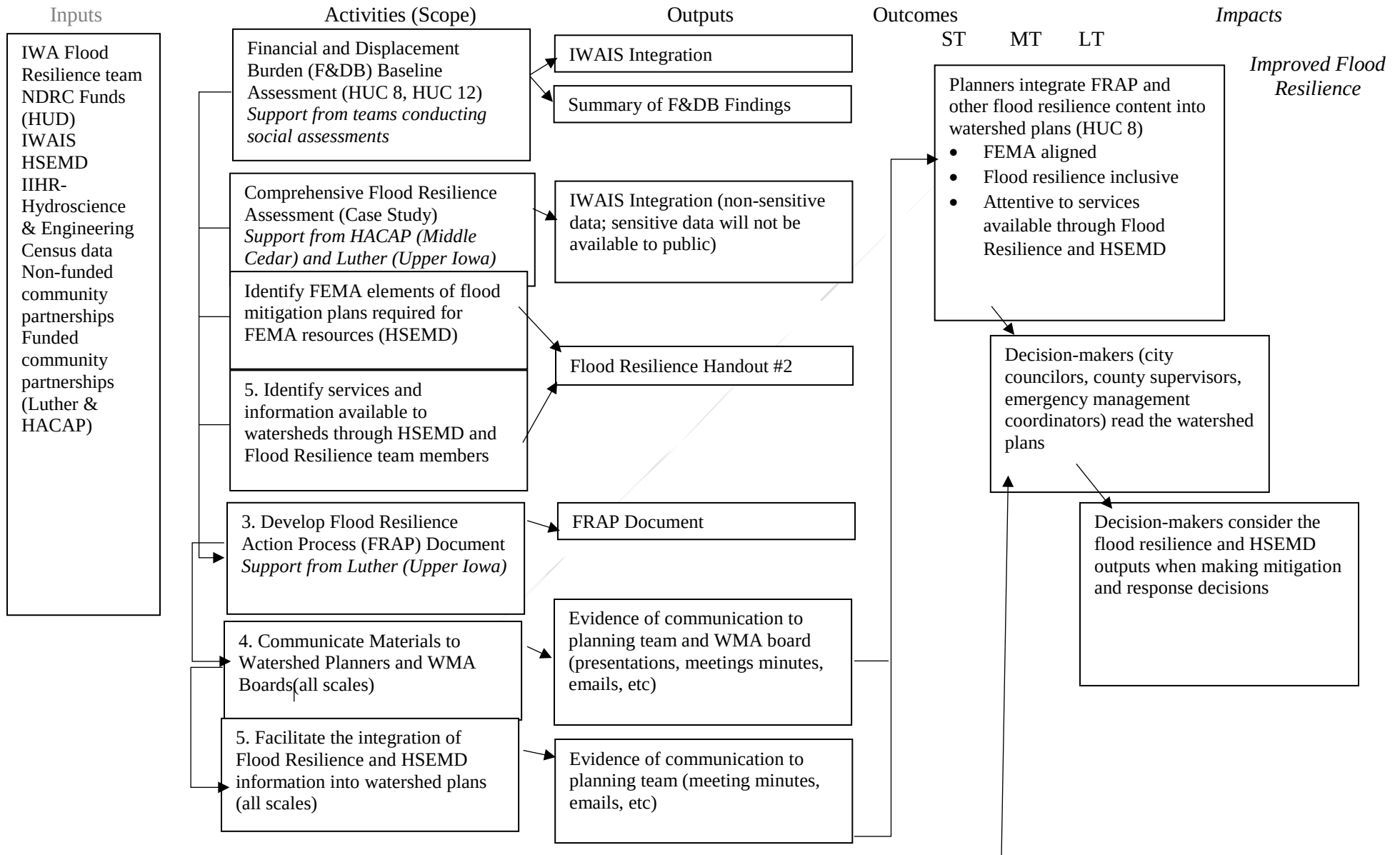
meetings or in the plans motivated you to think at the watershed level for mitigation and response: urban/rural, upstream/downstream, direct/indirect effects	
Influence of flood resilience information on decision-making for the community	5
Activities of funded local partners (e.g., HACAP, Center for Sustainable Communities)	7
Information presented about flood resilience either at WMA meetings or in the plans motivated you to use flood resilience planning tools at various scales	5

Attachment B1: Metrics from the proposal⁷ related to flood resilience

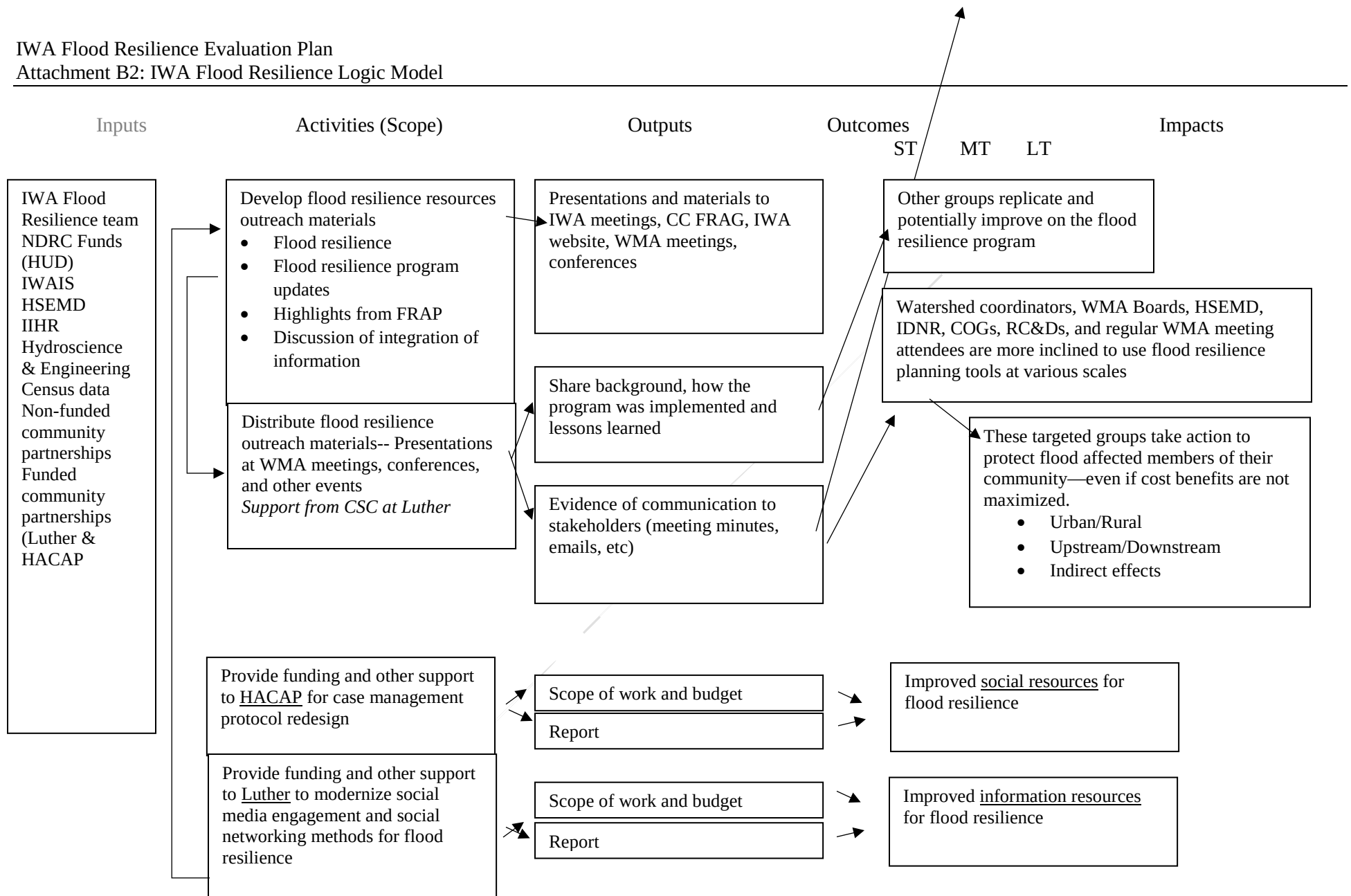
- Upper Iowa: This project will result in improved resilience to flooding, especially in the L/M income area, through programs to promote awareness and develop a community-wide flood resilience action plan.
- Upper Wapsipinicon: This project will result in improved resilience to flooding, especially in the MID-URN areas, through programs to promote awareness and a community-wide flood resilience action plan.
- Middle Cedar: This project will result in improved resilience to flooding, especially in the Vinton L/M income area, through programs to promote awareness and a community-wide flood resilience action plan.
- Clear Creek: This project will result in improved resilience to flooding, especially in the Coralville LMA, through programs to promote awareness and a community flood resiliency action plan.
- English River: This project will result in improved resilience to flooding, including the English River LMI area, through programs to promote awareness and a community-wide flood resilience action plan.
- North Racoon: This project will result in improved flood resilience, especially in Storm Lake, by promoting awareness and a community-wide flood resilience action plan.
- East Nishnabotna: This project will result in improved resilience to flooding, especially in the MID-URN areas, through programs to promote awareness and develop a community-wide flood resilience action plan.
- West Nishnabotna: This project will result in improved resilience to flooding, especially in the LMI area, through programs to promote awareness and a community-wide flood resilience action plan (See Soundness of Approach, Program 2).

⁷ The Iowa Watershed Approach for Urban and Rural Resilience. (2015, October). *HUD National Disaster Resilience Competition*. State of Iowa.

IWA Flood Resilience Evaluation Plan
Attachment B2: IWA Flood Resilience Logic Model



IWA Flood Resilience Evaluation Plan
Attachment B2: IWA Flood Resilience Logic Model



Attachment B3: CEA IWA Evaluation Plan: Suggested Timeline

Suggested Timeline for CEA IWA Evaluation Activities (as of 6-30-17)

Evaluation Activity	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
IWA Kickoff Meeting Survey	x*																			
IWA Flood Resilience Kickoff Survey		x																		
IWA Watershed Key informant Interviews		x	x							x	x							x	x	
IWA WMA Project Coordinator Surveys				x		y		x		y		x		y		x	y		x	
IWA WMA Board Surveys								x				x				x			x	
IWA Watershed Planner Interviews							x				x				x					
IWA WMA Meeting Attendee Surveys				z		z		z		z		z		z		z		z		
IWA Advisory Board Surveys		x				x				x				x				x		
IWA Partner Surveys	x*				x				x				x				x			
IWA Leverage Partner Surveys	x*				x				x				x				x			
Visualization and Information System User Surveys					+															
Ongoing documentation of program activities	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BBHH Home Advocate Interviews				x				x				x				x			x	
BBHH ECIA Interviews				x				x				x				x			x	
BBHH Client Follow-up Surveys					+															
IWA Flood Resilience funded partners				TBD																
Other evaluation activities as needed																				

Notes:

x: Evaluation activity is scheduled to occur during that quarter.

**: These activities were actually completed before the start of Year 1, Q1.*

y: Frequency is to be once or twice annually; second interview to be determined based on need.

z: WMA meeting attendee surveys will be twice annually, but not necessarily in Q1 and Q3.

+: Start date to be determined in consultation with relevant partners. Once started, to occur annually.

TBD: To be determined.

Appendix C- BBHH Evaluation Plan

The Center for Evaluation and Assessment (CEA) will be providing program evaluation guidance and services to the Bee Branch and Healthy Homes Resiliency Program¹ (BBHH). The CEA will be centering its evaluation activities on the role, accomplishments, and effects of this home advocate service and flood resilience program as components of the Iowa Watershed Approach Project (IWA). In addition, in the IWA proposal, CEA is charged with documenting progress toward the following metric related to BBHH: Home improvements will result in increased opportunities for resilient, affordable housing for these populations and home improvements will result in reduced mental stress associated with the life disruptions common during flood events.² All of these purposes will be addressed in CEA's evaluation activities.

Primary program evaluation activities

1. CEA BBHH Evaluation plan (June, 2017)
2. BBHH Home Advocate Data Collection: CEA will provide guidance, where requested, related to the BBHH Home Advocate Client Interview and Flood Resilience Survey.
3. CEA BBHH Home Advocate Interview² (Annual): CEA will interview home advocates annually to inform program improvements and document processes.
4. CEA BBHH East Central Intergovernmental Association Interview² (Annual): CEA will interview team members from the East Central Intergovernmental Association (ECIA) annually to inform program improvements and document processes.
5. CEA BBHH Client Follow-up Survey² (Rolling, after construction has been completed for each client): CEA will survey or interview BBHH clients about their experiences with the home advocate and outcomes related to recommendations received. This activity informs improvements and documents outcomes.
6. CEA Formative Report to BBHH Team and IWA Project Team (Annual, Years 1-4)
7. CEA Final Report to BBHH Team and IWA Project Team (Year 5)

This evaluation plan is based on the current project plan. If the project implementation plan changes, the evaluation plan will be revised.

¹ <http://www.cityofdubuque.org/2339/Bee-Branch-Healthy-Homes-Resiliency-Prog>

² The Iowa Watershed Approach for Urban and Rural Resilience. (2015, October). HUD National Disaster Resilience Competition. State of Iowa.

³ If anything particularly noteworthy emerges from the evaluation, CEA will provide a brief quick-turnaround report for the BBHHRP team. Otherwise, evaluation findings will be reported annually (activities 4 & 5).

Project Year	Evaluation Activity
Year 1: October 2016- September 2017	1. Design evaluation plan
	Conduct BBHH program evaluation activities
	6. Assist in developing the BBHH Home Advocate Data Collection 1. BBHH Home Advocate Resilience Survey developed by IWA Flood Resilience team 2. BBHH Home Advocate Client Interview developed by BBHH team
	7. Develop CEA BBHH Home Advocate Interview protocol and Interview home advocates 8. Develop CEA BBHH ECIA Interview protocol and Interview ECIA Team Members 9. Work with home advocates to determine format, develop, and administer CEA BBHH Client Follow-up Survey
	10. Deliver first year formative report to BBHH— <i>Due September 30</i>
Year 2: October 2017- September 2018	Conduct BBHH program evaluation activities
	6. CEA BBHH Home Advocate Interview
	7. CEA BBHRP ECIA Interview
	8. CEA BBHH Client Follow-up Survey
	9. Deliver second year formative report to BBHH— <i>Due September 30</i>
Year 3: October 2018- September 2019	Conduct BBHH program evaluation activities
	6. CEA BBHH Home Advocate Interview
	7. CEA BBHRP ECIA Interview
	8. CEA BBHH Client Follow-up Survey
	9. Deliver third year formative report to BBHH— <i>Due September 30</i>
Year 4: October 2019- September 2020	Conduct BBHH program evaluation activities
	6. CEA BBHH Home Advocate Interview
	7. CEA BBHRP ECIA Interview
	8. CEA BBHH Client Follow-up Survey
	9. Deliver fourth year formative report to BBHH— <i>Due September 30</i>
Year 5: October 2020- September 2021	Conduct BBHH program evaluation activities
	4. CEA BBHH Home Advocate Interview
	5. CEA BBHRP ECIA Interview CEA BBHH Client Follow-up Survey
	7. Deliver final report to BBHH— <i>Due September 30</i>

Appendix D- Iowa Watershed Approach Flood Resilience Evaluation Plan

Iowa Watershed Approach Flood Resilience Evaluation Plan

As part of the program evaluation of the Iowa Watershed Approach (IWA), the Center for Evaluation and Assessment (CEA) will conduct the program evaluation of the Flood Resilience Team's (UI FRT) activities. The purpose of the Flood Resilience Evaluation is to document the activities of the UI FRT and collect information related to the process and perceived successes of the program activities and deliverables. Accordingly, evaluation activities will occur at different scales based on feasibility and need. Findings will be reported on a rolling basis to the UI FRT and its collaborators to inform them of progress. Additionally, formal reports will be submitted annually to the Iowa Economic Development Authority (IEDA) and the US Department of Housing and Urban Development (HUD).

IWA Flood Resilience Program Goals¹

The UI FRT aims to communicate the needs of socially vulnerable residents (including low- or moderate-income residents) to community and state decision-makers and provide these residents with social and financial support to prepare for, respond to, recover from, and mitigate the impacts of floods.

The IWA Flood Resilience program strives to address their aims through four goals:

4. Measure, visualize, and communicate flood resilience resources
5. Enhance flood resilience content in formal watershed plans
6. Improve social resources for flood resilience
7. Develop a robust and replicable IWA Flood Resilience program

Flood Resilience Team Activities

The activities of the UI FRT have been defined based on IWA partner and community engagement over the course of the first three years of the program. In collaboration with the UI FRT lead, Craig Just, the CEA has defined the major activity categories and partners as follows:

<u>Activity</u>	<u>Partners</u>
1. FEMA multijurisdictional plans	Iowa Department of Homeland Security and Emergency Management (HSEMD) and the Iowa Flood Center (UI IFC)
2. Flood mitigation elements for watershed plans	HSEMD
3. Bee Branch Healthy Homes social resilience surveys	Dubuque Bee Branch Healthy Homes Program
4. Support the development and implementation of a Community Care Coordination System	United Way of East Central Iowa and Hawkeye Area Community Action Program (HACAP)
5. Community-wide Flood Resilience Action Plans (FRAPs)	Local watershed planners for each community
6. Social Resilience "How-to-guide"	Local watershed planner
7. Outreach and education in the form of presentations, trainings, and participation in WMA meetings	

¹ IWA Flood Resilience section is adapted from notes provided by the former IWA Flood Resilience Outreach and Engagement Coordinator.

National Disaster Resilience Competition Metrics for Resilience

In the National Disaster Resilience Competition (NDRC) proposal², the authors specified resilience metrics for each watershed. Community Flood Resilience Metrics for each IWA watershed were written in the proposal. The following approximates the metrics given that the target areas or populations are different for each watershed: “Improved resilience to flooding, especially in [specified local area] area, through programs to promote awareness and develop a community-wide Flood Resilience Action Plan.” Programs to “promote awareness” have been broadly defined by the UI FRT to include outreach and education activities.

Evaluation Activities

In order to monitor the activities of the IWA Flood Resilience program and document the UI FRT’s progress toward achieving the NDRC metrics for resilience, the CEA will conduct the following activities:

- Attend meetings and events during which the UI FRT presents their materials or participates in planning discussions
- Review emails and other documents provided by the UI FRT
- Interview or survey program stakeholders to collect in-depth information about the IWA Flood Resilience program activities, as needed.

The CEA will communicate regularly with the UI FRT and/or the collaborating partner to refine and articulate the scope of evaluation activities to meet the needs of the projects/activities as they evolve.

² The Iowa Watershed Approach for Urban and Rural Resilience. (2015, October). *HUD National Disaster Resilience Competition*. State of Iowa.

Appendix E- Partner Summary

Partner Summary

As part of the evaluation activities for Year 3 of the IWA, the CEA conducted interviews with key personnel from each of the IWA partner organizations. The purpose of these interviews was to learn about the halfway-point progress of IWA from various perspectives and to provide feedback that may help inform the continued decision-making and activities of those administering and executing the work of the grant. Accordingly, participants were invited to reflect on the benefits and challenges of the project, the contributions their organizations have made, and the sustainability of the watershed approach beyond the life of the grant. Participants were also given the opportunity to provide anonymous feedback including what they hoped could have gone better thus far.

In June of 2019, all partners were invited to contribute to the development of the interview protocol in order to collaboratively inform their own mutual understanding and ongoing efforts to improve their activity and outcomes in the remaining two years and one-half years of the grant. Next, in July 2019, all but one partner organization¹ was invited to nominate a representative to speak on behalf of their organization. Eight participants were interviewed, representing a total of nine partner organizations (see Table 1). Audio-recorded interviews were transcribed and summarized individually, then shared with each partner to allow them, as well as their colleagues, an opportunity to review their summary and provide any comments, corrections, or additions. After verification, the individual summaries were analyzed by one CEA staff member and synthesized into the following IWA-level summary, the results of which were shared with the IWA project partners for their use in improving the project over the final two and one-half years of the grant.

Table 1. Partner organizations and interview participants

Representative	Partner Organization
Larry Weber	Iowa Flood Center (UI IFC)
Craig Just	Flood Resilience Team (UI FRT) & Iowa Flood Center (UI IFC)
Jeff Geerts	Iowa Economic Development Authority (IEDA)
Jessica Turba	Homeland Security and Emergency Management (HSEMD)
Kyle Ament	Iowa Department of Natural Resources (IDNR)
Jamie Benning	ISU Extension and Outreach (E&O) & ISU Iowa Nutrient Research Center (INRC)
Melissa Miller	Iowa Water Center (IWC)
Laura Jackson	Tallgrass Prairie Center (TPC)

¹ Note that at this time IDALS declined to participate in any future evaluation activities. See also Partner Contributions

Findings

In the spirit of the mid-point review, this section will begin by looking back and discussing what the partner representatives shared about the overall benefits of the IWA, and the specific contributions of their organizations to the progress that has been made thus far. Next, findings related to the perceived challenges of carrying out the work will be presented, providing an indication of what barriers may need to be addressed in the final two- and one-half years of the grant. Finally, their perceptions regarding the strengths and weaknesses inherent in the WMA system at large will be summarized, as well as their forecast for the continuation of these efforts beyond the life of the grant.

Benefits

Looking back at the accomplishments and outcomes of the project through the halfway point in the grant, the partner representatives identified a range of benefits of the IWA, the majority of which centered on either the physical and quantifiable impact of the work being carried out or the heightened sense of awareness of the watershed approach resulting from the collaborations in and through the each of the WMAs. However, as will become apparent, it was not only the eight selected WMAs that have experienced benefits from the IWA, but also the partner organizations themselves that have been integral in facilitating the development and activity of the WMAs. In their interviews, partner representatives also acknowledged the funding that made this endeavor possible and pointed toward the future viability of the watershed approach.

Quantifiable Impact

All eight partner representatives, when asked about the benefits of the IWA, cited some aspect of the quantifiable improvements in the area of water quantity and/or quality. However, the predicted scale of these benefits, as well as the degree of certainty of their outcomes varied somewhat among interviewees.

Two of the partner representatives described the potential for significant and lasting positive impacts related the work of the IWA. Kyle Ament (IDNR) projected that “there could be some huge benefits” associated with the proposed best management practices (BMPs) in the various watersheds. He specifically cited the project in Swan Lake², which he noted, “could have a huge opportunity for water quality, for flooding, for ecological benefits.” In summary, he stated, “Anything to protect or enhance that water body, obviously there are some benefits there.” Similarly, Craig Just mentioned the broader “ecosystem services benefits,” describing that this will help with Iowa’s “nitrogen and phosphorus issues.” Furthermore, as a byproduct of these direct benefits of the IWA work, Just projected that there may also be some significant public health benefits. To that effect, he stated, “I think people feel reassured when you lessen their flood risk and it helps them focus on other things rather than worry about [flooding] issues.”

The remaining six representatives were moderately optimistic about the overall impact of the IWA on water quantity and quality in the watersheds. Several spoke of the potential for localized impacts of the practices being installed. For example, Benning (E&O) projected that this work will improve water quality, especially in the HUC 12 watersheds that received implementation funding from IWA, which will improve local water quality and might have a “cumulative effect on water quality and quantity management within the state of Iowa.” In predicting the lasting impact that the

²During a North Raccoon River Watershed Management Coalition meeting in July, 2019, the coalition’s engineering firm announced that the Swan Lake project would not move forward.

IWA will have on the state of Iowa, Laura Jackson (TPC) said, “I think eventually there will be a lot of farm ponds.” Expanding on that, she added that there will likely be some imprint of this project on the physical landscape, as well as among individual landowners.

When asked whether it was reasonable to expect to see measurable change in water resources in the IWA watersheds at the end of this project, two partner representatives deferred to the engineers, but still expressed hope for the potential impacts. Jessica Turba (HSEMD) responded, “Of course, I’m an optimist and I want to say, ‘Yes.’” Similarly, Melissa Miller (IWC) said, “I’m not a hydrologist, but I would imagine that we’ll see flood reductions in the five years.” Miller (IWC) acknowledged that water quality benefits take longer to realize, but “I would like to think that we are laying the groundwork to see real improvements in the future.” Their hesitance to overstate the potential impact of the project was affirmed by Larry Weber (UI IFC), who stated, “We are still the proverbial drop in the bucket. We are having a positive impact on twenty-ish small watersheds, [which] will have a very local benefit.” Articulating why they will not see greater change through this large-scale effort, Weber said, “We need roughly 10 billion dollars - five billion for water quality and five billion for flooding.” In contrast to what’s actually needed to effect the desired change, they are currently only able to “sprinkle 40 million dollars roughly, or less than that, around the state, so that’s a small percentage.”

As a byproduct of the potential reduction in the severity of flooding, three partner representatives also discussed the financial implications of this work. For Just (UI FRT), the avoidance of future losses and damages to property was the first and most obvious benefit of the work of the IWA. “I think some of these watersheds will get restored for the better in that regard.” By contrast, Turba (HSEMD) was slightly more cautious in her predictions of mitigation of damages because she did not know exactly how projects were being sited and if those changes could indeed be measured for the purposes of reducing risk to public infrastructure. Finally, Jackson (TPC) put the outcomes of this project in perspective by highlighting the point that the costs associated with flood damage and loss are going to rise regardless of what efforts are put in place to mitigate their effects. “The fact is that these costs are only going to rise. It’s just how fast are they going to rise. And I think prevention isn’t going to lower anybody’s cost compared to last year and the year before that. It’s [only] going to reduce how fast that [cost] rises.”

Collaboration and Awareness

For many of the partner representatives, the IWA has served as the catalyst for their increased collaboration, which has enabled them to facilitate a greater level of public awareness surrounding issues of water quantity and quality. Within this effort, the WMAs have served as the organizing entity and the conduit through which the coordinated activities of the partners have supported the development of the foundations for the continuation and maintenance of the watershed approach beyond the life of the grant. Collectively, these seemingly intangible benefits of the IWA rival the physically quantifiable benefits in that they are critical elements in sustaining the long-term vision and activity of the watershed approach.

WMA formation and activity. A small handful of partner representatives referenced the watershed management authorities (WMAs) as being a central component in the effort to address current and future issues of water quantity and quality across the state. For example, Ament (IDNR) described the formation of the WMAs themselves as an important outcome of the project that may continue to pay dividends down the road. In particular, he described the WMAs as a “group that can collaborate and make decisions and have leverage themselves to pursue additional funding opportunities.” Similarly, Turba (HSEMD) said she hopes that the benefit of this project is the experience the WMAs

gain through implementing this project and working together as an entity. To that effect, she said, “Maybe that will create some muscle memory moving forward. If they try to implement additional projects, they have some experience working within that coordinating mechanism and understand what the requirements will be based on the HUD experience.” Reiterating the critical role of the WMAs in the overall sustainability of the watershed approach, Geerts (IEDA) stated, “Hopefully we create enough momentum in those watersheds and communities we are assisting that they will be able to continue the effort once the Iowa Watershed Approach contracts are over.” One of the drivers of this momentum has been what Geerts described as “the development of watershed management plans in eight HUC 8 watersheds across Iowa that are focused on flood mitigation and water quality.” After citing the creation of these watershed plans as the greatest benefit of the IWA, he articulated that they essentially serve as “a road map for where [the WMAs] need to go and how they need to get there.” Ament echoed these sentiments by stating that the watershed plans serve as a mechanism to provide “some longevity and give [the WMAs] some opportunities to pursue funding beyond just the Iowa Watershed Approach.”

Benefit of collaboration. The organization of the WMAs as described above has also facilitated opportunities for increased collaboration and networking among partner organizations, which has reportedly strengthened the current work of the IWA and also holds potential to sustain these efforts beyond the IWA funding period. Looking back at the initial formation of the WMAs, Just saw this not only as a valuable contribution from the UI IFC, but also an incredible opportunity to “create a sense of value in how universities can partner with private organizations and the general public to do good.” He was proud of being able to bring together “disparate groups of stakeholders” to successfully carry out such a large-scale project. The value of being able to learn about the personnel, resources, and activities of the various partner organizations was a key benefit of the IWA described by at least three partner representatives. Miller (IWC) admitted that it’s easy to say that we should have state-wide partners, but “to have a project that really intentionally helps us develop those relationships has been extremely beneficial for us and I think is beneficial for the water community as a whole.” Turba reported that she now has a better understanding of some of the resources available through different project partners, and that the networking connections she has made in IWA have enabled improvements in communication with these partners. To that effect, she described becoming more aware of the resources other agencies have and “we’re thinking about those a little bit more when we’re out looking at disaster recovery work.” Benning (E&O) also reported that, while she thought she previously had a good idea of who was working on different water issues across the state, she developed a “better understanding of the breadth and depth of expertise that we have in Iowa working on water quantity issues.” Reinforcing the importance of building this enhanced network, she described how these stronger connections built through participation in the IWA have enabled her to become a better resource person to her team on campus and in the field. Furthermore, Benning believed the E&O team is now “better equipped to move forward and work in projects with more complex partnerships.” Thus, the increased funding and opportunities for collaboration made available through the IWA has led to capacity building among participating partner organizations.

Greater awareness. Several partner representatives either pointed toward the potential for or cited evidence of the momentum being created through the IWA to increase the awareness of the purpose and value of the watershed approach among a range of stakeholders. Two partner representatives viewed the current activity as laying the groundwork for such a “culture change.” Miller (IWC) expressed optimism that the successful outcomes of the current practices will allow the WMAs to promote a change in how we view water resources and related information in the future. In the same vein, Jackson (TPC) hoped that “there will be some greater awareness at the level of these watershed advisory boards regarding what the watersheds are and how they function.” Meanwhile, Just (UI FRT) reported already having observed a greater sense of awareness

on the part of WMA board members and meeting attendees, stating, “I think they understand why they’re there. I think people are now currently understanding why we assemble with this sort of a geographic boundary of a watershed.” Acknowledging the importance of the geographic boundaries of the WMAs, Benning (E&O) stated, “Our political boundaries are not always the right way to get landscape-scale change to happen. You run up against crossing political boundaries that don’t fit the natural system.” This remark evokes the very inculcation of the watershed mindset that Just had observed. Regardless, Benning emphasized the slow nature building momentum in this area, as well as the importance of education and outreach in being able to facilitate greater levels of awareness of the challenges and benefits of this type of work.

In sum, the partner representatives provided an indication that the IWA has laid the foundations for replication by demonstrating how to go about enacting the watershed approach on a large scale. In the words of Weber (UI IFC), “One of the biggest values of the program for the partners and the state of Iowa, is to demonstrate what good looks like, to show what’s possible, to create a road map for the future.” In this way, if “some meaningful, renewable, reliable funding” were to be provided, they would be able to swiftly enact this replicable model. Indeed, the benefits of the physical practices, as well as the lessons learned through the processes by which the IWA work has been carried out, have already begun to be disseminated to those that may pursue similar approaches in their own contexts.

Partner Contributions

This section outlines the self-reported major contributions of each partner organization to the work of the IWA, followed by a discussion of the ways in which their efforts were interpreted as being similar in focus. Whereas much of the partners’ contributions has been unique to the specific roles and functions of their organizations with respect to the IWA, many of their activities could be more broadly described as providing key resources and support to the Project Coordinators (PCs), as well as the members of the WMA boards. Additionally, a summary of participants’ anonymous feedback will be offered regarding the ways that their efforts could have been more strategically leveraged or more closely aligned with the scope of duties as originally outlined in the proposal.

Self-Reported Contributions

In their interviews, each partner representative was asked the following question: “What would you say have been, or will be, your organization’s most important contribution(s) to the success of the project?” A summary of their self-reported contributions is presented here by organization.

Iowa Flood Center (UI IFC): Larry Weber initially summed up the UI IFC’s primary contribution to the IWA with one word, “leadership.” Expanding on that, he stated, “It’s not just leadership from my chair, but it’s leadership amongst our team. And the team has been consistent, participatory, adding value, helping the watershed leadership think outside of the box a bit, bringing a state, regional, national, and even to some degree an international perspective to this issue.” Craig Just (UI FRT), who is also a faculty member affiliated with UI IFC, used similar language to describe the role of the UI IFC in facilitating the success of the IWA. Acknowledging the involvement of the whole team at the UI IFC, he confirmed that their most valuable contribution has been to cast the vision and provide leadership to the WMAs. He said that the UI IFC has been primarily involved in “creating the reason or at least promoting the reason why even forming a WMA is worth it.”

As a secondary contribution, both Just and Weber spoke of the quality of the technical modeling performed by the UI IFC. To that end, Weber applauded, “the hydrologic assessment and the modeling work in Phase 1 has been strong and solid. I think the Phase 2 portion of that is just going

to be rock solid and pushing the envelope in that technical area.” Similarly, Just described how their technical work, which has been “pretty powerful as they get embedded into the watersheds plans,” has provided the backbone for others to make informed, science-based decisions in the watersheds.

Flood Resilience Team (UI FRT): In describing the main contribution of the UI FRT, Just described how they have “helped to make the idea of a ‘multijurisdictional’ hazard mitigation assistance a real possibility.” Specifically addressing the technical efforts of the UI FRT, he indicated that they may “create a new model for communities to garner technical assistance and funding to restore their watersheds.” Through the research efforts of a graduate student, they have laid the groundwork for just such an opportunity with FEMA, thereby pointing toward the replicable model that was called out in the initial IWA proposal. He described that he has been developing a narrative to hopefully “trigger FEMA technical assistance in a way that’s never been done in Iowa before.” He continued, “At the onset, the UI FRT purposefully targeted the most difficult stakeholder group, ‘vulnerable populations’, since we have tremendous resources and that group is always named as the most difficult to hear from and plan for. So, even if we only move the needle a little bit for this broad group, then the project will be a success in my view.”

Homeland Security and Emergency Management (HSEMD): Jessica Turba anticipated that her organization’s greatest contribution to this project will be to provide resources and information to the project coordinators to enable them to more effectively define problems, identify available resources, and scale their flood mitigation projects according to those resources. She described that flood mitigation is not just about standing water, but it’s water that causes damage to the built environment. As such, HSEMD has been “looking at a lot of different aspects of what that damage is, how it affects or creates the problem that you’re trying to solve, and what [is] the best scale of the solution.” As an example of the scale of a solution, Jessica described that a farmer cannot fix the issue of having water on their field if the real problem is 10 miles upstream. She hopes that, through the information provided by HSEMD, the project coordinators will be equipped to see their implementation work in the larger frame of, “What problem was I trying to solve?” Turba further described that the information they have been sharing is embedded in the planning aspects of HSEMD’s work. She said, “We’ve been sharing data, trying to show the connection between damage and different kinds of occurrences for flooding.”

Iowa Economic Development Authority (IEDA): Jeff Geerts described that the major role of the IEDA is “being the administrator of the dollars and providing the assistance to make sure we stay in compliance with the federal requirements that come with those dollars.”

Iowa Department of Natural Resources (IDNR): Kyle Ament described that that the majority of the IDNR’s involvement has been at the onset of the project. Ament stated, “What we’ve done to get these WMAs on the ground is probably the major contribution that we’ve given. That was a lot of heavy lifting, took a lot of organization, took a lot of traveling to city councils, district meetings, and trying to explain how they will benefit and what the value of this is to them.” Referring to the investment of time and effort in establishing the WMAs, Ament added, “It’s something that hopefully now will be around for decades and evolve into something that maybe has sustainable funding someday.” Elaborating on their activity since the initial formation of the WMAs, Ament reported that IDNR has reportedly “[used] what we learned to help expand the watershed management authorities across the state.” Specifically, they have been providing insight and guidance to “communities in other watersheds with what I’ve learned from this Iowa Watershed Approach.” Ament also described being “heavily involved with drafting the RFP, the outline of what

the watershed plan should look like, what should it entail.” During this effort, he provided support to the “local members who don't know how that process works, guiding them through it, helping them make those decisions about ‘Who do we hire as a consultant?’, ‘What else do they have to do to get that consultant on board?’” Ament noted that the DNR’s “last major contribution has been [doing] some field work with collecting land use assessment data in at least two watersheds. So hopefully that’ll be a valuable product for the watershed management plan.”

ISU Extension and Outreach (E&O): Jamie Benning said, “For Extension, our contributions really revolved around developing education and outreach resources and supporting stakeholder involvement and outreach events.” Benning further described the role of E&O as a team that considers who needs the information and how to deliver it to them. She said, they consider how the different audiences prefer to receive information and the content and volume of information that’s appropriate. She mentioned having regional or county team members that were “working with each project in different ways in each watershed depending on their local needs.” Speaking to this point, she said, “Those sorts of outcomes are some of the best contributions-- having our people do what they do best and serve in a way that the watershed needs it.” Finally, Benning described two additional ways they have been supporting various watersheds: developing materials for the project coordinators and connecting coordinators with teams to help with outreach events.

ISU Iowa Nutrient Research Center (INRC): Benning, who also spoke on behalf of the INRC, discussed the potential for their research during the early stages of the IWA to contribute to a more thorough understanding of the current effectiveness of practices identified in the Iowa Nutrient Reduction Strategy for reducing nitrate and phosphorus. Specifically, “updating the scenarios of the Nutrient Reduction Strategy (INRS) will help everyone better understand the practices that are being installed and their impact on nitrogen and phosphorous reduction.” She also described research related to the economic benefits of these practices and the benefits of these practices on the landscape. Benning said these findings will be incorporated into the watershed plans during last couple of years of the project where possible, but “also will be available to incorporate into statewide INRS efforts and the next phase of each of these projects, whether they are part of another large effort or more individual at the watershed level.”

ISU Iowa Water Center (IWC): Melissa Miller articulated the most valuable contribution of the IWC in a couple ways. First, she described the importance of being able to offer the Iowa Water Conference as a venue to share the story and result of the Iowa Watershed Approach to a broader audience. Miller said, “I think that’s something that is contributing to the success of the project, not just in these five years, but helping with the sustainability.” CEA conducted a survey during the IWA sessions at the Iowa Water Conference in May 2019. Session attendees at all four IWA sessions found the information valuable and most were interested in learning more about the IWA (see [Appendix F](#) for summary report).

Second, she mentioned sharing the Daily Erosion Project (DEP) data with the planners and watershed coordinators who may not have known about it before. Miller said, “It’s tying the role of soils into what we know about water resource management.”

Tallgrass Prairie Center (TPC): Laura Jackson described how the TPC has focused on the practical aspects of supporting the work of the IWA, and being able to “move the ball forward for ourselves and really for anybody who’s thinking about expanding prairie at a meaningful scale.” Laura recognized that in a project like this, “a lot of times people get stuck with just advocacy about the benefits. But that will only get you so far, you really have to start addressing the barriers and being

proactive and observant about, “What is really holding us back here?” The TPC’s practical response to this very question has reportedly been their biggest contribution to the overall IWA project. Expanding on that, Jackson described how they have been “paying attention to the watershed coordinator’s needs” and providing them with the resources and support they need to carry out their jobs. As a concrete example, she offered, “We realized what they really needed was a list of contractors who could provide prairie restoration services and native seed and things like that. And so, we did it.”

Iowa Department of Agriculture and Land Stewardship (IDALS): Although IDALS, like all other partner organizations, was invited to participate in the interview process, they declined in taking part.

Organizational Change

Through their involvement in supporting the work of the IWA, several partner representatives described how their organization has expanded either the scope or focus of their work. For most organizations, this has meant gaining a new perspective on the work they do or adapting the functions they perform or the scale of their approach; meanwhile, others reported extending their geographic reach.

Five partner representatives indicated that, because of their organization’s role in the IWA, they have been compelled to gain practical experience in functions or directions that were previously unfamiliar to them. On the practical side, Ament (IDNR) mentioned that, whereas his organization had customarily been more involved in “awarding grants to local communities” and providing project management services to recipients, he and his organization have been tasked with playing a very different role in the IWA project. Rather than serving on the project management side, he stated that, “with the Iowa Watershed Approach, I kind of got away from my comfort level [with] the other side, where I’m trying to help with the grassroots side of things, get them organized, get them set up to use other people’s money. So that has definitely been a new role.” Other partner representatives described performing similar functions as before, yet expanding their audience or direction through their role in IWA. For example, Laura (TPC) described how this project has given them additional experience in the agricultural sector to complement their existing Prairie on Farms program. “We’ve always done the on-the-ground work and that’s very important, but not so much with agricultural systems.” Similar to the TPC, Geerts (IEDA) shared that, while “the work process or how we operate” has not changed because of their involvement in the IWA, it has “presented us with an entirely different area of work than what is normal for us.” His organization is “typically focused on funding projects within cities,” so the emphasis in the IWA on rural landscapes has prompted them to also delve into working with this new territory. This foray into a new setting has presented two challenges for IEDA. First, as far as process orientation, the IEDA’s “data collection and management systems are set up for singular projects, but what we essentially have here are multiple contracts, and within each contract have multiple projects.” Accordingly, the difference in logistics has “caused us to do things differently.” Second, they have reportedly had some “challenges fitting the project into some of the federal requirements of HUD, because this is also something outside of HUD’s normal programs.” Echoing the previous two examples, Just (UI FRT) also offered that, through their work on the IWA, “we have changed in our ability to focus on vulnerable populations,” particularly in the context of carrying out the technical work as described above in the contributions. Finally, the funding provided by the IWA helped the INRC more comprehensively address flood-focused research questions, as well as support research related to the economic value of best management practices (BMPs) and the impact of climate variability on agricultural

watersheds in Iowa. Jamie said there is so much research to do in “every facet of water quantity and quality,” so having increased budget capacity for this type of research helped INRC further its mission, while also expanding into related water quantity and resiliency topics. Through each of these examples, partner organizations have demonstrated practical changes their work, expanding their focus and skillset in response to the needs of the program.

For the Tallgrass Prairie Center (TPC), it was not necessarily the nature of their work that changed as a result of being involved in the IWA, but rather the scale at which it was occurring. The most significant change resulting from their involvement in the IWA has been their ability to figure out what it means to scale up their efforts beyond the individual-by-individual approach that they have been used to taking. To that effect, Jackson stated, “What we did not know before this project started is what scaling up would look like for empowering people to plant diverse native prairie on the landscape.” Looking back on their own learning curve, she stated, “We’re now able to look at things at this other scale.” Taking this broader approach to encouraging the adoption of prairie-related practices within the state-wide scope of the IWA has also enabled the TPC to have a much farther reach than their past efforts, which have “focused mainly on helping to install prairie strips within about a 50-mile radius. So, being involved in [the IWA] gave us the opportunity to think about prairie on farms at this much larger scale and figure out how do we operate at that larger scale?”

Beyond the practical considerations of expanding roles, responsibilities, and scope of their work, a small handful of partner representatives also discussed a shift in their perspective that resulted from their participation in the IWA. Returning to the work of the UI FRT, Just described that they have become increasingly aware of the need to respect and account for vulnerable populations in the work that they do. He said, “I think that makes us that much more prepared to continue expanding on good outcomes for those types of stakeholders.” Their increased emphasis on resiliency in the IWA has also begun to influence the lens through which their other research topics and activities are viewed. Regarding the growth of the IWC, Melissa reported that the work on IWA has provided a “sense of purpose” for the development of their Daily Erosion Project (DEP) and how people can meaningfully use the resulting data. She described that the level of interest from other IWA partners has “influenced how we think about the usability of DEP and also how it can inform management and policy.” She described how this response has “opened up some possibilities for us,” and has encouraged them to make upgrades to DEP to achieve different goals. Finally, Weber also acknowledged how through the IWA, as well as the work of the UI IFC throughout its 10-year existence, they have gained a better understanding of “what it takes to get a project done, built, and on the ground. So, I think it certainly made our work more real.”

Challenges

The two main challenges that partner representatives reported were related to the implementation and impact of the practices, as well as the continued engagement of the WMA board members and other stakeholders in the watersheds. These findings align very closely with the challenges cited by the key informants of the WMAs, reinforcing the importance of comprehensively addressing these concerns in the remaining two years of the grant.

Implementation of Practices

The most obvious challenge that lies ahead in the remaining two years of the grant is the successful implementation of practices on the landscape. This challenge was cited in some manner by each of the partner representatives, with an understanding that the outcomes of this grant may have longer

term implications for the continued funding and activity of the watersheds across Iowa. Stated succinctly by Weber (UI IFC), the biggest challenge “that’s on most people’s minds is getting all these projects constructed, getting the implementation dollars spent.” Ament (IDNR) also swiftly pointed to the “main focus of this project, which is to get conservation or to get practices on the ground.” He said that, while it has been a slow process working on this HUD funded project, he has been able to observe that, “a lot of [watersheds] are making good progress, but everything’s going to have go just right. I’m anxious to make it happen.” This cautious optimism combined with an awareness of the current and potential barriers to achieving success was echoed by other representatives as well. Just (UI FRT) mentioned the difficulties of navigating the restrictions imposed on the construction process by the Army Corps; meanwhile, Benning (ISU EO) mentioned the recent flooding, especially in the East and West Nishnabotna, that not only “re-emphasizes the need for this project,” but has likely limited the availability of the resource people who would otherwise be supporting the work of promoting and installing new practices. Jackson (TPC) also described hearing “frustration that things aren’t happening fast enough, there’s too much red tape, and landowners are frustrated because it’s taking too long.” She reported even hearing talk about requests for an extension “so that these projects actually get in the ground.” The limited timeline, even though it was a known commodity from the onset of the project, was a factor that was also cited by Miller (IWC) as a potential barrier to the implementation of practices. Linked to the challenge of timeliness of project implementation was also the issue of cost and funding for the projects currently in the pipeline. Just (UI FRT) was anxious to find out whether the proposed projects would “come in at cost and be built in a reasonable amount of time.” From Geerts’ (IEDA) perspective, he was not concerned about whether all the funds will be spent in the time remaining, but rather he projected that the money may not all “be spent at the contracted amounts with each of the current recipients. Some may spend less and have their money reallocated elsewhere.”

As far as responding to and addressing the barriers to implementing practices, there appeared to be a collective assumption of responsibility expressed by the partners. When asked specifically about the partners’ roles and responsibilities in helping the WMAs navigate the hurdles associated with on-the-ground implementation, Weber (UI IFC) said, “of course on the implementation side it’s all on the partners.” Specifically addressing the UI IFC’s responsibility, he indicated that, “our role there is more limited, and rightfully so. It’s on those community partners and the agency partners. So, I still think of DNR and IDALS as playing a supportive, active role in that implementation.” As if in direct response to Weber, Ament (IDNR) offered that the responsibility for addressing barriers, “it’s all of ours in many ways.” From his perspective, this may involve helping expedite the processes for implementation or “just being there to support the project coordinators as much as we can, offering them guidance.” Jackson (TPC) also noted that there has certainly been “evidence of learning and responsiveness” on the part of the coordinators to adapt and swiftly respond to some of the changes and barriers that have arisen.

For other partner representatives, the more significant challenges or concerns have to do with the likelihood of these practices producing measurable impacts on water quantity and quality. Just (UI FRT) was reportedly concerned about, “whether or not we can convincingly model the benefits of the practices that actually go in such that then the whole project looks like it has a good return on investment so to speak.” Although not a trained engineer, Geerts (IEDA) was also concerned that it may be difficult to demonstrate the level of impact of the BMPs through modeling or actual measurement. He pointed toward the ability of the IWA to achieve the “deliverable goals for HUD related to things like reducing stream flow and reducing nutrients and soil erosion. I think they’re

going to be challenging, particularly the flood mitigation part because we've had to add additional targeted sub-watersheds, which, pun intended, may water down our impact within each small watershed."

Engagement

The second most frequently cited challenge that lies ahead is the ability to simultaneously maintain an adequate level of engagement from existing stakeholders while also attracting interest from new landowners and other public stakeholders. For those partner representatives that discussed WMA board member engagement, the issue of obtaining quorum at quarterly meetings was of most importance. Although she did not have a solution to the current struggle to maintain quorum, Benning stated, "I do see the challenge in keeping that quorum and making sure those that need to be there are there to make decisions and that they're well-equipped to make those decisions." Ament (IDNR) echoed this concern, describing that this could become a larger issue as "the newness wears off, the money disappears, they discover they're not directly benefitting from this project, they quit showing up to these meetings, and it becomes harder to conduct business." He expressed the need to find "a way to keep them engaged and keep that WMA alive, [because] if they don't see a benefit, they're going to spend their time elsewhere." There were several other reasons offered that may explain the decrease in attendance at WMA meetings. Benning suggested that members from smaller communities often "wear a lot of hats" and have many competing demands on their time. Furthermore, as Turba (HSEMD) pointed out, the fact that board members have to volunteer their time and effort in the WMA makes maintaining interest difficult. Another threat to the sustainability of the WMAs according to Just (UI FRT) was "just the geographic size of a HUC 8 watershed and trying to keep people driving up and down and back and forth and to have these meetings." Benning also mentioned how the size of the watersheds may prevent members from really being able to know one another and creating those connections that are necessary to building momentum. An anonymous partner also described how the very localized selection of priority HUC 12s within the larger watershed, "has been very frustrating for many of the WMA members to understand why they can only do conservation in this little small area, but then we're doing all this planning for the HUC 8s." This representative mentioned how this has been part of the difficulty in maintaining broader interest and engagement in the WMAs when they don't see the direct benefit.

Regardless of the source of the growing concern related to quorum, there was a consensus about the vital importance of maintaining board member interest and engagement. In response to this challenge, Geerts (IEDA) advocated that "the cities and counties that make up these watershed management authorities become more active in the work of the authority and actually take action through policy changes and through financial commitments to help achieve the goals of the Iowa Watershed Approach." Turning again to the role of the partners, Ament (IDNR) shared that he had "been trying to work with the project coordinators to find little ways to keep the agenda alive, keep it something interactive, put something on there that's maybe going to entice them to come to the meeting, so they either learn more, [talk] about future funding opportunities, or just keying things up for them to look forward to." The notion of using meeting time effectively was echoed by Jackson (TPC) in reference to the all-partners meetings (which include project and community partners). She stressed the need for these meetings to be relevant for all participants, "because otherwise this whole thing could really [lead to] low morale." Benning (ISU EO) also pondered ways that her organization might be able to bolster engagement and ensure that things continue to move forward. She suggested having more frequent communication with those who are actively implementing the program to discuss areas in which they may need help. She suggested that E&O could reach out to the coordinators more frequently as the program draws closer to the end to learn about their progress and to make sure that they're equipped and that "they're accomplishing everything that

they can, spending their dollars, making sure everybody feels like it was a success.” However, she also wanted to be sensitive to not get in the way of the PCs, as she knows they are very busy. Only a few partners discussed the challenge of engagement among farmers or landowners. Geerts (IEDA) and Turba (HSEMD) each signaled that landowner participation could still be a challenge in the remaining years. In reference to their interest in the IWA and installing practices, Turba pointed out that “you kind of need to work with what you have available.” Benning (ISU EO) took a slightly different approach to engagement, advocating for additional farmer and landowner representation in the WMAs. She said, “Typically in most watersheds in the state, the change needs to happen on private land and on private agricultural land based on current land use in Iowa.” As such, Benning suggested that they need to figure out a way to get farmers to participate in WMA meetings (either officially or thorough a farmer advisory council) since many of the people who participate are city or county representatives. She said, “I think it should be more purposeful to make sure that there is a [farmer] voice and a seat at the table so that it’s a more collaborative effort.”

Other challenges

There were various additional challenges that individual partners cited as potentially influencing the outcomes and activity of the IWA, each of which are summarized below.

Jackson (TPC) spoke at length about the influence of agribusiness, or large agricultural corporations. She stated, “In our view it’s not really landowner resistance that limits us to adopting these [practices] that will make us more resilient, it’s farm policy, it’s global markets, it’s the very systemic nature of our landscape.” She described the impediment of “agribusiness with very deep pockets that want to make sure that they get cheap inputs and that they keep selling a lot of products to a lot of people.” Speaking of farmers as being constrained by this inherently oppressive system, she stated, “They may or may not recognize it as such, but they have very little autonomy when you look at it at the larger scale to make any important decisions.” Thus, while the current planning efforts through the IWA to influence “the way the landscape behaves with respect to water” are noble, they’re actually being “hemmed in by this much larger systemic issue” that is being manipulated by a handful of corporations.” Jackson implored Iowans to reject the status quo and instead to develop a sense of local watershed patriotism, which she sees as critical to ensuring flood resilience among the general populace. According to Jackson, this type of grassroots process may lead to a greater renewed sense of loyalty to our region and our landscape. Referencing the increasingly deleterious effects of climate change, she petitioned, “At what point will we be able to start acting on the knowledge [with] a more coherent scientific-based understanding of how the ecosystem functions?”

Benning (ISU EO) discussed the challenge of making sure that the research carried out by the INRC is disseminated in an appropriate manner to those for whom the information would be relevant. Benning said that the INRC has been more isolated by the nature of their deliverables for this project. She said, “This is where I see the Extension role overlapping, making sure that information is communicated to partners and stakeholders.” She cited three specific target audiences: other partner teams doing conducting planning and modeling work, the WMAs, and the Nutrient Reduction Strategy partners and implementation teams. She described the need to write succinct summaries for each project so that the results can be referenced by other project teams, especially in cases where the findings could affect the work of another partner.

Similar to the Benning’s concern about the challenges of effectively connecting outcomes to the audiences that could most benefit from the information, Weber (UI IFC) discussed the need to find creative ways to ensure that the outcomes of the flood resilience program are of value to the

communities in which they are engaged. He readily acknowledged the inherent challenges in sharing content in ways that are most helpful for those that need to act on it. Nevertheless, Weber expressed growing optimism that the final deliverables from that arm of the IWA project will equip communities to apply for “mitigation funding, disaster recovery monies in the future.”

As a counterevidence to the challenges cited by other representatives, Just (UI FRT) felt strongly that the project as a whole was on a solid trajectory “to meet all of the major objectives that were promised.” In fact, he was confident that “a lot of those major deliverables are kind of ahead of schedule right now.”

Anonymous Feedback

When asked about what they wished could have gone differently, some participants chose to offer constructive criticism related to potential opportunities for their increased involvement or activity during the early stages of the grant. Other partners discussed situations in which they felt that there was a disproportionate effort or contribution, either from their own organization or that of other partners’ organizations.

Suggestions for improvement. A handful of partners provided suggestions for how the initial development of the proposal and the inception of the project could have gone more smoothly. Specifically, two partner representatives described how a greater level of involvement from partners during the planning process may have resulted in a stronger and clearer program design. One representative described, “just making sure that all partners could be more of a part of that proposal planning process, I think things would have been more integrated and seamless,” rather than simply fulfilling contracts or providing resources and deliverables on an individual basis. The second partner representative spoke more generally about the selection of the WMAs, stating, “there could have been more local involvement in the development of the HUD proposal.”

The second major point that was addressed by three partner representatives was the potential value of having a partner meeting at the onset of the project to ensure that everyone understood what each other’s role was, to avoid duplication of effort, and to promote greater networking and collaboration. One partner stated, “We could have been a bit more formalized in our approach and how we coordinate information... we could have identified some redundancies or opportunities to collaborate more formally.” Reinforcing the importance of such a meeting, they described having a lack of awareness of the different aspects of the IWA project that other partners have been working on. This same representative added, “We missed an opportunity along the way to help each other be more effective.” In a similar vein, another partner representative reflected on the fact that their team spent a lot of time finding their unique place in the project. This representative described realizing after the project started that there were tasks in their workplan that overlapped with that of other partners. From their perspective, this extra time spent sorting out everyone’s scope of work led to a certain degree of disengagement, which perhaps could have been avoided if they had an opportunity to meet in advance. Similarly, another representative from a different partner organization suggested that it may have helped “to have brought all the partners together at the very beginning and gone step by step through the development of the project.” In this way, they could have collaboratively “identified some of the barriers, the questions, the delays that we encountered through the project, and maybe we could have streamlined the process more quickly.” Reinforcing this point, they stated, “Every time we think we’ve answered all the questions, there’s a few more. We get a new one every week.”

Disproportionate effort or output. With a grant of this scale, it is perhaps unsurprising that one of the more frequently cited elements of anonymous feedback from partner representatives centered on the imbalance of output or the disproportionate effort being put forth by different partner organizations. Whereas in some cases, this disequilibrium was readily acknowledged by the individual partners in question, in other cases it was only identified as problematic by one or more of the original planning partners (UI IFC, IEDA, and HSEMD).

Among those representatives that admitted their organization could have either contributed more or wished they had done some things better, several of them expressed a degree of uncertainty about how their efforts could have been improved. One representative simply stated, “When you consider how much money we’re getting out of this project and what I feel that the effort I’m putting back into it I think [they] are kind of incongruent.” In other words, while they felt they were living up to the expectations of their role, they were also ready and willing to put forth more effort when called upon to do so in order to match the sum of money they were allocated. Another partner representative described how their team was in the process of forming when the IWA started, and therefore it was “more a matter of the experience of our staff and coming together as a team.” As far as how this related to being better equipped to support the work of the grant, they said, “now that we’re a more gelled team, we would be able perhaps to do more earlier, but that’s always the case.” Their desire to be more effective in fulfilling their role and striving for better outcomes was only limited by their lack of experience in partnering on a grant of this scale. Still another partner described how the multifaceted nature of the project made it challenging to know how to most effectively support the on-the-ground efforts. Describing that disconnect, this representative stated, “we’ve spent a lot of energy and resources trying to support what we think the watershed might need from us.” Because of the higher-level approach of the grant, they said, “We might be doing something that the watershed coordinators will never use, and it’s not because we’re keeping it from them, it’s just because they don’t need it for what they’re doing in the present.” In other words, it has been difficult to capture the extent of what they’re contributing to the ongoing implementation effort.

In some cases, the planning partners made more direct comments regarding the disproportionate effort or misalignment of the activity of specific partner organizations. Addressing the different levels of involvement of select partners in the initial proposal stage, one planning partner representative described that there were several organizations that “wanted to be involved and wanted to lock down a portion of their involvement through the program development.” However, despite their inclusive approach in encouraging collaboration, they reflected that, “in some cases, not everybody has lived up to their role.” Turning toward the implementation phase, this representative offered specific examples of how various partners either deviated from their defined role or underperformed according to what was originally expected from them. With respect to the misalignment of activities, the planning partner representative emphasized the importance of ensuring that each of the partners “stay in their lane,” and perform the duties and roles that they have been assigned. Regarding those partners that were considered to be underperforming, the planning partner representative expressed regret about not working more closely with those organizations or being more engaged in their activities. The representative further articulated their apprehension about the current imbalance in effort by suggesting that they may have wished to reallocate funding in order to match the current effort. Nevertheless, they also acknowledged the potential for the output of these organizations to be either “an incredible highlight of the program, or it might just get over the bar. And I don’t know if it’s just going to make it over the bar or be something that really sets a new standard” in the field.

The perception of inconsistency in the partners' effort or deliverables, however, was not shared by the representatives of the partner organizations in question. Despite recognizing opportunities for minor improvements along the way, they did not feel that they were off the mark in terms of being able to achieve their final objectives as outlined in the grant proposal. Instead they each expressed a reasonable degree of confidence in the work they have completed thus far and were confident that their partner organization would increasingly add value in grand scheme of the project. One of the partner representatives in particular described how their involvement in the IWA has been the source of personal and professional growth. Although they were rather anxious about some aspects of their performance, on the whole this experience will serve as "an advantage on big projects like this going forward."

Finally, two partner representatives shared disappointment about the limited participation on the part of IDALS, who they each viewed as holding potential to be an effective partner in the success of the IWA. One representative described how they "got plugged in late, partly because I think they wanted to be a little bit of a watch dog over what we were doing." The other suggested that IDALS "probably had the most experience in the implementation side of it." They surmised that, if IDALS had dedicated more staff support to the work of the IWA, the implementation side of things could have proceeded more smoothly.

Strengths and Weaknesses of the WMAs

In the words of Weber (UI IFC), the WMAs "all come with their own strengths and weaknesses." While there are inherently unique strengths and weaknesses when considering each individual WMA, there were also several consistent themes that emerged from among the partner representatives' responses when discussing the collection of WMAs more broadly.

Strengths

The two most frequently cited strengths of the WMA as a system were the fact that these entities are locally led and that they function through collaboration from among a range of stakeholders and partners. For example, Geerts (IEDA) described the strength of the WMA as being the collaboration of multiple entities, and their ability to leverage their local connections toward a common objective in carrying out the watershed activities. To that effect, he described the strength as, "bringing together those different cities, counties and soil and water conservation districts together to work collaboratively on watershed issues." In a similar statement, Ament (IDNR) underscored the value in cooperation and collaboration among WMA members as "creating this coalition of people that have the same goals." He suggested that this relational strength, which extends beyond bureaucratic boundaries, should be highlighted in future applications for funding. In sum, he stated, "the partnerships have really been powerful, and I think will really help these communities and these watersheds looking forward." Considering the strengths of the WMA as a coordinating entity, Turba (HSEMD) said, "It should work fairly well. It provides the mechanism for jurisdictions to communicate and organize actions." Commenting on the local leadership among the WMAs, Weber was reportedly impressed with how "the WMAs in some ways are acting more nimbly and quickly than our legislature and our state government agencies have, and again, moving things forward from a planning, communications, and adaptation and adoption perspective." Miller (IWC) described that this multijurisdictional approach to watershed management is the "gold standard for how we manage our water resources." Reiterating the success of the locally led initiative, Weber mentioned their ability to gain funding through county conservation bonds, which have enabled them "to move things forward on a local level."

In a different vein, Just (UI FRT) highlighted the compelling nature of the common objective that the WMAs are attempting to address. To that effect, he stated, "A huge strength to me is just the topic of

floods. People don't want to flood. Floods are very visual. They evoke an emotional and then eventually a rational call to action.”

Weaknesses

The main areas of weakness of the WMAs described by the partner representatives were related to board member engagement and their diversity of perspectives and knowledge, as well as the lack of long-term and consistent leadership to provide ongoing vision and support to the work that has been initiated thus far through the IWA.

Engagement. As already mentioned above, several WMAs have begun to experience attendance and quorum issues at their quarterly meetings. This is indicative of a growing weakness in the WMAs’ ability to maintain engagement from among all of their members. While many of them have a core group of board members that participate regularly, several others attend only infrequently. Recognizing the disparate levels of engagement, Miller (IWC) commented that some groups feel as though they are not invited to participate in the WMA, which is a missed opportunity for them to understand who can be a member and how they could be represented on the board, even without having official membership. In response to the attendance and quorum issues, Just (UI FRT) suggested, “We need to redouble our efforts to target those in the WMA that don’t see enough value to participate. I am working very hard to provide additional value to the WMA concept that will benefit these rural communities that may not be participating currently.” Having also observed a somewhat weak level of engagement at quarterly meetings, Jackson (TPC) felt that the WMAs lacked “a grass-roots feel,” without which the future of the organizations may be uncertain. This same sentiment was shared anonymously by two other partner representatives who each voiced concerns about the lack of local involvement in the selection of watersheds. Like Jackson, one of the interviewees suggested that there might have been an overall better response on the part of WMAs if they were to have organically formed and voluntarily opted into the project. They acknowledged that there were valid reasons for selecting the particular watersheds for the grant, but “it would probably have just been a little easier sell to get members on board” if it were more of a grassroots effort from the onset.

Related to the broader notion of engagement, Geerts (IEDA) questioned the extent to which WMA board members felt empowered to develop agency in and through the work of the WMA. In fact, he noted what seemed like a sense of apathy on their part, stating that he was “not sure they recognize that they are the WMA.” He continued by saying, “So, when the WMA talks about what needs to be done, they’re really talking about what they need to do, and I’m not sure many of them fully realize that for those WMAs to be impactful, that means they actually have to go back to their city, county, or soil water conservation district and adopt policies, adopt incentives, dedicate funding.” Based on current observations, he was reportedly skeptical about “how much communication takes place by the watershed management authority participants back to the entities that they are representing.” Reflecting on this potential discord or lack of ownership of the WMA activity, he surmised, “That’s maybe something all of us other partners need to be better communicating or reminding them at WMA meetings that that is the case.” This critique by Geerts was tempered by Weber’s comments, in which he acknowledged, “We’ve got some [board members and chairs] that are incredibly active and positive and moving things forward, and others that simply haven’t been able to show that level of leadership.”

Multiple perspectives and expertise. Several partner representatives made remarks about how the diversity of the WMA members’ background and experiences has been something of a double-edged

sword. Where it has been a weakness is in the inability for all members to access and understand the information being shared. Turba (HSEMD) described that, from an “outsider perspective,” she sees a “struggle to connect” in the WMAs, which may be related to the multiplicity of perspectives, varying levels of understanding of the watershed concepts, and a variety of objectives being discussed. For example, Jackson (TPC) described how, at one meeting, “there were a couple of presentations by the modeling group, [and] if you were a modeler it was a very cool presentation, but I could tell the other people in the room were not getting it.” In a way, for some members, Turba noted, “all of this data is just in the way.” While she felt the board members exhibit a great level of engagement and willingness to participate, “I think that there’s a variety of interests and how they coalesce is just very challenging.” Turba (HSEMD) acknowledged that bringing these different perspectives of flooding into the same conversation could be advantageous and lead to a broader impact; however, it also introduces the possibility for confusion, where the meaning of certain terms and concepts can also become unclear. Furthermore, this diversity of background and expertise among the board members may lead to a lack of clarity regarding the appropriate actions to take in response to the information being shared. For example, Turba (HSEMD) has observed WMAs responding to the watershed plans with “actions” like encourage, communicate, and educate. While she did not discount the need for such activity, she noted, “those aren’t always actionable in the sense that it outlines exactly what will happen.” Furthermore, she doubted “that the coordinators or the WMAs know when they individually should act as jurisdictional leaders, when they should act together and for what purpose.” Thus, whereas the multiplicity of perspectives of the many WMA members may enable a greater level of collaboration (see strengths above), it may also negatively affect their ability to connect to and effectively carry out the goals and activities of the IWA.

Skills of project coordinators. Finally, the varying level of quality of project coordinators (PCs) in the WMAs was also discussed by a few partner representatives. In reference to the PCs currently employed through the IWA, Weber stated, “they come with their own strengths and weaknesses, and we have some of the best of the best, and we have some that haven’t risen up to that level yet.” Addressing the lack of adequate performance by one PC in particular, an anonymous partner representative advocated that, “We should look at the watershed coordinators at this point and decide who is evaluating their work and should they stay on.” Based on their individual observations, “this PC doesn’t have the right skill set for the work that needs to be done.” They added, “it’s not fair to the watershed, it’s not fair to the other people who are working around that person, [and] an enormous amount of opportunity is [being] allowed to slip through our fingers.”

Need for long-term and consistent leadership. Although the collaborative and grass roots approach to watershed management may be more effective in promoting widespread engagement, a few partner representatives indicated that they may also benefit from some more long-term and vision and direction. Miller (IWC) specifically described a need for dedicated leadership in the WMAs of Iowa organization: “They’re moving to a point where they would benefit from a full-time executive director who is working on all of those things for them.” Miller reiterated the point, stating, “this is about finding a person that can start to construct that story of what the WMAs are, what they can be, and how they get there.”

Despite the seemingly overwhelming list of weaknesses that were articulated by the various partner representatives, Geerts (IEDA) reiterated that “there are many benefits to [the WMAs] that make them very important and worthwhile. They’re just not being fully utilized to the extent possible for the impact they could be having.”

Sustainability

When considering the outlook for others to continue utilizing the watershed approach in Iowa beyond the IWA funding period, partner representatives expressed a mix of apprehension and cautious optimism. Regarding the overall construct of the IWA, most interviewees were expectant that the desire to maintain the approach would remain strong. For example, Benning (ISU EO) stated, “I think the interest and urgency to work on a watershed basis and work on water quality and water quantity challenges is really strong.” Ament (IDNR) was equally optimistic about the potential to expand its use. He said, “I think there's a good opportunity to replicate this in the future.” He acknowledged that “this isn't new, it's just, we plan, we implement, we evaluate it. What's unique here is the scale that we're doing it at and the resources that are made available.” Similarly, Geerts appeared confident that, “there will be others that will want to use the approach.” He continued, “Hopefully we create enough momentum in those watersheds and communities we are assisting that they will be able to continue the effort once the Iowa Watershed Approach contracts are over.” However, this general optimism about the value of the watershed approach was met with varying degrees of hesitancy regarding the myriad factors that influence the likelihood of sustaining the effort over the long term. Ament expressed having reservations about “how long it will be until we see this kind of effort,” or at least at this same scale. Turba (HSEMD) further reasoned, “So, the funding for the IWA was very specific, for a certain purpose from a certain organization. If you want the IWA construct to work, it has to be flexible enough to access other tools and resources. So, until I see that demonstrated, I'm not sure there is a sustainability mechanism for it.” Miller (IWC) also advocated that the IWA team should be paying greater attention to the sustainability and broader applicability of this work. Meanwhile, another partner representative stated matter-of-factly, “I don't see very much in the project that's designed to plant seeds of replication.”

Lessons learned

Looking toward the future benefit of what has already been accomplished through the IWA, a small handful of partner representatives cited how the lessons learned may lead to a more strategic and efficient execution of this approach moving forward. Turba (HSEMD) anticipated that the activity of the IWA will essentially build the muscle memory necessary to increase their overall efficiency in carrying out the same tasks in the future. To that effect, she stated, “When we get to the end, what I hope to see through planning and project scoping and future implementation, is a coordination of effort appropriate to the problem they're trying to solve. And then, kind of the basic knowledge of what the first, second, and third step would be to work on that problem.” Another representative also described the new learning opportunities that have occurred through the IWA because of the intersection of urban and rural practices. For example, they described watching and learning from the work currently being done in the City of Dubuque, which they described as a strong example of how to do watershed work in a way that directly affects people. In reference to their successful outcomes, this representative predicted, “We might all walk away with another tool in our belt from them.” Miller (IWC) also emphasized the potential for the WMAs to collaborate more intentionally and to apply the lessons learned from one another toward improving their overall impact. These types of mutually beneficial opportunities for learning would help address what Geerts (IEDA) identified as the “need to work out ways to continually streamline the process to make things go much more quickly.” Having also learned through experience by participating in the IWA, Benning (E&O) made two specific recommendations regarding the future continuation of these efforts. First, she said it would be important to consider splitting the planning and implementation processes into two distinct phases of the project. She acknowledged that it could be challenging

administratively, but “I do... have some concern with landowners that were there right at the beginning... but then had to wait until maybe even two years later for the ability to really break ground and install practices.” She believed that separating the processes in this way might help to manage “interest and enthusiasm among different partners and stakeholders within the watersheds.” Second, Benning suggested that certain tasks be considered at specific scales. As an example, she felt that networking and capacity building should occur at the HUC 8 scale and implementation at the HUC 12 scale. She said, “That’s how you continue to build momentum... you feel like you’re really accomplishing something when you’re working on a smaller scale.” Capturing the essence of what has been learned and how the current planning and efforts could translate into ongoing activity, Jackson (TPC) questioned, “Can planning happen from the ground up, from the constituents who are in and of it?” and “How do we transition from this big grant from HUD to something that sticks?”

WMA sustainability

As the central entity in continuing the IWA approach, many of the partner representatives focused their attention on the sustainability of the WMAs, or the likelihood that they would remain active beyond the IWA funding. As Weber (UI IFC) pointed out, “We’re at ground zero of the most critical time in the state of the WMAs in Iowa.” There were mildly varying perspectives on the outlook for WMAs to maintain their current level of activity, with much of the apprehension centering on the uncertainty of funding.

Broadly speaking, there was a sense of hopeful anticipation that the current activity of the WMAs, as well as the tools and resources provided by partners, might position the WMAs to successfully pursue and be awarded viable sources of funding in the future. Addressing the potential benefit of the IWA project at large, Geerts (IEDA) stated that it “will serve as the model for other parts of the state that have not yet developed watershed management plans or plans for how they’re going to address future flooding and water quality.” Combined with the work of the IDNR in creating a guide of best practices in forming a WMA, Miller (IWC) said that if the project team can spend the next two years “getting those materials properly established,” that will serve as a valuable resource for more WMAs in Iowa. Finally, as Just (UI FRT) pointed out, if his organization is successful in their technical efforts, they may “create a new model for communities to garner technical assistance and funding to restore their watersheds.” Just shared that they were learning how to “trigger FEMA technical assistance in a way that’s never been done in Iowa before,” which may eventually lay the groundwork for the replicable model that was initially called out in the IWA proposal.

Multiple partner representatives, however, expressed skepticism about the extent to which the WMAs would be able to sustain the current level of activity in the long term. This doubt was stated differently by different interviewees. Ament (IDNR) predicted that, “If you were to look ten years down the road, how many of those are going to still be engaged? If we’re lucky, we’re going to have 3 that are still engaged at this level and have funding and have dedicated people and keep pursuing additional funding sources.” Turba (HSEMD) speculated that the watersheds that were “organized and moving” before this project would likely continue, “but can they keep it at this scale is really the question. I don’t know.” Jackson (TPC) echoed Turba’s uncertainty about the sustainability of the WMAs, “especially if they don’t have any money to give away.” Even Just, who expressed optimism about the potential continuation of the watershed approach, was reportedly anxious to see to what extent the WMAs will continue assembling beyond the IWA grant funding period.

Funding. As already alluded to above, the lack of secure and renewable sources of funding was perceived as the greatest impediment to the future sustainability of the WMAs. Several partner representatives highlighted the urgency of devoting significant attention to securing additional funding for WMAs to maintain the day-to-day operations and to continue implementing practices. The only differences in the representatives' suggestions in this area were the means by which to pursue funding and the sources from which it should be derived. Just and Benning recommended writing grant applications. To that end, Just suggested that, "partnerships with these RC&Ds and other planning organizations that are used to writing proposals, hopefully that will keep going." Meanwhile, three partner representatives explicitly spoke about the need for consistent, state-level funding to support the continued work of the WMAs. Miller (IWC) advocated, "I firmly believe that the WMAs need some sort of base level state funding" if we are going to expect them to address watershed management at the "big picture" scale. Similarly, Weber (UI IFC) offered that, "if we had leadership in the state, then [funding] would come from [Iowa Water and Land Legacy (WILL)]," with allocations to the various WMAs originating from that source. Weber indicated that "the tone from the capital right now is there's a reasonable likelihood that IWLL will pass next year, probably a better chance than any other time in the last nine years." Jackson (TPC) also spoke of the need for "consistent funding" for the PCs in the same way that the roadside managers are currently being supported by their respective county governments, with additional support from the state for equipment, training, and coordination. Speaking specifically about the project coordinators (PCs), she stated, "If their only role is writing contracts and giving away money, when that money is gone, who is going to call for them to stay and find some other source of funding for their salaries and benefits?" Other partner representatives also indicated the need to prioritize the allocation of funds toward maintaining the role of the PCs, because of their critical role in carrying out the work of the WMAs. It should be noted that both Jackson and Weber spoke elsewhere about the potential negative influence of the Farm Bureau or agribusiness in thwarting the ability to establish state-level funding for this type of effort. Finally, Geerts (IEADA), much like his WMA board member counterparts, suggested that the partner organizations that are benefiting from the current activity should step up and contribute financially to the WMAs. Thus, while there are multiple avenues by which funding streams could be secured, all interviewees recognized the need to prioritize this discussion and swiftly begin taking action.

In summary, while the partner representatives agreed that the overall concept of the IWA holds the potential to have a great impact on flood mitigation, without a secure source of funding, the outlook for maintaining the current level of activity is bleak. As Weber reiterated, "We're at ground zero of the most critical time in the state of the WMAs in Iowa." Despite evidence of moving forward with project implementation, "it's going to be hard to keep the communities involved and engaged and feeling like the WMAs have meaning if they don't have funding. So, it's a sad state when we're always pointing back to funding, and funding, and funding, but it is just a reality for these WMAs to have meaning and have survival." Returning to the sustainability of the overall approach, Ament (IDNR) acknowledged that the way the overall grant activity has been structured (the sequence of planning, implementation, and evaluation) has laid the proper foundation for the WMAs to be able to make the case to other funding organizations to carry on the work that they started. While some select WMAs have already been able to win smaller grants to supplement current activity, secure and renewable funding still appears to be the elusive yet critical element in their efforts toward long-term sustainability. According Just (UI FRT), even if the watersheds become "more of a volunteer operation," he remains hopeful that they will maintain a certain degree of engagement and support, building off the current momentum through the IWA.

Anonymous Feedback

While much of the anonymous feedback has been integrated in the main body of the report, some additional comments made by the partner representatives are briefly summarized below.

One partner representative discussed the complicated and expensive nature of the project on the whole. Stemming from their own perception of how “the federal money that we're working with is so cumbersome,” they also acknowledged the frustrations experienced by other WMA members and partners. To that effect, they stated, “whether it's the process of bringing on contractors or it's the quality of work that the contractors are doing.” Unfortunately, they fully recognized “there is nothing you can really do about it,” but there has undoubtedly been “a lot of eye rolling as they're going through this process.” Even though there isn't the potential to fix the issue, it has definitely created a scenario where there has been a negative energy produced by the overwhelming requirements attached to federal dollars. In responding to some of these negative perceptions regarding the slower-than-expected progress made on this project, another partner representative stated, “A lot of people don't understand the benefit of planning. They don't understand why this is taking three years to get to this point.” In actuality, this representative believed that “the planning side of it has gone fairly smoothly.”

Finally, ending on a positive note, two partner representatives expressed sincere gratitude and appreciation for the staff that they work with, as well as the funding received from the IWA grant, which has made “all the difference in our organization in terms of helping us to recreate ourselves,” and gain momentum and capacity, becoming a lasting and “viable institution” that has diversified its funding sources and will continue to be financially secure when IWA funding runs out.

Appendix F- Iowa Watershed Approach at the Iowa Water Conference Survey Findings

Iowa Watershed Approach at the Iowa Water Conference Survey Findings

The Center for Evaluation and Assessment (CEA) conducted surveys at the Iowa Water Conference, *Back to Basics: Land, Water, People* held in Ames, Iowa on March 12-13, 2019 as part of the Iowa Watershed Approach (IWA) program evaluation. The conference was organized by the Iowa Water Center, an IWA partner. As part of the 2019 conference, there was a strand of sessions related to the IWA. The presentations in the strand were related to IWA work and IWA partners presented the sessions, however the IWA presenters hoped to attract a broad audience, not just people already involved in the IWA. The purpose of the survey was to learn more about the audience's familiarity with the IWA, their interest in the topics presented, and the IWA in general, and to gather any questions they might have about the IWA.

The CEA collaborated with Iowa Flood Center (UI IFC) and Iowa Water Center staff members to plan the content and procedure for the survey. The UI IFC chose four sessions that were part of the concurrent sessions and most directly related to the IWA for survey distribution. Two sessions were on the first day and two on the second day of the two-day conference. The four sessions and their presenters were:

- *A case study for flood resilience.* Sharon Gaul, resiliency coordinator, Housing and Community Development, City of Dubuque, Dubuque, IA.
- *Success and challenges of watershed resiliency.* John Rathbun, project coordinator, Clear Creek Watershed Coalition, Iowa City, IA; Jennifer Fencel, director, environmental services, ECICOG; Heather Thomas, project manager, CGA; Dan Holderness, city engineer and IWA urban planner, City of Coralville. Coralville, IA.
- *Community solutions for flood resiliency.* Jim Marwedel, hazard mitigation planner, Iowa Homeland Security and Emergency Management Division, Windsor Heights, IA; Cara Marker-Morgan, coordinator, East and West Nishnabotna River Watershed Project; Rick Wilson, leader, Integrated Water Management Service, JEO Consulting Team; Adam Rupe, environmental planner, JEO Consulting Group.
- *Evaluation of different flood mitigation strategies using GHOST: The Iowa watershed model.* Antonio Arenas, assistant research engineer, IIHR Hydroscience and Engineering, University of Iowa, Iowa City, IA.

At each of the four sessions, the CEA distributed paper surveys onto tables or chairs before the session began. The session facilitator or presenter briefly explained the survey to attendees and asked them to leave the surveys near the door as they exited the session. Attendees were told that the survey was voluntary. At each session, the CEA staff members took rough attendance numbers, but because some people came in late and others left early, the attendance numbers quoted below for each session are estimates. Because sessions were tightly scheduled during the day, there was very little time for people to complete the surveys and responses to open-ended items were, for the most part, correspondingly brief.

Brief Overview

Most of the people who attended each of the four IWA sessions were already familiar with the IWA. Session attendees at all four sessions found the sessions valuable and most were interested in

learning more about the IWA. Many of the participants' comments were related to the specific session they were attending rather than to the IWA in general, therefore, those comments are described below, by session. Across sessions, the areas in which participants expressed the greatest interest related to the IWA were:

- Partnerships
- Access to resources
- Working across municipalities and counties
- Urban watershed issues
- Data availability – flood and social data
- Education and outreach

The four sections below report survey results for each session.

Session 1: A Case Study for Flood Resilience

There were approximately 28 people in attendance at this session and 17 people returned a survey for a response rate of 61%.

Table 1.

Session 1: Case Study for Flood Resilience

Item	N	Yes	No
I was aware of the <i>Iowa Watershed Approach</i> before I attended this session.	16	13	3
The content of this session was valuable for me.	15	15	0
As a result of attending this session, I am interested in learning more about the <i>Iowa Watershed Approach</i> .	14	12	2

Most of the people who attended this session were already familiar with the IWA. Everyone who responded to the item said that the session was valuable to them and most indicated that they were interested in learning more about the IWA.

Attendees at all sessions were also asked the following two open-ended questions about the Iowa Watershed Approach. In many cases, although the questions asked in general about the IWA, some responses were more closely aligned with the specific presentation.

What aspects of the Iowa Watershed Approach do you think could be valuable to you in your work?

Eleven respondents at this session mentioned several ways in which aspects of the *Iowa Watershed Approach* could be valuable for their work.

- Building community resilience capacity: Four respondents mentioned local efforts to improve their communities' ability to "deal with flooding" and to be involved in "watershed management."
- Educational outreach: Two respondents said they were interested in "learning how to connect residents with educational resources to be more resilient" or in providing "educational components."
- Partnerships: Two people expressed interest in bringing more partners together or in "getting connected with all the partners IWA has across Iowa."

- Using data to inform work: Two respondents mentioned using an IWA approach to use more data to support their work.
- Resources: Two respondents mentioned finding “access to resources” (like the HUD grant) was important (especially for infrastructure and individual home projects).
- Focus on flood reduction: Two respondents mentioned having a focus on flood reduction. One respondent said they thought all aspects of the IWA could be valuable for their work, and one said that the IWA was valuable for them because it is “inclusive and intergenerational.”

What aspects of the Iowa Watershed Approach are you interested in learning more about?

The same eleven respondents listed aspects of IWA they are interested in learning more about including:

- Everything: Four people said they wanted to learn about all aspects of the IWA. One person said that they are interested in learning about “great long-term investments that benefit folks up and down stream.”
- Social aspects: Two people mentioned in particular wanting to know more about the social aspects of the project, as highlighted in Gaul’s presentation of the Dubuque work, with one saying, “Liked her presentation tremendously.”

Other aspects of IWA that individual respondents wanted to learn about by included:

- o “Grant writing”
- o “Tools to assist community planners in educating the public about IWA”
- o “Working between and within municipalities”
- o “Social resiliency data” for their part of the state
- o Data collection
- o Forming local partnerships around community resilience

One person said they would look at the IWA website to learn more.

Session 2: Successes and Challenges of Watershed Resiliency

There were approximately 33 people in attendance at this session and 23 people returned a survey for a response rate of 70%. Three people who attended this session indicated they had also been to Session 1.

Table 2.

Session 2: Successes and Challenges of Watershed Resiliency

	N	Yes	No
I was aware of the <i>Iowa Watershed Approach</i> before I attended this session.	23	17	6
The content of this session was valuable for me.	22	22	0
As a result of attending this session, I am interested in learning more about the <i>Iowa Watershed Approach</i> .	22	17	5

At Session 2, although most of the attendees were already familiar with the IWA, there were a few more attendees who were not already familiar with the IWA at this session than at Session 1. Everyone who responded to the item said that the session was valuable to them and most indicated that they were interested in learning more about the IWA.

What aspects of the Iowa Watershed Approach do you think could be valuable to you in your work?

As in the responses to session 1 items, some of the responses seemed more related to this specific presentation than to IWA in general. Nine respondents talked about the following aspects of the IWA that could be valuable for their work:

- Partnerships: Two people said they saw value in the types of partnerships that are part of the IWA.
- Coordination and comprehensive approach: Two respondents said they through the “consolidation of efforts” and taking on “comprehensive approach to address system issues” was valuable. One of these respondents said they were interested in replicating the WMA formation process in their own WMA.
- Communication: Two respondents saw value in “easier communication” and in “learning new ways to talk with farmers, county officials and city officials” about water issues.

Other responses from individuals included one respondent who saw value in working with the IWA “to develop higher quality wetland/stream mitigation sites” and finding sites that can be developed. Another respondent saw value in the IWA cost-share approach saying, “It seems to encourage landowners to want to make landscape changes.” Another respondent mentioned the value of “preventing’ flood issues.”

What aspects of the Iowa Watershed Approach are you interested in learning more about?

Ten respondents mentioned the following nine areas they are interested in learning more about regarding IWA.

- Resources and funding through IWA: Four people wanted to know about resources and funding opportunities. Two of the four asked about resources available through IWA about on how to form WMAs and “activities available to all WMAs” and “What types of resources/tools can be provided that we don’t already use/implement?” Two people also asked for information specifically about funding opportunities, including access to BMP cost share programs.
- Urban watershed issues: Work being done in urban areas and “planning efforts done in urban areas on a watershed-wide basis”
- IWA flood studies
- Plans for sustainability: “This thing needs to be able to continue!”
- Partnerships: “How to form, focus resources and implement conservation”
- How widespread is the IWA? (geographic areas where cost-share is available?)
- Help with how to “spread word on regulatory requirements – contractor assistance”

Session 3: Community solutions for Flood Resiliency

There were approximately 39 people in attendance at this session and 20 people returned a survey for a response rate of 51%.

Table 3.

Session 3: Community solutions for Flood Resiliency

	N	Yes	No
I was aware of the <i>Iowa Watershed Approach</i> before I attended this session.	19	14	5
The content of this session was valuable for me.	19	19	0
As a result of attending this session, I am interested in learning more about the <i>Iowa Watershed Approach</i> .	17	13	4

Again at Session 3, most of the attendees were already familiar with the IWA. Everyone who responded to the item said that the session was valuable to them and most indicated that they were interested in learning more about the IWA. Three attendees said they had been to one of the earlier IWA sessions.

What aspects of the Iowa Watershed Approach do you think could be valuable to you in your work?

Nearly all of the responses to this item in this session referred directly to the resilience tournament game that took place during the session. Six people said that the tournament was a valuable resource. Three people talked about the benefit to communities of taking part in the resilience tournament game. Two of these said it was of value because it brings the community “together to pool their resources and share their story about why flooding this region needs to be prevented.” Two people said it would be a good teaching tool. One of these respondents said, “The tournament/case study game would be a fabulous resource for high school and introductory college teachers.” One person suggested that the IWA could invest to make it available to all interested parties. Another person said its value was in “developing education and outreach to engage communities in this project and beyond.”

One person suggested that they add a discussion of potential conservation practices to the game. Another said that IWA helps in “identifying benefited entities/industries.”

What aspects of the Iowa Watershed Approach are you interested in learning more about?

Five people responded to this item listing different areas they’d like to learn more about.

- Challenges: One respondent wanted to know more about the challenges that IWA is experiencing and what “communities are finding to be most difficult to grasp and how can we work to make them clearer?”
- Priorities: One person asked how IWA takes into consideration the priorities of “city, county, and rural areas.
- Hazard mitigation planning: What are the resources for developing hazard mitigation plans in southeast Iowa?

Other individuals said simply that they’d like to learn more about “developing relationships” and “I look forward to learning a lot more about this program.”

Session 4: Evaluation of different flood mitigation strategies using GHOST

There were approximately 44 people in attendance at this session and 18 people returned a survey for a response rate of 41%.

Table 4. *Session 4: Evaluation of different flood mitigation strategies using GHOST*

	N	Yes	No
I was aware of the <i>Iowa Watershed Approach</i> before I attended this session.	17	13	4
The content of this session was valuable for me.	17	17	0
As a result of attending this session, I am interested in learning more about the <i>Iowa Watershed Approach</i> .	17	16	1

As in the previous sessions, most of the attendees were already familiar with the IWA. Everyone who responded to the item said that the session was valuable to them and nearly all attendees indicated that they were interested in learning more about the IWA. Five of the attendees had also attended an earlier IWA session at the water conference.

Nearly all of the survey responses for this session were related to the presentation itself and not to the IWA as a project.

What aspects of the Iowa Watershed Approach do you think could be valuable to you in your work?

Ten people responded to this item. Seven respondents said that they were interested in the modeling and simulation done as part of the GHOST model. One person commented, "It documents the effects of changing ground cover." Another said, "Great presentation – well done – explained the GHOST model very well." A third respondent said, "Landscape model very cool!" One person said they were interested in all of it.

Two people said that it was all of value and that the model presents "tools that could be used in other watersheds."

One respondent said they were interested in the idea of looking at mitigation at the county level. One person said they would look up the study on the website to learn more.

What aspects of the Iowa Watershed Approach are you interested in learning more about?

Ten people also replied to this item. The following is a list of their full responses.

- Reducing flood effects
- How will this information be used and what is the goal of the findings?
- How to bring these results to the communities and landowners for conversation.
- I hope these people are not seriously considering putting hundreds of these storage ponds in these watersheds.
- Development of GHOST
- Not using a state-wide broad brush to estimate local
- Can this model be used in classes?
- Additional benefits and financial incentives?
- How to apply tools to other watersheds?
- Everything about it.

Appendix G- Summary of Halfway Point Interviews with Project Coordinators

Introduction

During late fall 2018, the Center for Evaluation and Assessment (CEA) conducted extended interviews with each of the Iowa Watershed Approach (IWA) project coordinators (PC). The interviews were one element of the overall program evaluation of the IWA conducted by the CEA. The PC interviews offer a unique perspective on the progress made through the IWA at approximately the halfway point of the five-year project. The findings herein will be complemented by information gathered through interviews with project partners and local key informants from each watershed.

The CEA collaborated with IWA partners to decide what they wanted to learn from the PC interviews. The interviews were intended to shed light on the work of the IWA PCs as it is actually occurring. This included asking coordinators to talk about: the main aspects of their work as IWA watershed coordinators; their successes and the challenges they are facing; their collaborations with IWA partners and others who support their work; their interactions with their WMAs; their needs for further training or assistance to be most successful; and their views of the progress of the IWA work in their watershed. These interviews will complement ones that conducted with IWA partner organizations and WMA board members.

Methods

In the late fall of 2018, the CEA contacted the IWA PCs to invite them to participate in an interview. The CEA suggested that a CEA staff member could visit them at their sites to conduct in-person interviews. Six of the seven interviews were conducted in-person and one was conducted by telephone for the convenience of the interviewee. All interviews were audio-recorded and transcribed in their entirety. Interviews lasted approximately 40-75 minutes, comprised 143 pages of transcriptions, and summaries of individual interviews (see below) added up to 46 pages. In other words, the CEA strove to take the rich information found in these interviews and condense it into the summary below with the goal of providing an accurate, but accessible representation of the PCs' work lives in Year 3 of the grant.

The interviews were intended to be open-ended and conversational in nature. The interview followed a protocol (attached to this document as [Appendix A](#)) but allowed the interviewee to lead the conversation to areas that were important to them. Therefore, slightly different questions and emphases occurred in different interviews.

Individual Interview Summaries

As part of the interview process, before the interview began, the CEA interviewer explained the procedure that would be used to report the content of the interviews. The CEA informed PCs that after the interview was conducted, the CEA would summarize the content of the interview, provide the interviewee with the summary for their review and comments, and make final edits to the

summary incorporating their feedback. At the time that edits were requested, the CEA told PCs that the summary should represent the moment in time that the interviews were conducted and did not need to be updated to the date of the editing, but that, if they wished, they could add or update information they thought was particularly important.

Comprehensive Interview Summary

In addition to the approved individual summaries, the CEA created this *comprehensive interview summary* to be included in the Year 3 IWA Evaluation report submitted to the Iowa Economic Development Authority (IEDA) and to the funding agency, the US Department of Housing and Urban Development (HUD), using only the content in the approved individual summaries. That is, no additional content from the individual interviews was used in the *comprehensive summary*. In addition, PCs' names are not used in the *comprehensive summary*.

This comprehensive summary is therefore:

- Derived from summary content approved by the individual PCs
- Anonymous
- Distributed to the IEDA and HUD and part of the public record

The summary provided below is organized by the major topics addressed by the PCs, and not necessarily in the order in which they were discussed during the interviews. The major topics were:

- Roles, responsibilities, and challenges of Project Coordinators
- Engagement with collaborators and partners
- Indicators of success, current priorities, and future outlook
- Other factors affecting the ability to do IWA work
- Other formal training needs
- Recommendations for the IWA team

Roles, Responsibilities, and Challenges of Project Coordinators

As a central figure in the day-to-day activity of the grant, project coordinators (PCs) are uniquely positioned to provide insightful perspective on the progress being made on the IWA grant. PCs took a variety of approaches to their work, which was influenced by their own understanding of their role and by the individual characteristics of the people, partners, and geography of their watershed. However, the strong alignment between what they reported liking best about their job with what they described as their main role as IWA PCs, revealed their passion about what they do and strong motivation to ensure a successful outcome of the grant.

Main Roles as IWA coordinators

In describing what they considered their main roles as IWA coordinators, the following three main themes emerged:

- Making connections
- Communication
- Other roles

Making Connections

When asked to describe their main role as the IWA coordinator, all seven PCs reported that they were responsible for making connections between all the different stakeholders involved in the project. The coordinators described this *connection* role in slightly different ways.

The tentacles, the voice, the face

In various ways, three PCs described themselves as being the primary representative of the IWA or point of contact for stakeholders in their respective watersheds. One coordinator said, “I represent the watershed and the project. So, I’m the tentacle of the IWA that reaches into the [watershed].” Another PC also described being the connection between the IWA, landowners, technicians, and engineers. This PC said, “Just being that voice that’s in between all these different people that are part of the project in order to get a project to completion.” A third PC described themselves as “the face of the watershed” who works on sustaining the link between interested landowners and engineers.

Many different stakeholders

Two PCs emphasized *who* they try to keep connected as part of their job. One PC focused on the many different groups there are to bring together. While this PC mentioned, “coordinating with authorities” including the WMA members, county fiscal agents, and the farming community, the PC also talked about coordinating between “the upstream and downstream community, the farming and the non-farming community.” The same PC added, “We have to make sure that we have the right players in the game.” Another PC described the IWA coordinator’s role as, “Bridging the divide between the different agencies, the partners, the landowners. Being that connective unit.”

Making connections as the best part of their job

Four of the coordinators named making connections as the best part of their job. Their comments included:

- “I really enjoy bringing the partners together and all the pertinent pieces and working with the people that are involved.”
- “The best part of my job is getting to know the people in my watershed. [Relationship building] is not something with a lot of deliverables that are easy for people to see, but in the grand scheme of things, I think it’s the most important work that I do.”
- “You meet a lot of people, you get to see the countryside... it’s easy for me to relate to a lot of the people I meet.”
- “I think the absolute most valuable thing has been meeting with landowners out on their land and getting to know them and what they want to do. [I try to] not treat everybody the same I don’t assume anything...and try to approach it as a brand-new experience every time.”

Communication

The role of communication in making connections across different parties in their respective watersheds was also explicitly cited by five PCs as an important part of their role. The various aspects of communication described by the PCs are described in greater detail in the following sub-sections.

Recruiting new landowners

As one of the critical stakeholders in the IWA, it was perhaps fitting that PCs discussed the need for effective communication skills in their effort to recruit landowners and bring people into the project. One PC described that it is the coordinator’s role to be the one who is “actually getting the landowners interested and the public interested, informed and educated.” Another PC emphasized the importance of communicating with and engaging a diverse group of landowners, calling the IWA “a big social experiment.” A third PC said, “I enjoy writing and coming up with spreadsheets and stuff to track what’s going on” with the landowners.

Being the conduit back and forth between parties

Once landowners expressed interest in or were committed to the project, the PCs' role shifted quickly to that of an intermediary wherein communication skills continued to be a critical asset. Four PCs described the conduit of communication necessary to describe the watershed approach. One PC described taking word of the IWA opportunities to landowners, learning what landowners really want on their land, conveying that to the engineers, and then going back to the landowners to share concept drawings and ideas. The second PC described the communication process similarly, again with the goal of relaying important information back and forth between landowners, engineers, and archeologists. Another PC said that a lot of time is involved in making sure things are running smoothly. The PC said there has been constant communication between the engineers, county supervisors, and the watershed planners. The last PC described communication as trying to explain what the IWA is to landowners, and to the people who are doing the early design work.

Using multiple methods of communication

One PC said that communication skills are the most important of all the skills they use, including maintaining communication in many different ways to suit the needs of the stakeholders – meetings, phone calls, text messages. The same PC said that it can be equally important to communicate in “low tech” ways to make sure they are including everyone. The types of communication this PC reported using frequently included: following up on the status of projects, reporting progress, checking in, managing expectations, and next steps. Two of the PCs talked about developing written communication materials for working in the watershed as being one of the best parts of their job. Still another PC said that writing articles and coming up with ideas for field days and presentation, while sometimes stressful, provides “the opportunity to be creative” and that it is good to be “always learning something new.”

Neighbors talking to neighbors

In addition to the communication that PCs initiated, one PC described another layer of communication that being part of the IWA catalyzes: landowners are starting to talk to other landowners and then they refer the PC to the neighbor. The PC described being able to go out and say, “Hey, your neighbor’s doing this and wanted to know if you might be interested in getting involved.”

Other Important Roles for PCs

One PC said that identifying potential projects is a big role for the PC and explained that the PC needs to determine “if [a project] is suitable for them or if it’s going to meet their requests or wants.” After working with the landowner on that process, the PC then looks at different aspects of the site in question, arranges for the land to be surveyed and lines up any other necessary testing (soil or archeology). When all that has occurred, the PC can then go back to the landowner with “project designs and costs.”

One PC spoke more holistically, summing up the main role of the PC as transforming the IWA “from idea to reality. It’s kind of a big job, but I can’t think of a simpler way to put it.”

A “Typical Day”

There was a strong consensus among PCs that there was no such thing as a typical day for them. As one PC said, “There’s always something different that you’re trying to do every day. There’s always a different challenge.” Another PC described that “a typical day” really depends on what else is going on in the watershed, relating it to whether a quarterly meeting is scheduled soon, whether it

is time for landowner visits, or whether it is mostly important to be working with the engineers. Two coordinators actually cited the fact that their job has so much variety as one of the best parts of being a PC.

Although only one PC used these exact terms, several PCs differentiated between the following two categories into which most of their responsibilities could be divided: “the desk job” and “out in the field.”

The Desk Job

Some of the things that PCs mentioned as part of the “desk job” included (listed roughly in the order of the frequency that they were mentioned by PCs):

- Individual communications: emails, phone calls, sending designs via email or mail for potential practices and ballpark estimates with landowners, engineers, county engineers, planning team, and local partners
- Administrative: WMA business, e.g., scheduling and planning WMA meetings, sending minutes
- Preparing outreach materials: social media, mailings/newsletters, presentation materials, and doing research for these materials
- Application tracking
- Using ArcGIS to evaluate sites
- Consulting with IWA partners

The Field Job

PCs said that the “field” part of the job included:

- Meeting with landowners on their property/site visits
- Informing landowners of the IWA
- Reviewing maps with landowners and engineers
- Reviewing sites for on road structures with county engineers
- Visiting sites with soils crew

Several coordinators said they were currently not doing much in the field because it was late fall/early winter, but that they expected the field part of the job to increase dramatically as they also begin monitoring practice implementation and working with contractors in the spring.

Other parts of a “typical day”

Other responsibilities mentioned by project coordinators that fall outside of the field and office categories included attending meetings or trainings and giving presentations.

Boots on the Ground

To provide a deeper understanding of the kinds of work they have done to date, some of the PCs offered detailed descriptions of particular tasks or activities that they have carried out. The examples below provide an overview of the variety of approaches and level of activity that different PCs have been engaged in.

One PC talked about getting a newsletter out to describe some of the less common BMPs that landowners may not be as familiar with. The PC said that in addition to an update on the IWA progress, the next newsletter would “focus on a couple practices that they [readers] may not

think about because they are not as flood-focused: bioreactors, saturated buffers.” The PC said the newsletter would remind landowners that these practices are still eligible for IWA funding.

One PC described going out to see landowners with their technician. The PC said that while the technician is working on the technical construction details, they are able to talk with the landowner about all the details of the IWA and how it all works. Once that visit has occurred and the technician has brought the details to the engineer, then the PC can get the design details back to the landowner.

Another PC had been doing quite a bit of work in the field, talking with landowners and checking on potential sites. During the course of working with committed landowners, and after viewing aerial imagery to confirm some of the sites' characteristics, the PC found out that some properties had serious issues with types of porous bedrock that would not support the practices they had in mind. The PC said they would have to put things on hold until they could get a backhoe out and do some checking, adding, “There wasn’t a lot of point in going out and getting new projects lined up, surveying other projects, until we...get a better understanding of how it all works, so it can flow a little smoother.” The PC added that the IDNR, Iowa Geological Survey, and the NRCS have been providing great support on this bump in the road.

One PC also mentioned working on additional grant applications. The PC was working in collaboration with the RC&D on a WQI grant (Water Quality Initiative) through IDALS.

Another PC described putting together and sending out mailing packets to 1400 landowner addresses within the watershed eligible areas. The PC reflected that sending out letters with a little more detailed information appeared to be more effective than sending out postcards because they provided landowners with a little more “up-front information.”

While each of the PCs received similar job descriptions from the onset, they demonstrated a variety of approaches and implemented different strategies that matched their individual understanding of their role in promoting the grant’s success. In the words of one PC, “We have to think of how we can make this successful – how creative we can be.”

Logistics and Constraints of the PC Role

As the PC role was newly created through the IWA grant, it is important to understand the acuity of the role and the barriers they have experienced in carrying out their duties in their respective watersheds. While most PCs agreed that, at the time of the interviews, they had a manageable workload, they predicted becoming much busier in the near future once the projects get under way. Additionally, multiple PCs reported having competing demands on their time and encountering several obstacles beyond their control that have slowed their pace and prevented them from accomplishing what they had hoped to by this point in the grant.

Time Demands of the Job

When asked whether or not they had enough time to complete the work requested of them, five of the seven PCs reported that they were able to meet the current demands of the job. As indicated earlier, the PC interviews took place in the late fall and early winter during the beginning of Year 3 of the project, which was before construction had started in any of the watersheds. Therefore, the three themes related to the PCs’ ability to meet the demands of the job were perhaps not surprising:

- In general, they had enough time to complete the work that has been asked of them.

- They had been busier in the past and/or expected to be busier in the future.
- There were factors outside of their control making it difficult to get everything done (which may also interfere with getting things accomplished before the end of the grant period as well).

Ebbs and flows in workload

Four of the five PCs that indicated currently having enough time to do their jobs, qualified their response in one way or another related to the variability in their workloads. One PC said simply, “Yeah... [I have enough time]... now if you’d have asked me that maybe a month ago, I’d have said no.” Another PC said that some things have to wait until spring because that is when they can actually do the construction work, and weather during the past fall was “just not conducive to doing any sort of construction or investigations, really.” The PC added that certain projects, like grassed waterways, are only conducive to spring installation so that they will have a lot to do once it’s spring. Another PC said that while “there’s always work to do” at this time of year [winter], things are slowing down. This PC went on to say that although it is not overwhelming “by any means” there definitely is the sense that the workload keeps coming in and that a big part of staying on top of things is making sure that the whole sequence of things that need to happen are getting done on each project in a timely manner. Finally, one PC said, “I mean some weeks, no [there’s too much to do], but then there are weeks where it’s mostly quiet. It’s mostly trying to balance that out and juggle... It’s a typical job!”

Circumstances out of their control

Four of the PCs focused less on whether they could carry out the tasks to be done on a day-to-day basis, and more so on the difficulty of getting things done by the end of the grant period given the number of things that are out of their control. They talked about issues in the program that kept them from being able to do what they need to do to move the project along on time. Some of their responses to whether they had enough time to do their work included:

- “Generally, yes...but with the multitude of program level issues, delays, unanswered questions, unanticipated issues and questions, things can really pile up. So, generally, I feel like I’m really behind. I’m behind primarily due to things out of my control.”
- “There’s a lot of hurry up and waiting.” In the meantime, the PC is trying to keep things moving, “...but it seems like there’s a lot of stuff out of my control. I guess it’s kind of frustrating.”
- “Some of the things are just out of my control.” The PC lets landowners know that this is the pace to expect but said that new landowner recruitment has pretty much stopped because of the feeling that the ones who already signed up are just “dragging along.”
- “Yeah, I guess, time wise, I hope we can really figure out a way to expedite this. It’s not very good to know when you ask the state how long it’s going to take to approve a project packet and they give you a 30 to 60-day time frame.”

Organizational Differences

In addition to the multiplicity of perspectives on the part of PCs regarding their role and how they spend their workdays, there is also a great deal of variation in where IWA PCs are housed and who provides their direct work supervision. The fact that the PCs are in different physical settings and have different types of supervision also likely contributed to differences in how the PC’s roles and responsibilities have been defined. Because of these organizational differences, there were some concerns among project partners that PCs might be expected to do tasks other than coordinating

the IWA process. For the most part, however, PCs only minimally perceived demands on their time outside of their IWA work.

Other demands on their time

While a few PCs mentioned specific tasks they do that they considered to be somewhat outside of their IWA role, without exception, they said there were positive aspects to doing this work. For example, one PC said, “I do a lot of the WMA administrative stuff. I don’t feel like that’s unreasonable, [but] it adds extra work on my plate.... I’m very comfortable doing the work and I think it’s very valuable work.” Another PC mentioned being pulled into talking with customers about programs other than the IWA that are available to them. The same PC said that it is good experience to learn about the other programs and to think about what landowners could do if the IWA is not an ideal fit for them. In addition, the PC said it is good for a PC’s reputation to be able to refer people to other programs if they aren’t deemed to be a fit for the IWA.

Two of the PCs also shared that other staff in the office in which they are housed advise them and help them out with their work in multiple ways and it is a “good trade” to be able to pay that back now and then. A third PC mentioned helping the watershed planners with setting up events and facilitating contact with the WMA for other groups wanting to engage with the watershed work. While that was sometimes outside of what was considered regular PC work, it was nevertheless beneficial for the WMA. One PC also took the perspective that doing some extra work with the WMA could contribute to the sustainability of the PC position “beyond 2021” when the IWA money is no longer available.

Supervision

When it was time to hire the PCs, part of the process was to determine where they would be housed and who would oversee the work they were doing. This process began by working with the fiscal agent county to learn about available office space and what would be a good fit for a watershed coordinator. This process resulted in several different outcomes or determinations. Three PCs ended up being placed in NRCS/USDA/SWCD offices, one in a county office, one in a Council of Governments office, one in a municipality office (but often telecommutes), and one in an RC&D office. To varying degrees, there were benefits and/or constraints related to the PCs’ physical placements, which had an influence on their intraoffice relationships, logistics of their supervision, and resources available to them.

When asked about their interaction with their supervisor, most of the coordinators first articulated who they considered to be their supervisor. Some PCs named more than one entity that they received some type of supervision from or answered to in some way including (with frequency in parentheses if greater than one): County Board of Supervisors (3); WMA Board (3); SWCD (2); acts as own supervisor (2); NRCS; COG; and the RC&D.

In naming these entities as supervisors, the PCs made it clear that they received different types of supervision from different sources. For example, one PC said that the SWCD signs their paycheck. Two PCs said that, being housed in the NRCS/USDA/SWCD, there are lots of opportunities for support, and that they were happy with the level of guidance available there. On the other hand, another PC reported experiencing quite a few issues directly related to their placement in the SWCD office. While this PC acknowledged that in a new situation like the IWA there are some kinks to be expected, “which I’m fine with, but it’s also [important to be] trying to figure out how to solve those kinks...and not cover them up.” Yet another PC suggested that to help with resolving issues of

supervision, it would be helpful to have a designated human resources representative and a more complete formal agreement with supervisors.

In talking about the supervision received from the WMA board, one PC said, “I feel accountable to my board...they have an important role to play.” This PC continued by saying that, as the face of the project, the PC has the responsibility to keep the board informed about the project and added, “I feel like I have a good relationship with my board.”

Autonomy

In addition to naming people who are officially their supervisors, five of the PCS spoke about having a great deal of autonomy in how they spend their time. For example, one simply described “getting done what needs to get done.” Meanwhile, another said that working as a consultant, there is no actual supervision involved. One PC described working with the WMA board to make sure they knew what the IWA PC was supposed to do. Specifically, they reported reviewing the program and documents and communicating to these groups regarding “the way I see the program should go.” This PC described taking this approach based on the idea that many members of the WMA are new to the watershed context and needed guidance on “how to make the [WMA] perform as a group,” and how if they are to perform in this context, they must “slowly get to understand the science...physical and social.” Another said that to some extent the PC role, as well as the management, was already in existence prior to the awarding of the grant. Therefore, the supervision remained the same, which greatly facilitated the transition. Finally, while one PC described the ease of talking about their work with the WMA board chair and with the grant administrator for the watershed. This PC described the grant administrator as the “go-to” for IWA questions, and their close working proximity was reportedly an asset, given that this PC also described the work setting as a “one-man department.” According to the PC, it was possible to “just walk over, stick my head over the wall.”

Frustrations of the PC Job

The job-related frustrations reported by PCs were largely related to the uncertainty of or lack of clarity surrounding their role, as well as other factors that were outside of their control. In some cases, their concerns reflected the point in time when they were interviewed related to issues that have since been resolved, but others reflected less transitory concerns. One PC was not asked about frustrations.

Compensatory stream mitigation¹

Two PCs talked about being frustrated with the unexpected news that some projects might be required to do compensatory stream mitigation, especially for larger projects. This frustration was exacerbated by the time it took to resolve the issue as to whether stream mitigation was required, the logistics of stream mitigation, and whether it could be paid for with IWA funds. One PC said that it was possible that up to half of the projects in their watershed could be affected by the policy and could cause them to abandon projects that triggered the mitigation requirements or come up with alternate funding sources. This PC continued, “It’s up in the air right now as to whether we can use project funds to pay for that mitigation, and knowing that will make a big difference.” Another PC expressed surprise that this issue was not worked out ahead of time. The PC said that it seemed to make a difference who they talked to about the stream mitigation question (both at US Army Corps

¹ <https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Mitigation/MitigationRuleBrochure.pdf>

of Engineers and within the IWA), and that was also frustrating. Both of these PCs said it was hard when they had been encouraged to pursue larger projects, but those were the most likely to involve “active or perennial streams” and, therefore, also require stream mitigation.

Bureaucracy

Three PCs described their frustration with the time that it took to get things done and dealing with the bureaucracy and channels that they said they knew are inherent in this type of project. One PC acknowledged that it is “the nature of the beast,” but that some of the aspects of the project were taking up to “quadruple” the expected time. Another PC said that the time it takes “to get to where we need to be” has been the most frustrating part of the job. The third PC said that it seemed like every time it felt like they were making progress, “all of a sudden there’s a roadblock.” Of the things that they perceived as taking too much time, two PCs mentioned the environmental and archeological review process, and one mentioned getting the landowner application ready and finalizing the maintenance agreement. Related to those documents, several PCs wondered why those documents could not have been prepared before they were hired since most ended up using essentially the same document.

Who to Reach Out to for Help

A few of the PCs also expressed some confusion about who they go to for assistance when certain issues would occur. One PC said that with the “hierarchy in this great big project ... navigating the spheres of influence [is] challenging for me.” The same PC elaborated by saying, “Sometimes I feel like we’re all running around trying to talk to as many people as possible to get pointed in the right direction.” Another PC had issues related to personnel and guidance in how to approach the work load, and said it was not clear how to address these concerns. This PC said, “Everybody that’s not responsible for me wants to take responsibility for me, and they’re not the proper people... I want the person to really take charge and be an advocate for me. I feel like nobody is being an advocate for me. Other people like to say what they think my job should be, and I would love somebody that actually knows. Tell me!”

Other frustrations

One of the PCs expressed frustration about the timing of some of the IWA-related events. This PC said that sometimes there were meetings in Des Moines or elsewhere related to project management, and then a two-day training event within a close time span. The PC said that the travel time for events scheduled so close together made it difficult, and sometimes was “just not feasible.” Finally, one PC said that articulating the role of the project coordinator to the landowners in the area has been frustrating, especially when they have to field calls about things like source water issues that are not part of their work.

Engagement with Collaborators and Partners

In the same way that the self-defined roles and responsibilities and organizational structure supporting the PCs varied from one watershed to another, so too the involvement of various entities and partners differed. By consequence, the amount and type of interactions that PCs had with these organizations varied across the watersheds. In this section, PC interactions will be presented according to the following categories of collaborators: IWA partners, affiliated groups, and other stakeholders. Each PC first spontaneously listed the people with whom they interacted,

and then, if the PC hadn't already mentioned them, the interviewer asked the PCs to talk about particular groups.

Before characterizing these interactions, it is important to first highlight the fluidity of the roles carried out by several of these organizations, a fact that likely affected PCs' interactions with them. When reflecting on the support received from specific partners, one PC said, "I understand that we are one of, if not the first ever, of our kind of this grant," which they acknowledged contributed to the complicated nature of the interaction between the web of related entities. Another PC shared that "a lot of it is the resources," and that while the PC does not necessarily interact directly with all the partners, the PC is responsible for connecting the partners to the situations where their support is needed.

Note that the IWA partners and other stakeholders are listed in alphabetical order by category for organizational purposes throughout this section of the report.

IWA Partners

The interviewer asked PCs to characterize their interactions with each of the IWA partners and/or the support they received from each organization in successfully carrying out their roles.

Homeland Security and Emergency Management (HSEMD)

Six PCs described having interactions with and receiving support from HSEMD. Most PCs mentioned the following individuals that they worked with in some capacity: Jessica Turba, Tom Oswald, and Colleen Kinney. Of these comments, two PCs specifically emphasized how helpful Jessica Turba has been, and another two also described getting helpful feedback from Tom Oswald.

Conversely, half of these PCs described having limited interaction with the HSEMD team. Two PCs said they have not worked with HSEMD, and another said HSEMD is "showing interest" in the PC's work but that there does not seem to be overlap with the work that the PC does.

Most PCs described specific ways they have or will receive support from HSEMD. One said they facilitated communication among the project partners. Another had received information about flash flood damages and has used that information in presentations. A third said that HSEMD reviewed the materials they were going to provide to Earthview Environmental to be sure that their submission would be accepted. Lastly, one PC said HSEMD has been willing to help, and that they will likely support planning efforts at a later time.

When considering relationships with the different IWA partners, one PC described that their planner is working with HSEMD to get the hazard mitigation planning elements into the watershed plan.

Iowa Department of Agriculture and Land Stewardship (IDALS)

Six PCs described interactions with and support from IDALS. Nearly all of these specifically mentioned working with Felicia Campbell, either early on or throughout the duration of the project. PCs described her as "awesome," a "great help," and one of the first people they would go to with a question.

Half of the PCs described services provided by IDALS. Individual PCs mentioned each of the following:

- Feedback on articles and newspaper content

- Guidance on developing work estimates without Agren software
- Clarifying requirements
- Providing details about working with landowners
- Answering specific landowner questions
- Specifying details of the project

One PC described the funding available through IDALS for the watersheds. The PC mentioned that the WMA is working on a Water Quality Initiative grant application and that a lot of water quality funding could come from IDALS.

In addition to other comments, one PC described working with the IDALS people in the office.

Iowa Department of Natural Resources (IDNR)

Six of the total seven PCs that were interviewed described having interactions with and/or receiving support from IDNR. Nearly all of these PCs mentioned working with specific team members with one or more mentioning the following names: Mary Beth Stevenson, Andy Asell, Kyle Ament, and Allen Bonini. One respondent reported that Ament had been helpful and another described Stevenson as attentive, saying, “Anytime I have issues or I need to meet with her, she’s very willing to work me into her schedule. So, she does a fantastic job.” This PC identified Stevenson as one of the first people they would go to with a question. Stevenson also initiated and typically facilitated an informal group work time for the PCs.

A few of the PCs mentioned that IDNR team members have answered their questions. One mentioned getting questions answered about GIS work. The other said that Stevenson will “just answer any question I’ve got if she can,” or she knows where to send the PC if she does not know the answer herself.

A few of the PCs described that other IDNR team members have been helpful with watershed planning, with the “scientific part of things,” and GIS work.

Iowa Economic Development Authority (IEDA)

The IEDA has proven to be the most frequently cited source of support, with all seven PCs describing having at least some level of interaction and support from them. Most of the PCs specifically mentioned working with Jeff Geerts. For example, one PC said, “He’s been extremely helpful.” One PC also said “Shelly [Peterson] is there if Jeff is not.” Another said that both Geerts and Ann Schmid have been helpful with navigating the environmental and archaeological review processes.

In sharing how the IEDA has been supportive of their work, most PCs described how Geerts provided answers to their questions. One PC specifically mentioned emailing Geerts frequently with questions. Two said that they contacted him periodically (one specifically said quarterly) and offered that he has been timely in his responses. One of these individuals commented that the PCs interact regularly with Geerts and that the PCs are “really good about if they have questions that they’ve sent into IEDA and they’ve gotten answer back, they’ll backfill us on those answers.” A fourth PC said that IEDA has been good about getting back to him on “problematic areas.”

Nearly half of PCs said that IEDA helps to be sure that processes are being done correctly. For example, one PC said working with IEDA is “wonderful, wonderful, wonderful” because they are always there “dotting the i’s and crossing the t’s—making sure all is right.” Another said, “They have the decisions! Always work with them!”

Two PCs described receiving general support from IEDA stating that they helped with what's needed and have been very supportive as the main agency. One PC reported not having much contact with IEDA and that since the PC associates their group with "higher up questions" that IEDA is "not the first people that I go to [with a question]."

Finally, individual PCs discussed how IEDA provided support with the environmental and archaeological review process (including managing the time frame) and working with HUD to implement at 90%/10% cost share.

IEDA resources

When some of the PCs were asked about their familiarity with the Policies and Procedures Manual on the IEDA website (Not all PCs were asked this question), a few said they were not familiar because they relied on their grant administrators to know that materials, one reported knowing there are resources on the IWA cloud site, and another reported having awareness of the resource and planned to review it, but said that it often got deprioritized.

Iowa State University: Extension and Outreach (ISU EO)

All seven PCs described having interactions with and receiving support from ISU EO. One PC specifically mentioned that working with this group has been positive; though, they had less interaction with ISU EO than UI IFC. Nearly half of the PCs said they had worked with Jamie Benning. One specifically said that Jamie Benning had been very helpful, especially in the beginning. Additionally, PCs mentioned working with Kristina TeBockhorst and another person (not named) from the Iowa Learning Farms².

Most PCs commented about the Watershed Academies facilitated and hosted by ISU. A few of the PCs made general positive comments about the event stating that a specific Watershed Academy was "absolutely phenomenal" and that the Academies are valuable. A few of the PCs found the opportunities for field experiences to be particularly valuable. For example, one PC said the best part was that there was a portion of the event in the classroom and then they went out into the field and "got to actually see it in place." A few of the PCs mentioned the following content that was particularly valuable to them: water quality practices, prairie strips, cover crops, ponds, ideas for feed lots, cattle systems, and practices on different landscapes. Individual PCs described considerations for attendance (location and content relevance), how the event was a way to network with other coordinators, and that this was an event to train coordinators statewide.

Most PCs described specific services provided by ISU EO. Individual PCs mentioned each of the following:

- Developing materials about practices
- Reviewing newsletters and postcards
- Providing job sheets and information packets
- Providing a list of organization phone numbers—especially those for food sponsors (part of the outreach plan developed by ISU EO)
- Supporting the development of a WQI grant proposal
- Supporting the planning of educational events like field days

A few of PCs mentioned support from their county-level ISU EO representatives. One described receiving very helpful support from Kris Kohl, Agricultural Engineering Specialist for Buena Vista

² <https://www.iowalearningfarms.org/>

County. This PC said Kohl helped identify landowners, talk with farmers, and build trust in the community. The other said they had met multiple times with Greg Walston, County Extension Program Director for Benton County.

ISU EO resources

Most PCs mentioned ISU's outreach plans but indicated they were not used very often. Two said they have not used their outreach plans because it contained strategies and resources they were already using. However, one plans to return to the outreach plan in the event of a roadblock. One PC simply mentioned being aware that a plan had been set up for PCs to use.

A few of the PCs said they were reluctant to do outreach at this point. One indicated wanting to do more outreach but that right now the PC feels "that would just take me away from trying to push some of those other things through." The other said ISU EO is interested in being involved, but the PC is not ready to start outreach until there is a practice on the ground.

Iowa State University: Iowa Water Center (IWC)

Most of the five PCs that mentioned interacting with the IWC talked about their engagement as occurring through the WMAs of Iowa or by their involvement in the Iowa Water Conference, hosted by the IWC. However, few PCs reported having substantive or ongoing interactions with members of this group. One PC described this organization as positive, especially as WMAs find their "usefulness," but said they weren't sure how this organization will affect their work as a coordinator. Another two PCs talked about being involved in WMAs of Iowa more generally. When prompted by the interviewer to discuss their interactions with IWC, yet another PC said they interact with this group less than they do other partners.

ISU IWC resources

After a prompt from the interviewer, a few PCs talked about their engagement with the IWC's Daily Erosion Project data. One mentioned reviewing the information and tools and knows they are there if needed. A few of the PCs said they have not yet used the Daily Erosion Project information; however, one of these PCs further enumerated that: 1) the data will be important for planners; 2) the data are available for the board members if they are interested; and 3) the PC can "pretty much eyeball where erosion problems are" at the proposed sites, but that it's "nice to have data to support it."

University of Iowa: Flood Resilience Team (UI FRT)

When prompted, six PCs acknowledged having interactions with the UI FRT. Nearly all described limited experiences working with this team. Three PCs that said they are not working directly with UI FRT. For example, one indicated that they had a different area of expertise and the other asked, "What is resilience?" A few of the PCs described confounding or "lumping" together UI FRT with the Iowa Flood Center. A few of the PCs also said that the UI FRT is working primarily with their watershed planning contractors.

Three of the PCs described ways that the UI FRT has supported their work. One described using resilience materials in presentations, and said, "I think that's valuable." Another said UI FRT talked with watershed stakeholders about a potential project area. The third PC described having good relationships with the team, especially the team leader, Craig Just. The PC said this team has answered any questions they had and has also recommended professional training events that might be of interest.

University of Iowa: Iowa Flood Center (UI IFC)

Five PCs described interactions and support from the UI IFC. Most of the PCs described using UI IFC's tools. A few of the PCs indicated that they had worked with the Agricultural Conservation Planning Framework (ACPF) tool. For example, one worked a lot with the information from the ACPF tool to get an idea of where projects should go. A few of the PCs mentioned using information from the UI IFC website, and one of those specifically said they use information from Iowa Watershed Approach Information System (IWAIS).

Most PCs described other types of support they had received from UI IFC. A few of the PCs described generally positive experiences including prompt and timely counsel and answers to questions. One of these specifically mentioned both Kate Giannini and Breanna Shea. A few of the PCs said that UI IFC has presented at and provided materials for WMA meetings. One PC said that UI IFC has been helpful with social media and outreach.

A few of the PCs said UI IFC has been or will be engaged in the watershed planning work. One said that UI IFC has made a "huge contribution to the planning effort." Another described that their watershed planner is working with the UI IFC to get the necessary hydrology information into the watershed plan.

One PC said that, due to the nature of the project and their current day-to-day activity, they have not needed the UI IFC as much in the last six months as in the beginning of the project.

University of Northern Iowa: Tallgrass Prairie Center (TPC)

Six PCs described having interactions with and/or receiving support from the UNI TPC. Two PCs made general comments stating that interactions with TPC had been positive and that team members checked in frequently. The rest of the responses fell into two categories: TPC support specifically related to interactions with landowners and support for PCs as partners.

Three PCs talked about support related to interactions with landowners. One PC stated that it would be helpful to know from TPC what can be converted to prairie and how this applies in the planning and design process. One PC mentioned having a client interested in prairie (though the acreage keeps getting smaller) and that TPC has been out for a site visit. Another described discussing prairie strips with TPC, but that no landowners have committed yet. This PC said that it has been hard to convince landowners to give up land, but that there is a huge potential with this practice. The third emphasized the importance of this work stating that "they should be more aggressive in promoting that practice." However, The PC mentioned struggling to make a case for prairie with landowners because it's not as useful for the landowners as on-field practices (no-till, cover crops).

Two PCs described support they received from TPC as partners in the project. Both PCs indicated getting seed mixes developed with TPC. Additionally, these two PCs individually mentioned the following types of support: sharing contractor lists, being responsive to PC requests, attending UNI trainings, and talking informally with TPC team members at meetings.

Other IWA Project Coordinators

In addition to the IWA partners, six PCs either mentioned independently or shared when prompted about interactions with and support received from other IWA PCs. Nearly all of the PCs talked about their experiences in group meetings or calls, which were initiated by Mary Beth Stevenson with IDNR. Most PCs described the group as an opportunity for sharing information and supporting each

other. This process has included PCs from watersheds that are farther ahead sharing their process and experiences, as well as PCs with additional resources (for example, an NRCS office) sharing what they have learned. Half of these PCs also described these meetings as opportunities to get feedback and to commiserate about difficulties they were experiencing. One PC also said these meetings have been an opportunity to look toward what's ahead. Another PC mentioned that sometimes they invited IEDA or others onto the call, but that, in doing so, it could get "a little too formal." Two PCs made general comments about this group helping a coordinator feel connected to other PCs or Stevenson when they are geographically too distant to meet with them in person.

Individual PCs also described one-on-one discussions with other PCs about their experiences and participating in group emails where they let the others know about answers they may have gotten to questions that were relevant to the rest of the group or to find out whether a question they planned to ask a partner may have already been answered elsewhere.

Affiliated Groups

In addition to the official IWA partners, there are several other types of groups with whom IWA also has formal relationships such as the WMAs, grant administrators, watershed planners, environmental and archeological assessors, and the engineering firms contracted to do IWA work. In the interviews, PCs were asked to talk about their interactions with these groups. In some cases, contractors were hired to serve multiple roles for a WMA. For example, one contractor (Northeast Iowa RC&D) serves both as a grant administrator and watershed planner for two watersheds, while concurrently fulfilling their typical role as the local RC&D. Also, some contractors serve the same or different roles in different watersheds. For example, Emmons & Oliver Resources (EOR) is the planner for two watersheds. The differences across watersheds regarding the web of roles and relationships of various entities can make the discussion of PC interactions complicated; however, for the purpose of this summary, each organization is categorized according to their most salient role with respect to the grant activity.

WMA Boards and/or Chair

All seven PCs described interactions with their WMA board or chair. Their experiences are described in greater detail below according to the themes that emerged in the qualitative analyses.

Nature of interactions with WMA board

Six PCs mentioned the frequency and types of interactions they have with their WMA board. Four PCs said they are primarily in contact with their WMA boards during or in preparation for quarterly meetings. One PC described being "constantly in contact" with WMA board members. Another PC did not cite frequency but described checking in with the WMA board chair on several topics such as expenditures, progress updates with landowners, and updates related to the IWA program.

Two PCs specifically mentioned that they have good relationships with their boards. One said a "pretty good relationship" with the county supervisors and the WMA means that they know they can reach out if they have questions. The other said, "I feel like I have a good relationship with my board...I have a responsibility to them and to the project."

In addition to those mentioned above, PCs described engaging with their WMA boards via email (2), meetings (e.g., planning meetings, public forums) (2), one-on-one conversations, and other

correspondence. One PC said there are a handful of WMA board members who have not come to meetings, and this PC has not met them.

WMA board members' active engagement

Four PCs described different ways their WMA board members are supporting the work of IWA. One PC said that some of their board members have been “very interested in this program [and] want it to be successful.” This PC described that board members have helped with “getting the word out on the street about this program and opportunities.” The PC said these board members have connections to producers through their own operations or agricultural business, “so, they’re connected with multiple groups.”

One PC characterized the board members as “pretty well involved” and described that “they want to know what’s going on with the plan” and have reached out to the PC if they had questions. However, this PC said that sometimes, if a question was unrelated to the work of IWA (e.g. questions about source water problems), the PC tried to connect those people with the right contacts.

Regarding the list of potential projects, one PC said that he brings the list to the board for their review, but that they don’t actually have authority to deny projects, adding that authority lies with the fiscal agent.

Barriers to WMA engagement

Five PCs talked about other ways that they engage with their WMA. Two PCs described the WMA’s role as primarily limited to involvement in the quarterly meetings. One said, “I don’t solicit their input on a lot of things partly because I haven’t felt like they wanted me to. If I find out otherwise... then I’ll tune that up a little bit.”

Individual PCs commented on: engagement among board members who represent areas outside of the targeted watersheds, saying that while there is not a barrier to working with this group, occasionally it has contributed to “quorum issues”; a lack of consensus between the PC and the WMA board leadership about the PC’s chain of command and information sharing policies; PC’s engagement in running or supporting quarterly meetings; and board members’ concerns that their entities will be “relied on for funding.”

Sustainability

Three PCs talked about the sustainability or future of their watersheds. They focused on the following different elements:

- *Funding for the work of the WMA:* When asked about how the board might be involved in the future, one PC said that they were all aware that the funding will run out in three years and that it’s probably time to start looking out for other funding “in order to keep this going if this is something they want to keep continuing on with projects.”
- *WMA engagement:* One PC said that in the future it might be nice to have a broader scope of people involved with the WMA—especially farmers—to get more of their perspective.
- *Finding a fit for their entity and funding for a PC position:* One PC said the board members were trying to “figure out how the WMA is going to help them long-term—what benefit they are going to see.” When asked if the WMA will be trying to pursue a sustainable coordinator position, this PC said that they planned to talk about it during a recent WMA meeting and ran out of time, but that question will come up again soon.

Recommendations for new coordinators on working with their WMA

One PC offered insight for new coordinators in working with WMAs. This PC recommended that after elections of new supervisors, conservation districts, or municipalities (member entities), the PC should go to the counties to give short presentations to the boards about “what the WMA is” and what they are doing. According to the PC, it is important to actually reach out to them and say, “Hey, I’m here for you if you need anything” and provide them with examples of the water issues they may hear about in their counties and how the coordinator and the WMA can help address water issues.

County Soil and Water Conservation Districts (SWCDs)

Three PCs talked about their interactions with SWCDs. Of the two PCs that described having somewhat regular interaction with SWCDs, one described meeting with the SWCDs at different levels of frequency depending on their expressed needs. According to this PC, one SWCD specifically indicated that this might be limited by asking the PC to let them know “when there is something we need to know how about.” The other PC described SWCDs as a “big component of the project,” both as part of the WMA and implementation. The PC is “working with them and the Farm Services Agency...for instance doing a project on [Conservation Reserve Program] ground,” they verify that the project is in compliance with their programs.

Two PCs described their relationship with an SWCD as their supervisor. One PC said the SWCD signs their checks and that two SWCD board members “have been chosen as being my supervisor, so if I have an issue, I go to them about it.” The other technically reports to an SWCD but also answers to relevant Boards of Supervisors. This PC reported getting the support they needed and is happy with the amount of guidance available, but mostly does what they think needs to be done.

County Boards of Supervisors

Three PCs talked about their interactions with county Boards of Supervisors. One PC described meeting regularly with the Boards of Supervisors for the counties in the watershed. The PC said these meetings have included overviews of the program for new supervisors, requesting permission to hire their engineer, setting up the archaeology contract, and to “just give them a general overview and update.” This PC described meeting with different Boards of Supervisors more or less regularly based on their reactions to their presentations. Specifically related to one board, the PC indicated not wanting to “take up more of their time than they are willing to give.”

One PC described working well with a specific county’s Board of Supervisors, one of whom was the WMA board chair; meanwhile, another mentioned working with the Board of Supervisors regularly, but did not elaborate.

Municipalities

One PC said a large municipality in the watershed has expressed interest in the project, in particular in working with their utilities department, adding, “They’ve been actively engaged in watershed planning and projects prior to the HUD funds.” This municipality reportedly can contribute to the cost-share match since theirs are not federal funds.

County Staff

One PC described working with the Conservation Directors who have stake in a large-scale project their watershed is pursuing. This PC also mentioned working with the following county staff members: information technology, GIS specialist, auditors, drainage clerks, and supervisors.

Grant Administrators

Five PCs described working with their grant administrators in some capacity. The nature of their interactions, most of which were generally positive, are described in further detail below.

Regular interaction

Three PCs said they have regular interactions with their grant administrators. Specifically, one PC described being housed in the same office with the grant administrator. The PC said, “It’s nice to be in the same office as ECICOG because they are the administrators,” so if the PC needs anything, they are able to get an immediate response.

Questions and concerns

Three PCs said they go to their grant administrators with questions and concerns. For example, one described asking “higher-level questions,” and the grant administrator providing an ear for general concerns about the program or to vet a question before contacting other project partners.

Other interactions

Individual PCs talked about interacting with their grant administrators in other ways. One said, “[Grant administrator] is my resource for CDBG rules and requirements and QA.” The other said that the grant administrator has worked extensively with the first HUD project and had done some road structure work with that project. The PC said working with someone with that experience has been helpful.

One PC described inconsistent interactions with the grant administrator, feeling supported at times and unsupported at others. Additionally, the PC struggled with the role of the administrator and best ways to ask for information, describing a case where the PC asked for clarification on the office budget and did not receive a response, and another where the PC asked for work guidance and was told offering that type of guidance was not their responsibility.

Watershed Planners

Six PCs commented on working with their watershed planners. Two PCs indicated that they have not been involved in the watershed planning process (one of whom reported expecting to have been more involved); meanwhile, four PCs described specific ways they have worked with or would like to work with their watershed planner:

- Coordinating and setting up planning events (2)
- Providing input to the plan to leverage prior experience with watershed planning (2)
- Data collection (for example, compiling a mailing list for a survey)
- Sitting on the technical committee

One PC said that because two WMAs use the same firm to do both the watershed planning and their engineering work, they are “constantly in communication... I guess we’re that true partnership. I’m really, really fortunate... Their doors always seem to be open and welcoming to assist me if I ever need it.”

When asked how they planned to interact with the watershed plan when it is finished, three described using the plans to guide the work to be done in the watershed or secure grant funds of implementation or coordination (provided below).

- “I see myself using the plan as a road map for what to do next and hopefully use the plan to garner funding for future projects.”
- “It’s a guiding document...there’s going to be information in there to help target practices – where to best start looking for new people or projects, so that will be helpful for grant writing for other projects if and when that point comes. We’re going to run out of money sooner or later, so...we’ll be using that document for that, long-term-wise to keep projects going in the watershed. Obviously, to keep my job would be a nice addition, too.”
- “I envision that plan being the basis for the potential of being able to write grants... Obviously, if we don’t have the funding for my position, we won’t have the funding for somebody to write grants.” The PC said they have implementation dollars now, but “the hard part is finding coordination dollars... That’s where I see the future – I see the plan, really, telling the need for those implementation dollars.”

One PC described not thinking too much about interacting with the plan once it’s complete, adding that, it seemed more like it will be an important tool once the IWA is done.

Engineers

Six PCs commented on their interactions with their engineers and/or engineering technicians. Five said they meet consistently or most often with their engineer. Two PCs made very positive comments about their work with their engineering contractors. One simply stated that their engineering firm is his “go-to.” The other described a very positive relationship with the engineering firm. This PC said that in early 2019 they will be meeting with the engineer to talk about the landowners who have expressed interest and what the possibilities are for those landowners. The PC added, “They’re always calling me if they need anything. I feel like we have good discussions and working relationship.”

One PC said that some of the work with the engineers was going a bit slower than expected. This was due at least in part to issues out of the PC’s control, “at the engineer’s end.”

Environmental and Archaeological Assessments

Due to the interrelated nature of this process, especially as it relates to providing evidence for the Tier 2 environmental desktop review and the environmental and archaeological assessments, PCs were prompted to describe their interactions with the groups providing this support at the same time.

Because this is a complicated process, the CEA asked Kate Giannini (UI IFC IWA Communications Specialist) to describe the process briefly for this report to provide some context. Both the environmental and archaeological assessments required for IWA project implementation are tiered processes implemented by state-wide and/or local contractors. Giannini described this process in three steps:

1. *Emmons & Oliver Resources, Inc. (EOR) completed the programmatic environmental assessment, the high-level environmental review.*
2. *Earthview Environmental with Impact7G, Inc. were contracted to do the section 106 compliance. In this process, the PC enters potential practice information into a GIS map for review. At that stage, Earthview either recommends no further review is required or no action*

is needed or recommend a Phase I archaeological investigation is required. If a Phase I investigation is required, WMA contracts with a private archeology consulting firm to complete the field investigation.

3. *Grant administrator is responsible for delineating the area of potential effects to identify cultural resources including archaeological sites (Tier 2 Environmental desktop review). The grant administrator is conducting an environmental review to address federal acts and check boxes at the desktop level for factors like archaeology (I-sites), clean water act, contamination and toxic substances (dumps, landfills, industrial area), farmland protection, floodplain management, historic preservation, wild and scenic rivers.*

Four PCs made comments about the archaeological review process and three of these also made comments about the environmental review process. In three cases, PCs made comments about both the groups simultaneously. One PC indicated confusion about the archaeological work as opposed to the environmental assessment. Another PC indicated that the grant administrator was in direct contact with the environmental and archaeological assessment groups. The third PC had not yet started working with either group.

When prompted, three PCs commented about the archaeological review process. One said, “We have some interaction with Earthview when we have work that we need them to do. That ebbs and flows.” The other said that the grant administrator was doing the environmental work, but they weren’t quite there yet. The third PC said that they had had limited interactions with Earthview related to timeline.

Stakeholders and Others

Other groups have relationships that arose more organically as part of carrying out the work of the project and/or are with groups that are considered to be IWA stakeholders. While stakeholders include some of the aforementioned groups, they can also be entities who agreed to provide support (usually in-kind support) to the IWA project or receive direct benefit from its activities. In the summary below, PCs’ interactions with stakeholders include The Nature Conservancy, the Iowa Soybean Association, and, arguably of greatest importance, the landowners.

NRCS

Five PCs talked about interactions with NRCS. Three PCs said they are housed in an NRCS office. Two of those described receiving “every day” support and supervision from the NRCS, while the other PC described NRCS as more of an acting landlord and their SWCD as administrator for signing paychecks.

One PC described a relationship with a retired NRCS engineer who offered constructive criticism on how to be more effective with marketing the program or addressing landowner concerns.

One PC described finding common interest with NRCS in the watershed related to a specific large-scale conservation project. The PC described that having this common interest has improved the working relationship with that group.

Farm Service Agency

Two PCs said they interacted often with the Farm Services Agencies. One described “doing a project on CRP ground.”

Stormwater

One PC described interacting with stormwater coordinators for urban areas in the watershed. The PC said they worked together on an outreach campaign grant application to the DNR and reflected, “They’ve been a helpful group to bounce ideas off of.”

Local Businesses

One PC described contacting local businesses to help provide funding for food at WMA-related events.

Iowa Soybean Association

One PC described working with the Iowa Soybean Association (ISA) on their ongoing planning and water monitoring efforts. He said that ISA is “always looking for water monitoring sites,” so they will try to incorporate some water monitoring function into a few of the larger wetland sites “whether it’s a station or just access to take samples.”

The Nature Conservancy

One PC said The Nature Conservancy (TNC) has been a “tremendous partner, especially with project implementation.” The PC explained that with TNC funds they were able to cover the 10% match for wetland and wetland-type projects, and with some of the large projects, “I would never anticipate a landowner to pick \$20,000 out of their pocket to build a wetland—not impossible, but it’s very impractical for most people.” This PC said they have been great to work with and they were collaborating on finding other ways they can work together.

Landowners

Six PCs talked about interactions with landowners. Three PCs commented on the frequency with which they interacted with landowners saying things like, “Obviously, landowners are a big part of my time,” and “They should really be at the top of the list.” Two PCs commented on whether they had *enough* landowner interest to accomplish their goals. One said, “There’s a fair amount [of interest]. There can always be more.” That being said, the PC was satisfied with the number of landowners who had expressed interest in the project. Following a comment about early-adopters influencing their circles, the other PC said they didn’t anticipate difficulty getting more people involved, especially after expanding their eligible HUC 12s.

One PC described a process for working with landowners. They mentioned working from a list of landowners who had expressed interest and the practices they were interested in, and beginning to sit down one-on-one with them mostly looking at GIS maps (“since it’s cold out”) to talk about what they might want to do and where. The PC described drawing out the ideas they talked about and talking with the engineering about the possibilities.

Strategies for engagement

Four PCs described specific strategies they used to engage potential participants. They are described in greater detail in the following subsections.

Early adopters. Four PCs discussed how landowners were, or will be, talking to other landowners about the work of the IWA. Three PCs said they have already had new landowners approach them because they heard about the program from someone else. One PC said, “Pure word of mouth between the landowners” was the biggest thing at this time. This PC said, “That’s how it’s spreading now more than anything else. One landowner will be talking to another and then I get a phone call... If you can get those key early adopters, they’re going to talk.”

One PC said that there will also be another group of people who will get interested and involved “once we start doing stuff... once soil gets pushed around and water starts to fill up a pond, people are going to [say], ‘How’d that go?’ Right?”

Mailings. Three PCs referenced creating and sending a mailing of some sort to recruit landowners. One PC in particular described sending invitations or mailings to eligible practice areas and getting “a flush of people after I sent out the postcard announcing the 90% cost share.”

Targeted Outreach. Two PCs discussed specifically targeting outreach to landowners or public entities based on their location. One PC described in some detail one round of “targeted outreach” to people in specific areas who had not already contacted the PC. The PC said that effort included about 25 landowners, of which six replied, making it well worth the effort. Another PC reported contacting people because they lived in good locations for practices based on looking at maps.

One of these PCs also described on-road structures as “sites to really focus on.” The PC described that this was a focus “mainly because the county really wants to do them as long as they’re feasible.” The PC mentioned working to get adjacent landowners involved, but that on-road structures on county land were also a good deal because by working with the county, “what you gain is an entity that’s going to maintain those structures forever.”

Other. Individual PCs also described utilizing the following strategies for reaching out to landowners about IWA:

- Leveraging contacts from those who had previously worked with NRCS
- People approaching the PC directly
- Landowners approaching the PC after they became aware of the IWA funding through PC’s kickoff meetings in the spring
- “Facebook was really big for us.”

Landowner motivations

Two PCs relayed the reasons why landowners had been interested in participating in IWA. The information they shared is summarized below.

Individual focus. Both PCs described situations where landowners wanted to participate in this work because they wanted something for their own land. The first PC described that the group who became interested in the project after IEDA announced the 90%/10% cost share were not in the category of wanting to do something for the watershed as a whole, but were instead drawn in by the cost share “to do something they wanted to do.” The other PC agreed with these comments saying that for most landowners, it’s that they wanted a pond or “something either for aesthetics or helping control some sort of erosion issue they have on their farm... I think there still isn’t this sense of community—that we’re doing this for the betterment of the community, the future.” The PC said perhaps the WMA could be more involved in promoting that whole idea. The PC described trying to do this, but not all that actively because the work is more focused on getting projects done.

Community focus. One PC said, “The early people that got involved—the first dozen or so (or maybe more than that)—were most interested in being part of the project and a little less interested in having a pond. They *were* also interested in having a pond, but they wanted to be part of the bigger project, which I thought was really cool. And, even, honestly, a fair percentage of the later adopters are the same frame of mind, so that’s really cool.” This type of response is perhaps most indicative of the spirit of the grant, where landowners are equally taking a broader, more holistic approach.

Concerns or barriers

When prompted by the interviewer, two PCs mentioned concerns or barriers to successful work with landowners to meet the goals of IWA. One PC commented that potential participants had been interested, but needed to “hold off a little bit” because the farm economy was not great at the time. However, the PC did indicate that they still had enough interest to “keep us busy.” The PC said that if people had financial concerns, State Revolving Funds (SRF) could be an option. This same PC was not able to find other solutions for landowners that had projects that did not appear to be viable due to bedrock/sandstone issues. The PC said this was because of the short timeline of the grant and the need to move forward with projects that were deemed viable. Another PC said this project created a situation where some people wanted to wait to see how it’s going before they “jump on board—or even buy a ticket to jump on board.”

Additional Comments

After talking about the ways in which they interacted with others (both partners and other affiliated groups), one PC described being “to the point where I don’t rely on a lot of other people to do my job.” The PC added that knowing they’re there is nice, but they just didn’t need them much anymore.

Another PC made a similar comment about the sense of autonomy in the PC position, saying (in reference to the IWA partners), “If they haven’t directly helped me push through a question or an issue or something, it’s really hard for me to tell you how they’ve helped me.” This PC completed the thought with, “Maybe they’re doing stuff behind the scenes that I’m not aware of.”

Indicators of Success, Current Priorities, and Future Outlook

When assessing the current progress of the grant and forecasting what lies ahead, coordinators focused intently on the status of projects. While a majority of PCs had hoped to be further along by this halfway point in the grant, they reflected positively on the what they had already been able to accomplish and were aspirational about the road ahead and being able to get “boots on the ground” in the very near future.

Early Indicators of Success

Although several of the PCs expressed regrets that they did not yet have projects in the implementation phase, the PCs were able to readily identify the following early indicators of success in IWA work in their watersheds (with frequencies in parentheses):

- Successful initial landowner engagement (7)
- Long list of applicants (4)
- Projects submitted to engineers for preliminary design (3)
- Dollar amount of potential projects (2)
- Talking with landowners about other conservation practices (2)
- Landowner conversations and collaborations (2)

In addition to the early successes named above, individual PCs listed other important accomplishments in their IWA process: locating promising implementation sites; hiring an engineer; getting bid packets ready to go out; getting through the environmental/archeological assessment process (while simultaneously expressing dismay at the length of time these processes

are taking); establishing good working relationships; adding to their own personal technical capacity (to improve the process); and conducting effective WMA meetings.

Initial Landowner Engagement

All seven PCs said that early connections they made with landowners through landowner meetings and other outreach activities were good indicators of early progress. Complementarily, several PCs cited good turnout at landowner meetings as an early sign of success. Some other ways they described their successful landowner connections included:

- “Generating interest in the program in a pretty organic matter.” This PC also said that getting the “right people” involved was important.
- “Really excited about landowner engagement” and that this was a “cool” part of the project.
- “At this stage, it’s continuing connection with landowners.”
- Being able to tap their skills as coordinators to “pull people together – the right people at the right time – to talk about different topics.”
- One PC noted that all current applicants in their watershed arose from initial landowner meetings.

Applications

Four of the PCs pointed to their current list of applications as an early indicator of success³. One PC said the watershed had 37 applicants (at the time of the interview in late 2018), and that many applicants wanted to implement multiple practices. This PC was also particularly happy about working on bigger proposals. One PC said the landowner meetings led directly to 17 applications to date. A third PC cited “a big list” of 30-40 applicants with probably more than 100 practices of varying size. The third PC said it would definitely have been nice if they had practices built already, but felt good about the size of the list and about good turnout at meetings.

Projects Out to Engineers for Design

Three PCs said an early sign of success was having projects that were in the engineer design phase. One PC talked about the number of applicants as a function of the number of site visits saying, “17 -- I’ve sent to [the engineer] out of almost 40 site visits. It’s a little less than 50%, which seems about right.” Another PC related that showing landowners some of the engineer’s preliminary designs was stimulating good conversations with landowners. A third PC said that nearly all the designs were ready and were only awaiting permitting.

Cost of Proposed BMPs

Two PCs talked about the money that would be spent if the projects involved in the current applications were to be implemented. One PC estimated that the total cost of practices ranged between \$20,000 and \$200,000 and added, “I think...if we did designs and all the landowners went through with all of the projects at this point in the game, we could probably have \$3.5 million dollars of work to do.” This PC continued to explain that they would be in good shape, “if we’re counting success in terms of not having to give money back to HUD.” Another PC said their projects at the time added up to over \$1 million.

³ . Since the watersheds vary greatly in size, applicant numbers cannot be compared across watersheds, however the PCs keep close track of their work and often quoted numbers.

Other Conservation Practices

Two PCs discussed the value of talking with landowners about conservation practices outside of the IWA-eligible practices. One PC said that although this may seem to go beyond the mission of the IWA, talking with landowners about things like cover crops gets them more interested in trying new things. The other PC described a similar situation in which landowners learned about new edge-of-field practices along with hearing about the benefits of no-till and cover crops. The second PC said these conversations included discussion of helping landowners understand the economic benefits of changing their farming practices. The PC said that this kind of discussion provides the opportunity to openly discuss the possibility that the goal should not be to extract as much as possible from the land, but the goal could instead be to maximize profit against investment. The PC said, “We should invest a little lower because when you invest something and you get the same cash return, then you have a zero-net return.”

Landowner Conversations and Collaborations

Two PCs talked about landowners spreading the news to each other about the project and sometimes even working together on collaborative projects. One PC described three different adjacent landowners working together and spoke extensively about the collaboration process saying, “[It’s] really cool to see that kind of collaboration happening, and that’s how word of the program is spreading. It’s a real organic process to see how word of this spreads literally on the street, over the fence rows... or at Casey’s! I really like that.” This PC added, “It doesn’t surprise me about the [...] watershed at all. Of course, that’s the way the word is getting out.”

Expected “First Shovel”

PCs were unmistakably hoping to get construction underway as soon as possible. All six of the PCs that were asked when they thought the “first shovel” would be for an IWA practice indicated that they were hoping to see this happen during 2019⁴. Three PCs were hoping for spring 2019, two for summer, and one was aiming for fall 2019. The PC who indicated the earliest date said, “As soon as the ground thaws” in 2019.

The other PCs spoke with a bit more hesitation, with one PC saying they had really hoped for fall 2018 knowing that would be “very optimistic.” They now said, “I think there will be a number of projects that we’ll be able to get moving in the spring [2019].” The PC indicated that a few practices might have to wait until summer. A third PC said there had been some barriers in getting started in time to get approval for tree removal and to finish the Phase I archeological reviews, but said that there was hope for spring 2019, or in the worst case scenario, it would have to be fall of 2019.

One of the two PCs who indicated summer 2019 said, “We’re hoping later summer next year... hoping.” Another PC also indicated some concern about getting through all the steps in a narrow time frame for summer implementation and added, “I’ll be really sick we don’t have one until fall.” The final PC said that “spring and fall window” was good for implementation, and that, realistically, it would probably be fall 2019.

Current Priorities

Marking the halfway point of the project’s timeline, the most commonly cited priorities by PCs fell into two main categories, both centered on implementation. The first main category, named by five

⁴ One PC was not asked this question

PCs, was to get practices in the ground. The other related priority, also described by five PCs, was to act as the facilitator that keeps all the various processes going so that practices can indeed be implemented.

Moving Dirt

Five PCs said that getting construction started was their primary priority for the next six months. They all expressed this focus rather succinctly: “Moving dirt,” “Getting projects built,” “Putting our on-farm mitigation and conservations practices on the ground,” “Implementation,” and “Projects!”

Moving the Process Along

Five of the PCs emphasized the importance of their role as the coordinator in making sure all the right steps get done so that construction can happen on schedule. One PC said that getting things back from the engineers and moved forward to environmental review is the primary task for now, commenting that it is the PC’s job “to keep everybody moving that’s supposed to be moving.” A second PC agreed, “At this point, it’s just me making sure that [the projects] are getting pushed forward.” Another PC, while indicating concern about keeping track of the process to make sure they are “getting project designs lined up” and ready for archeological review, interjected that the written reports issued by the archeologists are “pretty cool.” A fourth PC said, “My priority is getting as many proposed projects through as many steps as is feasible in the hope that the various things that are hanging them up will resolve during that time, and they will then be clearer for summer and the... bid-letting.” This PC went on to say that there have been a lot of “hang-ups,” and there are many steps remaining. Despite these concerns, this PC said, “I’m going to get everything done that isn’t dependent on something else getting done, and we’re going to have a lot of projects in the pipeline.” The fifth PC spoke in general about getting designs prepared, and about getting letters of intent from landowners, naming these as moving the process along.

Other Priorities

There were several additional priorities that were named specifically by two of the PCs. They are detailed in the following subsections.

The watershed plans

Two PCs referred to the watershed plan as a priority in slightly different contexts. For one PC, their watershed plan was still being written, so their priority was to be ready for its completion. For the other PC, reviewing the plan was a high priority. The PC said that although the plan was mostly complete, reviewing the plan would take significant time, and that the watershed board was probably not going to review it carefully, so the PC viewed this as their duty.

Water quality data

One PC said that it was a priority to complete water quality analyses and present the findings, first to the water quality volunteers and then to the watershed board. The PC said that there would be an event to share the data with the volunteers that would in part be a thank you to that group for their help.

Adapt to changes in focus area

One PC said that a priority in the watershed right now is to adapt to changing realities about where practices should be installed. These changes were dictated in part by the additional HUC 12s eligible for IWA funding, but also by geological issues detected primarily with the bedrock at some of the sites that were initially identified.

Additional Support Needs

Whereas five PCs described one or more ways in which they anticipated wanting support in the near term, there was relatively little consensus on what their actual needs were. Individual suggestions for support were recorded as follows:

- Additional training in GIS: PC said that the biggest challenge at this time was “being able to go in and understand the design aspects of the project.”
- Answers to questions: One PC said, “We need to get this FSA situation resolved.”
- Archeologists’ reports complete: A PC said, “I’m going to be a really happy camper when our archeologist can get back on board and start plugging away at the log jam waiting for them.”
- Assistance with approaching landowners: PC described this need as ongoing but added that they are getting help from the local ISU EO agent, the administrative agent county, and the WMA chair.
- Environmental review process: The process feels like a “black box” and knowing more about it and about the public comment waiting period would be helpful.
- More direction and feedback: PC asked for more input on the work from the IWA partners, adding, “I would love for that to happen.”
- Realistic timeline for project completion: A PC said, “Project partners need to be thinking about... whether the timeline for the project is realistic.”

One PC had no specific ideas for what support they needed at the moment. Another PC said that they did not have any anticipated needs, instead suggesting that sometimes there was almost too much partner presence. This PC went on to explain that sometimes partners would come to meetings intended for landowners. The PC said, “You end up having a meeting full of agency people and very few landowners, and I’ve been to too many of those.” The PC suggested that for future meetings, the meeting agenda could be adjusted to be very specific and then only invite partners who could provide the most relevant technical information.

One PC reiterated that financial support from partners like The Nature Conservancy, a municipality in the watershed, and the UI FRT (through an EPA grant application) was very helpful.

Spending the Allotted Funds

As an indicator of PCs’ confidence in the progress of their IWA work, five of the seven coordinators said they thought they would be able to spend the money allocated to their watershed through the HUD grant. On the other hand, two PCs said that, at this point, they were not at all sure their WMA could spend the money during the grant period.

Yes, the money will be spent!

The most confident PC reported, “That’s what I was hired to do – to spend the money. That’s going to be my goal always,” adding that the plan was to spend all the money allocated to their watershed and then some. However, the PC expressed concern about how long some of the steps were taking, including getting concept maps from engineers.

Another PC said, “Right now, I feel like we’re on a really good trajectory,” but added that they could lose applicants if they don’t start getting projects on the ground soon. The PC said, “For all of those who signed up this spring [2018] for cost share who aren’t going to see their project on the ground until the following fall, 2020, how many of them are going to stick with us? I don’t know... people change their minds. If they have another crappy harvest season next fall, like they’ve had the last

few years, then that might put them over the edge, and they're not going to want to spend any money."

A third PC said, "I'm pretty confident" and cited a "parking-lot-outside-the-ballpark estimate for the projects that I've got kind of in the pipeline now of about a million dollars. So, if we can do that three times, we'll be perfect!"

A fourth PC simply said that the change in the cost share to the 90%/10%, as well as adding the additional eligible HUC 12s, have made it so that it seems likely the money will get spent.

A fifth PC said that it looked as if all or nearly all the money for their WMA may be spent on one project. So, if that project goes through, it would be no problem to spend the money. The PC indicated that the large project could be a "challenge," but that even if it didn't happen, there should be enough landowner interest to spend the HUD money and start looking for more.

Not sure that the money will get spent

Two PCs were less confident that all the money would be spent by the end of the funding period. One PC reluctantly said, "Initially, I thought there was a good chance the money gets spent." They said that a lot of money gets spent "just getting to the project," but worried that with the length of time it takes for the different processes in implementation, "I don't foresee the amount of projects getting done in that time frame." The final PC stated only that the projects currently on the WMA's list did not add up to the amount allocated to their WMA.

Other Factors Affecting Outcomes of the IWA

Coordinators cited a handful of additional factors with varying degrees of frequency that have negatively affected their ability to carry out the work of the IWA in their watersheds. As outlined in the following subsections, the barriers to successful outcomes have included the composition and dynamics of the WMA itself, site eligibility issues, and the farm economy.

The WMA itself

The most commonly cited additional factor hindering progress on the IWA was related to the structure of the WMA itself; however, in each case, within a very different context. These responses included:

WMA dynamics. One PC said a Watershed Management Authority is a relatively new construct. The PC said that "the dynamics of the coalition," the roles of the coalition members, and the role of the coalition itself have yet to be worked out.

WMA composition. A PC commented that the makeup of the WMA can be important in ways that were not necessarily foreseen. The WMA being described has many very small municipalities, and this was described by the PC as being problematic in two ways. First, small municipalities "simply don't have the resources to send a person to every quarterly meeting," and the involvement of the community may be limited by this fact. Second, if communities become WMA members and then are *not* able to attend meetings, it can be very difficult for the board to reach the quorum required to make decisions. The PC said it was tough because they want communities to be involved and did not want to discourage them from being official members.

WMA and state politics. One PC expressed concern about some changes in WMA powers during the 2018 state legislative session; however, to date, there have not been any changes made to the WMA structure.

CRP lands questions

One coordinator brought up an issue that they heard about from another PC but had not experienced in their own watershed. This was related to whether lands set aside for Conservation Reserve Protection (CRP) were eligible for siting IWA practices. The coordinator who mentioned the CRP question did not elaborate beyond that because it ‘drifts off into hearsay,’ but did comment that it was something that they would all probably need to have clarified and, like the stream mitigation issue, the answer people were getting appeared to depend on who was being asked.

“The big picture?”

One PC said that at times it was troubling that participation in the IWA did not seem to be related to landowners having “the whole sense of ‘the big picture’” of IWA. This PC went on to say that the big picture (of improving the landscape to provide flood mitigation and water quality improvement) “hasn’t resonated yet with this program and I think that’s what really needs to happen for it to be really successful.” When asked what could happen to promote this vantage point in the communities, the PC said, “I wish I knew. I think about it a lot... more awareness... maybe just outreach meetings.” The PC also wondered whether more work in sub-watersheds would help, “where farmers get together and work together – promoting that or getting that established would be huge for getting and keeping this thing going.” The PC said one does have to remember that the IWA is a long-term approach, reflecting, “This isn’t going to all happen overnight.”

The farm economy

Four of the PCs were explicitly asked whether they thought the farm economy was having an impact on the project’s success. However, none of them considered the farm economy to be a big problem for the IWA project. One PC had brought it up earlier in the interview by saying that since the farm economy is not great right now, some landowners started to look into participation and then said they needed to “hold off a little bit.” The same PC elaborated at this point by saying that the watershed region in general, while “pretty open-minded” to change and not quite in “survival mode,” has to be pretty careful about what they do financially. which has likely affected their willingness to participate in the IWA.

One PC’s response was that it probably depends on the farmer/landowner. The PC explained that, if you’re talking to younger famers – those who are still running their own farming operations—then, “times are a little tougher – [they] aren’t wanting to spend a lot of money right now.” By contrast, the PC said that spending the money on conservation practices is not as big an issue for those who are no longer farming or may be farming more as recreation.

The third PC said that the economy doesn’t appear to be a factor in the watershed because many of the landowners getting involved in the IWA are doing it for improve ground for animal habitat and hunting purposes.

Finally, the fourth PC mentioned that the 90%/10% cost share had increased landowner interest in the IWA. When probed as to whether the economy was a factor in the success of the IWA in the watershed, the PC said that may be the case, but the currently active group “didn’t seem to be bothered one way or another by that,” because they were the initial group of landowners who were already interested in the program anyway. The PC added, “How can you pass up an opportunity like a 90% cost share?”

Other Formal Training Needs

Looking ahead toward the remaining two and a half years of the grant, PCs expressed varied needs for additional training.

Two of the PCs said that they could not think of any specific training that they needed at the moment. One said that there is always professional development that can be done, but, “when looking at things that I absolutely need to get done, no, not at this time.”

Two PCs said they would be interested in more training on GIS, with one PC saying that it would help with interacting with designs to do cost estimates. Two PCs also asked for more interactive hands-on training sessions like the surveying session at the spring 2018 watershed academy and some of the fall 2018 sessions where there was a portion of it in the classroom and then they went out into the field and “got to actually see it in place.”

Other ideas for training mentioned by individual PCs included:

- Stream restoration process
- Computer-aided design (CAD): to aid in interacting with designs to do cost estimates
- Environmental review process: one PC said that right now it seems like a “black box”
- The GHOST model (Generic Hydrologic Overland Sub-surface Toolkit): Iowa Flood Center’s new simulation model
- ACPF tool
- Connecting with landowners

Several PCs expressed appreciation for the training events that have already occurred. One PC said the fall 2018 Watershed Academy held in Louis, Iowa, was “absolutely phenomenal.” The PC highlighted presentations about water quality practices, discussions about ponds, and ideas for feed lots. One PC said they try to take advantage of all the training opportunities out there “if I think it can be of use to the project.” Another PC said that the trainings have made it possible for PCs to really serve as a resource for landowners when they have questions. Finally, one PC said that they did not need more training on cover crops or on how to engage people in the work, but that some of that education would be good for the people who were newer to this type of work.

Recommendations for the IWA Team

When asked about any recommendations they had for the project team, most of the PCs chose to talk about things they might have done differently during the first half of the project or things they might suggest if there were to be another project like the IWA⁵. Notably absent from their responses, however, were recommendations regarding things that could still change during the current timeline of the project.

The most common recommendation was that some of the documents and paperwork could have been developed ahead of time. They said they did not see the value in having to develop things individually at the watershed level. For example, one PC said, “We literally spent the first year just coming up with the language on our application.” Another PC echoed this sentiment, saying that there appeared to be an assumption/expectation among the IWA partners that there would need to

⁵ Note that one PC was not asked this question during their interview.

be aspects of the documents specific to individual watersheds. However, there were very few, and this PC felt that the process could have gone more smoothly if the applications were developed in advance. The third PC said that it would have been very helpful if “some of this stuff would have been laid out a little bit better initially... I was kind of expecting more of a road map.”

Two PCs said it would have been better if the project had gone through a process to make sure there was buy-in from all the agencies involved with housing, supervising, and cooperating with the PCs. Both PCs said that there were times when it was difficult to work with and around the people, and there was “some friction that could have been avoided” if there had been more of a conversation ahead of time with the project organizers.

Other recommendations made by individual PCs included:

- Help everyone involved understand that the pace of the work will be slow
- Get archeologists on board sooner
- Provide early and ongoing details of *the Iowa Watershed Approach* to the WMAs
- Engage social development specialists to involve more people in WMA work, especially more landowners and urban residents
- Make sure watershed plans “harmonize” with existing city, county, and state-level plans
- Designate a human resources person for the project coordinators as a group
- Specify a system of hierarchy and well-defined differentiation of services offered by IWA partners

Attachment A: Interview Protocol

As part of the evaluation of the Iowa Watershed Approach, the Center for Evaluation and Assessment is conducting interviews with the Project Coordinator at each project watershed. This is in lieu of the survey we typically send every six months. The purpose of the interview is to learn more about project coordinators' roles, experiences, concerns, and anticipated needs. In order to use the information from these interviews effectively, the project staff needs to know who is providing the information so that your particular knowledge and interests can be taken into account. Therefore, the findings from this interview will not be reported in an anonymous way. However, in reporting beyond project staff, your comments will reference your site, but not by name. This limits the possibility that you will be identifiable beyond the people working directly with the project but does not provide complete anonymity.

Findings from this survey will be provided to you and to the IWA partners to provide guidance on how to best support project coordinator work. Findings will also be submitted to the project funding agency to describe the ways in which IWA partners facilitate the work of WMA project coordinators.

Your participation in this interview is voluntary. You may decline to be interviewed, you may decline to answer particular questions, and you may ask that the interview not be used even after we have completed the interview.

The interview will take 60-90 minutes. You may end the interview at any time. Please let me know if you need to leave or take a break and finish the interview later.

We will be asking the same general questions of all interviewees. Findings from all interviews will be summarized and you will be given the opportunity to review the summary and make comments, corrections, or additions before the summary is considered final.

[Ask permission to record the interview]

Project Coordinators' Roles

1. [Let's start with something easy] What is the best part of your job?
2. [Thinking globally] What do you see as your main roles in the IWA project?
3. There is probably no such thing as a typical day, but if you consider the last couple of weeks, percentage-wise how do you spend your time? [Reference their roles from the previous item]
4. Right now, do you feel like you have enough time to complete all of your duties?
5. Do you feel there are demands on your time outside of the work of IWA? How do you manage these demands?
6. [This section ask you to reflect on the different groups of people you interact with in your job as PC. We'll do this in sections. To start...]
 - o What groups of people do you interact with on a regular basis?
 - o What does that interaction look like?
 - o [(After they've done their list) "one group I thought you might mention was..."]

Group	Possible Follow Up Items
IWA Partners □	
WMA Board and WMA Board Chair □	• What successes have you encountered engaging with your WMA board? • What barriers have you encountered engaging with your WMA board? • What strategies can you recommend to other coordinators for keeping them engaged? (Probe: Have you tried these strategies? Do you think they're working?)
Watershed landowners □	• Can you characterize the level of enthusiasm you have had from landowners about this work? • What have been the biggest challenges/barriers related to engaging landowners generally in IWA opportunities? • What kind of support do you need to overcome these barriers? • What strategies could you recommend for overcoming these challenges? (Probe: Do you think anyone has changed their mind?)
Planners □	• In what ways have you been involved in the planning process? • Knowing what you know about the planning process so far, how do you see yourself interacting with the plan once the consultant is gone?
Contractors □	
Engineers □	
Contractors for environmental assessments □	

Contractors for archaeological assessments □	
Other groups mentioned:	

7. What's the most frustrating part of the job?
8. What local, state, or national factors are affecting your WMA's ability to complete the work of IWA?
9. What are your priorities for the next six months?

Support

10. There are lots of local and statewide partners in this project. In what ways have the different partners supported you in your IWA work? [Let them talk and have the list to reference as they talk. After they say the partners they find helpful, we can say have you worked at all with XX to round out the list, how has that gone *[when we analyze, we should say who they said unprompted]]*

IWA Partner	Discussed	Prompted
Iowa Department of Agriculture and Land Stewardship (IDALS)	☐	☐
Iowa Department of Natural Resources (IDNR)	☐	☐
Iowa Economic Development Authority (IEDA)	☐	☐
Iowa Homeland Security and Emergency Management Department (HSEMD)	☐	☐
Iowa State University – Extensions and Outreach (ISU-EO)	☐	☐
Iowa State University – Iowa Water Center (ISU-IWC)	☐	☐
University of Iowa – Flood Resilience Team (UI-UI FRT)	☐	☐
University of Iowa – Iowa Flood Center (UI-UI IFC)	☐	☐
University of Northern Iowa – Tallgrass Prairie Center (UNI-TPC)	☐	☐
WMA board members	☐	☐
NDR Policies Procedures Manual (on IEDA webpage)	☐	☐
Written materials (maybe if not mentioned)	☐	☐
Watershed academies, advisory board meetings, other events?	☐	☐
Others mentioned:		

11. How do you interact with your supervisor? Are you getting the support you need to do your job well?
12. What considering the priorities you mentioned earlier, what additional support do you need to accomplish these priorities?
13. What formal training opportunities would be helpful to accomplishing these priorities?
14. How confident are you that your WMA be able to spend the money allocated to your watershed for conservation practices?

15. What else would you point to right now as early indicators of success?
16. When's your best guess of the "first shovel" in your WMA?
17. As PCs you have opportunities to get together both formally and informally. How has working with other PCs helped you?

Overarching Questions

18. What is going particularly well for you so far? What accomplishments are you most proud of?
19. What recommendations would you make to the program team to improve IWA?

What other comments to you have about the Iowa Watershed Approach, project coordination, or anything else?

[Turn off the recorder]

[Provide the opportunity to discuss the role of evaluation in IWA and their role in the evaluation if the PC is interested.]

Any other thoughts or feedback on the evaluation efforts as you understand them?

Do you have any questions for me before we finish?

Appendix H- Iowa Watershed Approach WMA Planner Survey Findings: Summer 2018

Introduction

The Center for Evaluation and Assessment (CEA) collaborated with IWA partners to create a survey for Iowa Watershed Approach (IWA) watershed planners at roughly the midpoint of the watershed planning process. The purpose of the survey was to inform project improvement by asking a representative from each planning group to reflect on:

- The planning process
- Major successes, priorities, and challenges
- Working with the IWA partners and the WMAs
- Their planning team
- The future

This is the second of three surveys the CEA will administer to IWA planners at different points in the watershed planning process.

Methods

On July 24, 2018, the CEA sent an email invitation with a link to complete the online survey to representatives of the planning groups with whom the IWA WMAs had contracted to create watershed plans, asking them to complete the voluntary survey by August 1, 2018. The seven WMAs included:

- Clear Creek Watershed Coalition
- East Nishnabotna River WMA
- English River WMA
- Middle Cedar River WMA
- Upper Iowa River WMA
- Upper Wapsipinicon River WMA
- West Nishnabotna River WMA

Two watershed planner teams are doing planning for two IWA watersheds so there are six planners for these seven watersheds. The East and West Nishnabotna plans are being created in conjunction with each other by a common planner, JEO Consulting Group (JEO); therefore, JEO was asked to complete the survey only one time. Northeast Iowa Resource Conservation and Development (NEIRC&D) is creating watershed plans for both the Upper Iowa River and the Upper Wapsipinicon River watersheds, but the plans are completely independent of each other, so their team was asked to complete a survey for each watershed separately.

At the time of this survey, the watershed planner for the North Raccoon watershed had not yet been hired. Subsequently, they contracted with Emmons & Olivier Resources, Inc. (EOR) who also is the planner for the Middle Cedar. Later in the North Raccoon planning process, the CEA will communicate directly with EOR to learn more about their planning process there.

After the invitation, the CEA received several emails indicating that key planning team members were on vacation, therefore the CEA extended the date for survey return by one week. On August 10, 21, and 27, 2018, the CEA sent reminder emails including the survey link to planning groups who had not yet responded to the survey. By September 11, 2018, planning groups affiliated with five watersheds had responded to this survey. Respondents were asked to indicate their WMA affiliation.

In the email invitation, the planning groups were informed that the surveys were not anonymous for two reasons. First, the small number of intended respondents would have constrained the ability of CEA to report the findings in an anonymous way. Additionally, the CEA, in collaboration with the IWA partners, decided it could be important for the IWA partners to know who gave particular responses so that the partners could address individual challenges and concerns.

In most cases, this document reports results in an anonymous way, including not identifying the watersheds from whom responses were received. As necessary, the CEA will provide partners with more specific information confidentially, upon request.

Survey Findings

The Watershed Planning Process

The first section of the survey asked planners to indicate their level of agreement or disagreement with a set of items on a 5-point scale where 1 was “Strongly disagree”, 3 was neutral, and 5 was “Strongly agree.” The items were related to different facets of planning logistics including: workload, funding, timeline, and general perceptions of their working relationship with different entities of the WMAs and the IWA partners. Table 1 reports the results.

Table 1

Planners perceptions of current state of planning logistics (N=5)

Item	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Our planning team is on schedule to complete the watershed plan by the time designated.	0	0	0	5	0
The workload is reasonable for the funding we will receive.	0	0	1	3	1
The workload is reasonable for the established timetable.	0	1	1	2	1
The roles of the IWA partners are clear to our team.	0	1	1	1	2
Working with the WMA is going well for our team.	0	0	1	1	3
Working with the project coordinator is going well for our team.	0	0	0	2	3
Working with the IWA partners is going well for our team.	0	0	1	1	3

Working with WMA technical team is going well for our team.	0	0	1	1	3
Working with watershed public stakeholders is going well for our team.	0	0	0	1	4

The summer 2018 survey included seven items that were also on the first IWA planner survey and two new items. The results from the fall 2017 and the summer 2018 surveys cannot be directly compared nor can differences on the same items be interpreted as change in attitudes among planners because respondents were not the exact same group of planners. Although most responses were quite consistent across the two surveys, in the fall of 2017 four of the five respondents strongly agreed that they were on schedule to finish the plan in time and by summer 2018, all five only somewhat agreed that they were on schedule. The deadlines for all the eastern Iowa planning teams (who had started the planning process earlier) were extended during summer 2018, so this isn't surprising. In addition, the hydrologic assessments reports from the Iowa Flood Center were running behind schedule and the watershed plans could not be completed without those reports. [For the complete Fall 2017 Watershed Planner survey results see the *IWA Year Two Evaluation Activities Report*.]

On both surveys, respondents agreed that work with the WMA, project coordinators, and partners was going well, and in summer 2018, they reported that work with the technical team and watershed public stakeholders was also going well for the planning teams. On this survey, one planner disagreed that the workload is appropriate for the time and one also disagreed that they understood the roles of the IWA partners.

Successes

In this section of the survey, planners were asked to reflect on their accomplishments in the watershed planning process in four important areas: assessment; outreach and stakeholder engagement; goal setting; and collaboration and partnerships. These three areas arose from planners' first survey responses about what was important for watershed planning. All five respondents answered these items, unless otherwise noted.

Assessment

The watershed planners listed quite a few accomplishments related to assessment. The only accomplishment listed by more than one planner was completing a social assessment of landowners, named by three planners, with two planners reporting "good response" rates on the social assessments. One planner detailed the importance of learning from the social assessment that more than 70% of the respondents had been affected by flooding due to the closure of roads or bridges on roads they take regularly. The same planner said they learned that close to 60% of their respondents are interested in learning more about flood mitigation and improving water quality. The other assessment accomplishments mentioned by individual planners included the following:

- Beginning to apply information from draft hydrologic assessment report
- Hiring a consultant for stream restoration concept design
- Compiling years of water quality data
- Using ACPF and BMP mapping data
- Creating a "watershed characterization"

- Using an older SWAT model and draft information from the flood resilience team to do preliminary planning as they wait for the hydrologic assessment report and the full flood resilience information
- Using data from the Daily Erosion Project

Outreach and Stakeholder Engagement

Four of the five planners described the kinds of meetings they have had or plan to have with local stakeholders. Two planners said they had each held four landowner meetings in the watershed, another said they had “several,” and one planner said they had several meetings scheduled for the fall of 2018. One planner described that they had attracted more than 100 participants to the meetings and “gathered ideas of what they want to see in their watershed plan and the things they value in their watershed.” One planner said they had also conducted a meeting specifically targeted to one of their selected HUC 12 watersheds to “learn how much people know about their watershed and to educate them on the funding opportunity available to them right now.”

One planner said they had completed a “successful watershed survey mailing” and another said the planning team had met with community leaders to “plan resiliency strategies” for watershed communities.

Goal Setting

Three of the planners said they had worked with their watershed’s WMA boards to establish and approve goals [also naming strategies, action steps, actions] to be included in their watershed plan. Two planners commented specifically that their goals relate to water quality as well as to flood mitigation with one saying they will, “Work to create a resilient watershed.” Another planner said that their “most important” accomplishment in goal setting was to establish a goal for water quality aimed at improving water quality such that streams within the watershed “meet their designated uses rather than focusing [only] on the Nutrient Reduction Strategy Goals.”

One planner said that their goals are also intended to, “Unite public and private entities to improve the health of the watershed including the residents that live within it.”

Another planner said that their goals arose from the watershed survey they had conducted and are related to the types of practices they wanted and their “prospects for implementation.”

The fifth planner said they had not yet completed the goal setting process.

Collaboration and Partnerships

Planners named a number of groups that have already been important collaborators on watershed planning. Those named included:

- Their watershed technical team
- IWA partners
- A local seed dealer
- WMA Board
- Watershed coordinator
- Iowa Agriculture Water Alliance

In regard to the IWA partners, one planner said they’ve enjoyed working with the many partners, adding “Having so many partners can make things more complicated and tediously slow, but the overall end product will be better for it.” Another planner described the success of their internal

partnerships between the planner, the WMA board, and the project coordinator, especially in organizing and conducting stakeholder meetings and in deciding on things that they collectively really want to “carry out in the future.” That planner said they “continue to form new partnerships with other entities who want to improve the health of the watershed.” One planner said that work with their technical team has been great and they have “really stretched the assessment funding and gotten useful data for the urban areas of the watershed.”

Other successes

Three planners described other successes they’ve experienced during the planning process. These included:

- Collaborating with the Department of Transportation on a stream mitigation project related to planned road construction in the watershed
- Helping to organize a watershed tour in another watershed to learn about “successes and struggles” the watershed experienced during a major watershed project
- Developing a draft of their watershed’s education and outreach plan
- Discussing future governance and financing issues for sustainability

One planner said that the summer months had been slower in watershed planning than the initial phase.

Priorities and Challenges

Planners were asked about their priorities for the next phase of the planning process and about how they have dealt with challenges they have experienced during the watershed planning process. The list of challenges they were asked about was also generated from planners’ responses to the first survey including: coordinating with IWA partners, tight timelines, and meeting IWA goals.

Priorities

When asked for their watershed planning priorities for the next few months, planners named the following (with frequency in parentheses if greater than one):

- Incorporating the information from the hydrologic assessment into the watershed plan (2)
- Incorporating the information from the resilience team into the watershed plan (2)
- Completing assessment work
- Completing goal setting
- Preparing detailed sub-watershed plans for public input
- Writing the narrative of the plan
- Developing an implementation plan to meet WMA-established goals

Dealing with challenges related to coordinating with IWA partners

On the first survey, planners named coordinating with the large number of IWA partners to be a challenge. On this survey, four planners responded to this item with one saying that there have been no challenges with IWA partners, and the other three saying that they are communicating and coordinating well with the IWA partners. One planner said, “Good communication with IWA partners has allowed our work to flow smoothly.”

Dealing with challenges related to tight timelines

Three of the watershed planners said they had brought the matter of tight timelines to the attention of necessary people and received extensions on their timetables. One specified that this is a no-cost

extension. One planner said they have “brought in additional staff to assist in the technical aspects of the plan.” The fifth planner said, “Tight timelines have not occurred yet, but will soon!”

Dealing with challenges related to meeting IWA goals

Two of the planners said they were not experiencing problems related to how their plan will meet IWA goals. One planner said they make sure they are in ongoing conversation with the IWA partners to “make sure that our team is meeting the goals of the IWA.” One person said they were still unclear as to the “mitigation component of the plans and goals.” Another planner said they were not clear what is meant by “IWA goals.”

Additional challenges and how they have dealt with these challenges

One planner said they did not experience any additional challenges. The other three planners who answered this item provided the following additional challenges and the ways in which they are dealing with these challenges:

Challenge	Approach
<i>Time and money (“but we are making it work”)</i>	“Ask for help!”
<i>Waiting for completion of supporting materials</i>	Constant communication and “understanding of partners to our challenges and their willingness to help”
<i>Lack of WMA board member engagement in planning due to: 1) members’ lack of watershed management background knowledge and/or 2) members’ feelings that they are not “empowered to make decisions” for their member entity</i>	“Not sure we have overcome the challenge yet, but we try!”

Anticipated challenges and additional assistance requested

One planner said they did not anticipate additional challenges. One planner mentioned the challenge of getting stakeholder input on draft plans and another mentioned getting communication about the plan out to the member communities. Both of these planners requested assistance with distribution of the plans and “developing and delivering presentations on the planning process for community members.” Another planner said, “I see some long days ahead, but that is the nature of the work.”

Unexpected obstacles to planning process

Two planners responded to this item. One planner said that the need for more time and the “amount of data that is going into this plan to make it the best it can be” were somewhat unexpected. Another planner said, “Not receiving work products from the project partners in a timely manner was very unexpected.”

Working with IWA partners

Value-added from IWA partners

Four of the planners named as valuable the hydrologic assessment reports and modeling that they receive from the Iowa Flood Center (UI IFC). One planner said that they are starting to get modeling data from the UI IFC and that it “will hopefully be useful in establishing the flood benefits to be gained by the conservation practices being considered.” Another person named the UI IFC support as the “most valuable piece in terms of data and analysis,” but said that working with “all partners

has been valuable.” Another partner agreed saying that all of the partner entities are “providing data to us as needed and are open for communication.”

Three planners named working with the Iowa Department of Homeland Security and Emergency Management (HSEMD) as providing value to the watershed planning process. One planner mentioned that they are in close communication with HSEMD to make sure that the watershed plan “correlates with the county Hazard Mitigation Plans so that other funding sources can be reached with the watershed plan.” Another planner agreed that the HSEMD helps with “connecting [them] with new funding possibilities for flood mitigation efforts” that could be valuable to WMAs.

One planner mentioned the UI IFC’s Flood Resilience Team (UI FRT) as providing them with documents specifically related to watershed flood resiliency.

Information needs from IWA partners

The four respondents to this item communicated the following needs (with frequency in parentheses if greater than one):

- Hydrologic assessment reports from the UI IFC (including ACPF) (4)
- Resiliency reports from the UI FRT (3)
- HAZUS/economic impact information from the HSEMD (2)
- Additional information from the Iowa Water Center
- Water quality and modeling information from The Nature Conservancy [The Nature Conservancy is not an IWA partner, but is a leverage partner involved with the IWA.]

Differences in working with IWA compared to other projects

While one of the planners said they had not experienced any specific differences in working with the IWA compared to their prior experience in watershed planning, the other planners mentioned several differences. These included:

- Timelines:
 - “Adjusting timelines to wait for assessment information”
 - “More partners makes the process cumbersome and slow, but the overall product is improved.”
- More coordination with others:
 - “Many more partners in the project and many more pieces of the puzzle being completed by others. This Plan really has little to do with the funding that is available now, rather it will be for what to do after it is no longer available.”
- Not doing the modeling in-house:
 - “Makes it difficult for us to work on developing and testing scenarios.”

Working with WMAs and other local entities

Additional needs from local entities

Only one planner said they needed more feedback from their WMA board and the watershed coordinator. Another planner said, “Everyone has been very helpful.”

Interacting with the WMA

All five planners said they primarily interact with their WMAs at WMA board meetings. They said they provide the boards with updates on the planning process, seek the board’s input on content of

the plan, and invite them to community outreach events. Two planners said they also work with technical teams or other WMA committees. Two planners mentioned working in particular with the WMA chair and one mentioned working with the IWA project coordinator.

Interacting with the WMA technical team

One planner said they have not yet met with the WMA technical team and another said that the technical team “has been less involved than that of other watershed groups we’ve worked with.” One planner simply said they had worked with the technical team through in-person meetings, email and phone calls. The other two planners emphasized the value of working with the WMA technical team. One planner said, “They are the most important part of the process. We meet as needed to move things along.” The other planner who said they had worked with the technical team said, “The technical team was important in selecting the priority watersheds” but added that they had not yet met again for “decisions based on the watershed plan.”

Interacting with the project coordinator

All five planners described ways in which they had worked with the project coordinator including the following (with frequencies in parentheses if greater than one):

- Outreach and stakeholder engagement (3)
- Help with WMA board and committee meetings (2)
- Water quality data and monitoring
- Regular communication by phone and email

One planner mentioned in particular that the project coordinator helped with getting contact information for interested landowners and with communication information about project implementation to these landowners. Another planner said that the project coordinator had been “a great help in outreach efforts.”

Interacting with other watershed stakeholders

The watershed planners mentioned several different ways in which they had engaged with different audiences of watershed stakeholders. Three watershed planners said they had or will engage with the general public and stakeholders through public forums and open houses. They also use these meetings to gather input from broad groups of stakeholders. One planner mentioned working with agricultural groups and local businesses to enlist their support for watershed planning and implementation efforts. This planner said these efforts have been “mixed in their success.” Another planner said they had presented at SWCD meetings and encouraged attendees and others to be involved in their open events.

The planning team

Their planning team’s strengths that are being tapped for the watershed plans

Planners named a broad list of skills or characteristics of their planning team that were important in creating the watershed plans. These included (with frequencies in parentheses if greater than one):

- Communication and facilitation with diverse groups (with WMA, IWA partners, and technical team) (3)
- GIS capacity (2)
- Organization
- Diligence

- Writing skills
- Experience in planning and goal setting
- Graphic design
- Local connection

Additional personnel necessary to complete the watershed plan

Four of the five planners described limited additional needs for which they had hired extra staff or consultants to complete their IWA watershed planning including survey work, stream restoration design, and urban analysis GIS work. One planner said they had been specifically asked to sub-contract with another group and worked only with that group. One planner said they had no additional staffing needs.

The future

The watershed planners were asked a number of open-ended questions about the future of the watershed plan. These questions ranged from what they hoped was the “take-away message” the WMAs would learn from the planning process to what the WMAs would still need to make their watershed plan a success to how they themselves as planners might be different as a result of working with the IWA.

The take-away message

The planners each had succinct, distinctive ways of describing what they hoped would be the important take-away message that the WMA could learn from taking part in the planning process. Their take-away messages in their own words were:

“The plan is a guide for them to use to create a resilient watershed. They are in charge of the content in the plan; we want it to be theirs.”

“That the process of planning is simply the first step and that the work begins once the plan is done...it is not finished.”

“More knowledge about the conditions of the watershed and where they might find assistance both locally and in state and federal agencies.”

“These plans will showcase the tools that are ready when they need evidence or ideas for future implementation.”

“The NEED for improved water quality in the streams and lakes of the watershed.”

The most important remaining tasks for WMA

The planners had several ideas of what remained for the WMA. These included (with frequencies in parentheses if greater than one):

- Secure a sustainable funding source (3)
- Implement the plan, strategies, and actions (2)
 - “Continue to make progress in some way even if the results are not dramatic”
- Continue water quality monitoring
- Reach out to urban centers for involvement in the watershed

The assistance the WMA will need to carry out those tasks

Three of the four planners who responded to this item said that the WMAs would need a fully-funded project coordinator position to keep the WMA going. These planners said the project coordinator would be able to keep WMAs engaged, write grants to seek additional funding, and seek participants for implementation of the watershed plan. One planner said that keeping the partners involved would be helpful. Two planners talked about the need for community buy-in saying that the WMAs will need “continual support from watershed residents” and ongoing “communication with member communities.”

The contribution of the watershed plan in advancing the *Iowa Watershed Approach*

All five planners answered this item. Their answers were focused on the impact the watershed plan will have on the watershed rather than on the *watershed approach* per se, but described some important aspirations for the contributions of the plans. Three of the planners indicated the value of their plans for seeking additional funding. One planner said, “Our plan will help the WMA get funding to implement more projects including BMP implementation, resident education, and wildlife improvement.” Another planner said the plan will present “data and evidence to support conservation practices” that will help the WMA to get funding to implement more practices. Another planner said, “We hope that the plan will be something that can be used in the WMA for a long time to leverage funding for implementation of practices that build resiliency in the watershed.”

Three planners also talked about the long life of the plan in the watershed. One planner said, “I hope the plan will bring together all of the elements being produced by project partners into a cohesive, meaningful path for future management decisions.” Another planner said, “The most important contribution of our plan will be that the WMA and other entities can apply it to the real world to develop a resilient watershed.” A third planner said that the plan will be helpful in identifying priorities for future work.

How working with IWA will change planners’ approaches to watershed planning in the future

The five planners had unique responses to this item. One planner said their plan was similar to their previous plans, so they didn’t expect their process to change. The other planners described the following ways in which their watershed planning approach will likely change:

- “More tool-based planning” – WMAs will be more able to use these tools in the future
- More direct ways to apply for future funding will be included in the plans
- Planning would include more “education on watershed issues for the WMA board and focus on “building the organization itself” rather than on future water quality and flooding work
- “The level of data we’ve had access to through the IWA project will forever raise the standard in watershed planning.”

Appendix I- Iowa Watershed Approach WMA Planner Survey Findings: Summer 2019

The purpose of this survey was to gather information from Iowa Watershed Approach (IWA) watershed planners. The sections in the survey included to examine different elements of the planning process and considerations for the future of this work: the watershed planning process, successes, challenges, working with IWA partners, working with WMAs and other local entities, the planning team, and the future of the watershed plan.

According to the survey results, the planners met the planning requirements with the help of time extension and had positive interaction with different entities. Planners described several accomplishments in data collection and assessment, outreach and stakeholder engagement, goal setting, and collaboration and partnerships. The most prominent challenge was managing tight timelines. The planners agreed that funding and a project coordinator are needed to carry out the most important WMA task, which is defined as implementation of the plan.

The Center for Evaluation and Assessment (CEA) collaborated with IWA partners to create a survey for Iowa Watershed Approach (IWA) watershed planners for the final point of the watershed planning process. The purpose of this online survey is to give them the opportunity to:

- 1) Let IWA partners know about any challenges or problems
- 2) Describe their planning process
- 3) Share their experiences working with each watershed
- 4) Provide their comments or feedback about the work and the IWA project

For all but one group, this was the third of three surveys the CEA administered to IWA planners at different points in the watershed planning process. This report has seven sections to examine different elements of the planning process and considerations for the future of this work: the watershed planning process, successes, challenges, working with IWA partners, working with WMAs and other local entities, the planning team, and the future of the watershed plan.

Methods

On July 9, 2019, the CEA sent an email invitation with a link to complete the online survey to representatives of the planning groups with whom the IWA WMAs had contracted to create watershed plans, asking them to complete the voluntary survey by August 10, 2019. The eight WMAs and their watershed planning groups are listed below.

WMA	Watershed Planning Group
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Clear Creek Watershed Coalition	East Central Iowa Council of Governments
East Nishnabotna River WMA	JEO Consulting Group
English River WMA	City of Kalona
Middle Cedar WMA	EOR, Inc.
North Raccoon River Watershed Management Coalition	EOR, Inc.
Upper Iowa River WMA	Northeast Iowa RC&D
Upper Wapsipinicon River WMA	Northeast Iowa RC&D
West Nishnabotna River WMA	JEO Consulting Group

Three watershed planner teams are doing planning for two IWA watersheds so there are five planners for these eight watersheds. The East and West Nishnabotna plans are being created in conjunction with each other by a common planner, JEO Consulting Group (JEO); therefore, JEO was asked to complete the survey only one time. Northeast Iowa Resource Conservation and Development (NEIRC&D) and Emmons & Olivier Resources, Inc. are each creating watershed plans for both the two IWA watersheds. However, the plans are completely independent of each other, so these teams were asked to complete one survey for each watershed separately.

Due to the difference in planning timeline for the North Raccoon River watershed, the survey for that watershed was the survey administered to the other planners in summer 2018. CEA intends to reach out to EOR again next year for their final of three surveys.

On July 30, 2019, the CEA sent a reminder email including the survey link to planning groups who had not yet responded to the survey. After the reminder email, CEA received a note that the email could not be delivered to one watershed planner. By August 10, 2019, planning groups affiliated with four watersheds had responded to this survey. In the email invitation, the planning groups were informed that the surveys were not anonymous for two reasons. First, the small number of intended respondents would have constrained the ability of CEA to report the findings in an anonymous way. Additionally, the CEA, in collaboration with the IWA partners, decided it could be important for the IWA partners to know who gave particular responses so that the partners could address individual challenges and concerns. In most cases, this document reports results in an anonymous way, including not identifying the watersheds from whom responses were received. As necessary, the CEA will provide partners with more specific information confidentially, upon request.

Survey Findings

The Watershed Planning Process

The first section of the survey asked planners to indicate their level of agreement or disagreement with a set of items on a 5-point scale where 1 was “Strongly disagree”, 3 was neutral, and 5 was “Strongly agree.” The items were related to different facets of planning logistics including workload, funding, timeline, and general perceptions of their working relationship with different entities of the WMAs and the IWA partners. Table 1 summarizes the responses. The first seven items included in the summer 2019 survey were also on both the fall 2017 and summer 2018 IWA planner surveys. The item eight was on the second IWA planner survey but not on the first one. And, the last

two items were only asked in the summer 2019 survey. Any changes from the previous two surveys and the summer 2019 surveys should be interpreted with caution because respondents were not the exact same group of planners. However, a table of responses to each of these three surveys are provided in [Attachment A](#) for reference.

Table 1. *Planners perceptions of current state of planning logistics (N=4)*

Item	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Our planning team is on schedule or was able to complete the watershed plan by the time designated.	1	1	0	1	1
The workload was reasonable for the amount of funding we have or will receive.	0	1	0	3	0
The workload was reasonable for the established timetable.	0	3	0	1	0
The roles of the IWA partners were clear to our team.	0	0	0	4	0
Working with the WMA went well for our team.	0	0	0	0	4
Working with the project coordinator went well for our team.	0	0	0	0	4
Working with IWA partners went well for our team.	0	0	0	0	4
Working with WMA technical team went well for our team.	0	0	0	0	4
Working with members of the public in the watershed went well for our team.	0	0	0	0	4
Integrating and organizing information related to hazard mitigation plans went smoothly.	0	0	0	1	3

In the fall of 2017 and summer of 2018, all the planners who responded to the survey somewhat or strongly agreed that they were on schedule to finish the plan in time or were able to complete the watershed plan by the time designated. However, in the summer of 2019, only two of the four planners agreed with that statement while other two planners disagreed.

In summer 2019, three planners disagreed that the workload was reasonable for the established timetable, and one planner disagreed that the workload was reasonable for the amount of funding they received. Three planners made comments related to these items. One of them indicated that the planning timeline was too short and added that “there was a lot of work that relied on the IWA partners and they needed time to complete their work.” Similarly, another planner indicated that the combining two watersheds’ plans into a single plan would be more efficient since there was about “99% overlap.” Moreover, he detailed that “clearer requirements on the case studies and HUC 12 plans would have helped the efficiency of those efforts, as they ended up being a larger portion

of our workload than anticipated.” Furthermore, the planner said that they were given three-month extension because of the delay on the UI IFC hydrologic assessment and this extra time helped them to complete the project on time. Another planner also mentioned about the extra time given them to complete the plan.

In summer 2019, planners agreed that that work with the IWA partners, project coordinators, and public partners was going well. Moreover, they agreed that integrating and organizing information related to hazard mitigation plans went smoothly.

Successes

In this section of the survey, planners were asked to reflect on their accomplishments in the watershed planning process in four important areas: data collection and assessment, outreach and stakeholder engagement, goal setting, and collaboration and partnerships. All four planners answered these items, unless otherwise noted. Some planners described multiple successes, so total responses will not sum to four.

Data Collection and Assessment

Two planners mentioned about using ACPF and BMP mapping data for the planning process served a critical role in the development of the watershed plan. One specified that they used these tools along with the hydrologic assessment to develop a detailed plan with specific goals and strategies for implementation. The other described that they used Iowa BMP mapping and ACPF tools to create a user-friendly website designed to help a variety of audiences (WMA, SWCD, NRCS, landowners, and project coordinators).

Two planners described developing a cover crop analysis allowing them to “estimate cover crop usage and spatial distribution across the watershed.” One planner listed the geolocation of stormwater inlets and outfalls for the urban areas of the watershed as an accomplishment since they will be able to use this information to inform land use decisions and possible green infrastructure projects. This planner said this watershed is also unique because of historical data available given the proximity to the University of Iowa. Another planner said that working with the NCRS to compile PL-566/WFPO watershed plans and evaluate them as part of a case study and the UI IFC data used in the planning process were important. Lastly, one planner said the team analyzed bridge infrastructure to evaluate the potential for on-road structures based on ACPF data and also used story maps to support public use and understanding of the information.

Outreach and Stakeholder Engagement

The planners described the kinds of meetings they have had with various stakeholders. Three of them specifically mentioned about public meetings as their outreach and stakeholder engagement accomplishments. One planner said that they had three community meetings with watershed residents to gather feedback, and more than 100 residents attended a single meeting. They also “collected and summarized real life stories from affected community members during the flood of 2016.” Another planner stated that they had multiple public meetings with the public from various geographic areas to inform them about the planning process and obtain feedback from them. Another planner said they held three public engagement events with 30 to 50 attendees in each, where each event focused on three areas of the watershed planning; water quality, flood risk, and

recreation and habitat and local partners were informed about the watershed plan and provided input to implementation of the plan.

A couple planners described different types of engagement they used in their process. One planner said they had the first “flood resiliency tournaments, which were a unique and very successful engagement technique. There was high turnout, robust discussion, and many positive comments were received.” Another planner said they conducted a meeting with sub-watershed landowners in order to discuss funding opportunities for flood reduction practices in the watershed. Moreover, they had multiple technical meetings with more than 20 attendees who provided input to the watershed plan. Another planner reported that they are working on the online version of the resiliency plan in order to make it more accessible, which would increase stakeholder engagement.

Goal Setting

Two of the planners said they had worked with their local technical committee and WMA and planning team to establish goals for the watershed (i.e. flood reduction, water quality improvement). One of them said that they worked with WMA and technical committee to develop first “overarching goals for the watershed and then develop specific quantifiable goals for specific strategies.” Another planner stated that the planning team facilitated discussion between the technical committee, “who developed qualitative goals based on flood reduction and water quality improvement for the watershed.”

The other two planners described their process for defining goals for the watershed plan. One mentioned that they engaged with stakeholders in order to build common goals for two watersheds. The planner detailed that having common goals would be helpful in “future prioritization of projects, collaborative efforts, and in communicating with the public.” Another planner reported that they are still working on this section, but public engagement meetings, which were held at different geographic areas, contributed to the planning process.

Collaboration and Partnerships

Planners named a number of groups that have already been important collaborators for the watershed planning. Those categories included (with frequencies in parentheses if greater than one):

- Officials (Engineers, emergency management, city, and county) (2)
- IWA partners (2)
- Local Technical Team
- WMA
- NRCS

Related to partnerships with cities, counties, engineers, and emergency management personnel, one planner said that their watershed plan has been incorporated into the county Hazard Mitigation Plan. That planner also said the watershed plan may be included in the future stormwater projects. Another planner said the partnership between city staff, county staff and IWA partners was helpful and stated that the local technical team is “probably the most important because it sets up relationships that will be valuable in implementing the plan.” This planner detailed that the input provided by the technical team on the Iowa Department of Transportation

(DOT) project was incorporated into the road construction project. Another planner said their partnership with another WMA created “a sense of ownership so that they continue to work together on implementation after the IWA project is concluded.”

Other successes

Three planners described other successes they have experienced in the last few months of watershed planning. These included:

- The plan review and approval process
- Executive summary poster as a way to “simplify the plans and keep partners engaged into the future”
- Development of online interactive Watershed Resiliency Plan
- Collaboration with the GeoTREE Center at University of Northern Iowa, which will “take some watershed assessment work a step further”

Challenges

Planners were asked about how they have dealt with the challenges they have experienced during the watershed planning process. The list of challenges they were asked about was informed by planners’ responses to the Fall 2017 survey and feedback from IWA partners: coordinating with IWA partners, managing timelines, meeting IWA goals, and hazard mitigation plans.

Dealing with challenges related to coordinating with IWA partners

In Fall 2017, planners named coordinating with the large number of IWA partners to be a challenge. In Summer 2018, four planners responded to this item with one saying that there have been no challenges with IWA partners, and the other three saying that they have been communicating and coordinating well with the IWA partners. On this survey, all four planners stated that they did not have any challenges related to working with IWA partners. One planner detailed that “the process of working with IWA partners has smoothed out since the beginning of the project. We have had good interactions with all of the IWA partners, and it has been a great help to have the diverse set of partners on board.”

Dealing with challenges related to managing timelines

Three of the planners stated that they received extensions on their timetables upon their requests. Two planners said that managing timelines was a challenge since some components of the plan were dependent on different partners. One of them stated that they developed a flexible plan so that the portion completed by partners incorporated into the plan when it was received.

Dealing with challenges related to meeting IWA goals

Three of the planners said they did not have any problems in meeting IWA goals. One planner said that meeting the planning timeline was a main challenge since they had two resiliency plans, but that planner did not explain how they dealt with that challenge.

Challenges related to Hazard Mitigation Plans

Two of the planners mentioned that specific challenges related to having their plan in an online format. These planners described navigating a process to create a product that HUD or FEMA will accept since these plans are typically static documents. Another planner stated that they had “very

few issues” related to integrating or coordinating information to inform hazard mitigation plans since they had experience in watershed planning and hazard mitigation planning, and Homeland Security was easy to work with. Similarly, another planner reported no challenges related to this component of the project.

Additional challenges and how they have dealt with these challenges

Three planners responded to this item and provided the following additional challenges and the ways in which they are dealing with these challenges:

Challenge	Approach
<i>Engaging the public across a large geographical area</i>	Hold flood resiliency workshops
<i>Time</i>	Communication
<i>Online Watershed Resiliency Plan</i>	“freeze the online version to create an official draft and final website.”

Unexpected obstacles to planning process

Three planners responded to this item and one of them said that they did not experience any unexpected obstacles. One planner indicated that waiting for WMA board decisions prevents them from moving forward. Another planner said, “the acceptance of an online format for the Watershed Resiliency Plan that is fluid in time” since their plans were created to be dynamic given the information available and priorities of the watershed.

Working with IWA partners

Planners were provided a list of IWA partners they may have encountered in their work. The following items invited them to review the list and consider how collaborations with or contributions from IWA partners was valuable to their watershed plan and how working on the watershed project with the IWA partners and the IWA funding has been different from other watershed projects.

Value-added from IWA partners

Hydrologic assessment was named as valuable by two planners while ACPF data and BMP analysis were listed by the other two planners. One planner detailed that the hydrologic assessment was “by far the most important piece of data” that they received but said that “all the data products provided by the agencies was useful in the plan and was incorporated.” Another planner stated all the data shared with them (such as the ACPF data, BMP analysis, hydrologic assessment) was helpful in different ways. Another planner agreed saying that “all of these partners have provided information and/or advice for the planning process.” The other examples of things planners received from IWA partners that added the greatest value to their watershed plan included the following:

- Guidance for incorporating Hazard mitigation information (2)
- IFIS and “other online water information”
- Providing vulnerable population information
- Providing additional narrative for water quality data
- Presence at community meetings, technical committee meetings, and WMA meetings

- “Content and advice” (For example, “MaryBeth has helped with everything.”)

Differences in working with IWA compared to other projects

All four planners mentioned that working with many partners was a different experience for them. One planner detailed that working with large number of partners was “beneficial, but also took more time to coordinate than we planned.” Similarly, another planner stated that working with many partners resulted in “some timing issues” but he added that “that the benefit of working together at whatever pace it turns out to be, far outweighs the tradeoff in terms of timeline... This project brings important people together that have influence over how water is managed in Iowa. Those relationships will outlast the IWA project.” Another planner stated that in addition to number of partners, tools and data used in the planning process were different. Another planner said the project was different from the other watershed plans in terms of gathering feedback from various watershed residents and landowners.

Working with WMAs and other local stakeholders

In this section of the survey, the planners were given multiple pre-defined options which described possible ways of interactions with WMAs, the project coordinator, the technical team, and members of the public and asked to check off all the choices that apply to them. They were also given an “other” option to describe their unique interaction. All four planners responded to each of these items.

Interacting with the board and the chair

There was consensus in how the planners had interacted with the WMA in the following four ways:

- Communicating the planning effort and answering questions
- Providing updates on the planning process
- Seeking input on the content of the plan
- Inviting them to community outreach events

Additionally, two planners said they have encouraged WMA boards to form committees, and one said there were WMA board members on the local technical team.

Interacting with the project coordinator

Again, there was quite a bit of consensus among the planners about how they have interacted with the project coordinators. All four reported engaging with this group in the following ways:

- Participating in outreach and stakeholder engagement
- Helping with WMA board and committee meetings
- Providing support for communications
- Including them in planning activities and community meetings
- Sharing data
- Engaging landowners and area residents

Two or three planners each reported engaging with the project coordinators through collaboration by providing support for GIS work, conducting water quality data and monitoring, and collecting contact information for interested landowners.

Interacting with the technical team

All four planners indicated working with the technical team in the following ways:

- Moving the process along
- Selecting priority watersheds
- Reviewing data

Individual planners described that the technical team had participated in drafting the goals, objectives, and implementation strategies and developing quantifiable sub-watershed goals.

Interacting with the members of the public

The four planners interacted with members of the public in the following ways:

- Sharing information through public forums and open houses
- Collecting information through public forums and open houses

One planner indicated interacting with the members of the public through Watershed Landowner Survey.

Interacting with the other watershed stakeholders

When asked which other stakeholders the planners had engaged with in their work, planners indicated the following with frequencies in parentheses if greater than one: agricultural groups (4); representatives of counties, municipalities, or Soil Water Conservation Districts (4); local businesses (3); public health; emergency management; parks department; and conservation department.

The Planning Team

Their planning team's strengths that are being tapped for the watershed plans

Planners named a broad list of skills or characteristics of their planning team that has drawn upon to create the watershed plans. These included (with frequencies in parentheses if greater than one):

- Engagement with partners (2)
- Communication (with public and partners) (2)
- Experience of watershed planning process (2)
- Experience of flood risk reduction
- Experience of hazard mitigation

Additional personnel hired to complete the watershed plan

When asked whether they had hired additional personnel to support the development of the watershed plans, three of four planners stated that they did not hire additional staff or subcontract any planning aspects. One planner mentioned that they hired GeoTREE Center at UNI for "more stormwater modeling work" which was possible because of the planner's good relationship with the cities in the watershed.

The Future

The watershed planners were asked a number of open-ended questions about the future of the watershed plan. These questions ranged from what they hoped was the "take-away message" the WMAs would learn from the planning process to what the WMAs would still need to make their

watershed plan a success to what would be the most important contribution of their plan in advancing when the plan is complete the Watershed Approach and to how their general approach to watershed planning would change as a result of being part of the IWA watershed planning.

The take-away messages for the WMA from the planning process

In their take-away messages for the WMA this process, three of the planners pointed out the importance of collaboration and partnership in different ways. Take-away messages of the four planners in their own words were:

- “Overall, this is the right approach! It is key to have an engaged watershed coordinator and staff/consultants with the experience necessary to navigate the technical data and agency requirements. We were fortunate enough to have all these ingredients”
- “I hope they see the option of working together as more viable than they did before.”
- “That they are not alone in their efforts and to take advantage of the many tools and expertise of various state and private organizations that can help them be successful in implementation of their Resiliency Plan.”
- “That the resulting plan is their own, and they have been a part of making it what it is today. It is now their guiding tool to continue to improve the [Watershed] in future to mitigate flooding and water quality to create a more resilient watershed.”

The most important tasks that remain for WMA

The planners had several ideas of what remained for the WMA. Three planners stated that the WMAs needed to secure sustainable funding for either implementation of the plan or keeping a project coordinator. Two planners commented that the WMA would need to implement the plan focusing on continuing to take steps forward so they don't lose momentum in this work. Lastly, one planner recommended they continue to engage with the cities and counties

The assistance the WMA need to carry out those tasks

The four planners listed the resources or assistance necessary to in order to carry out the aforementioned important tasks. Congruent with the responses above, three planners indicated a need for a project coordinator and two said funding. Additionally, individual planners stated the need for technical support, multi-agency support, and staff to pursue grants (aligned with funding).

Contribution of the plan in advancing the watershed approach

All four planners responded to this item about what the most important contribution of their plan in advancing the watershed approach would be when the plan is complete. One of the planners indicated the value of their plans for seeking additional funding sources in the future. Another planner said their main contribution to the project is “the process itself and the local collaboration it creates” in addition to providing “a useful tool for pursuing grant projects.” The third planner said that their plan contributed to the IWA project by showing “the impact of flooding” on the watershed and will be helpful “for people to learn about what has and is happening in regards to flooding, but also what can be done to mitigate future events.” The last planner described that their group developed a method to successfully navigate the difficult process of combining flood, water quality, and hazard mitigation information into a single plan.

How working with IWA will change planners' approaches to watershed planning

One planner mentioned that they would use the interactive online formatting in the future. Another planner reported that they would be better at planner phases of future projects, including identifying documentation. One planner stated that his general approach to watershed planning will not change in the future as a result of being part of the IWA watershed planning since the process used in IWA watershed planning was similar to the one that he had used in another watershed plan. Another planner stated that they would use a similar approach in the future, but they would include more partners for project planning.

Attachment A

	Strongly disagree			Somewhat disagree			Neither agree nor disagree			Somewhat agree			Strongly agree		
	1 st	2 nd	3 rd	1 st	2 nd	3 rd	1 st	2 nd	3 rd	1 st	2 nd	3 rd	1 st	2 nd	3 rd
Our planning team is on schedule or was able to complete the watershed plan by the time designated.	0	0	1	0	0	1	0	0	0	1	5	1	4	0	1
The workload was reasonable for the amount of funding we have or will receive.	0	0	0	1	0	1	0	1	0	3	3	3	1	1	0
The workload was reasonable for the established timetable.	0	0	0	2	1	3	0	1	0	2	2	1	1	1	0
The roles of the IWA partners were clear to our team.	0	0	0	1	1	0	0	1	0	2	1	4	2	2	0
Working with the WMA went well for our team.	0	0	0	0	0	0	0	1	0	0	1	0	5	3	4
Working with the project coordinator went well for our team.	0	0	0	0	0	0	0	0	0	1	2	0	4	3	4
Working with IWA partners went well for our team.	0	0	0	0	0	0	0	1	0	1	1	0	4	3	4
Working with WMA technical team went well for our team.	NA	0	0	NA	0	0	NA	1	0	NA	1	0	NA	3	4
Working with members of the public in the watershed went well for our team.	NA	NA	0	NA	NA	0	NA	NA	0	NA	NA	0	NA	NA	4
Integrating and organizing information related to hazard mitigation plans went smoothly.	NA	NA	0	NA	NA	0	NA	NA	0	NA	NA	1	NA	NA	3

1st= Fall 2017 Survey, 2nd= Summer 2018 Survey, 3rd= Summer 2019 Survey

Appendix J- 2019 IWA Stakeholder Survey Findings

2019 IWA Stakeholder Survey Findings

During early 2019, the Center for Evaluation and Assessment (CEA) worked with Jessica Turba and Larry Gioffredi from the Iowa Department of Homeland Security and Emergency Management (HSEMD) to create a survey of stakeholders in the Iowa Watershed Approach (IWA). This survey is an element of the overall program evaluation of the IWA conducted by the CEA. The purpose of the survey was to learn about stakeholders' current and future interests in the IWA and in watershed management issues in Iowa.

Definitions and methods

In the context of the IWA, *stakeholders* were defined as representatives of organizations who had written letters of support for the IWA during the grant proposal phase. As part of its role in the IWA, the HSEMD has responsibility for engaging with the stakeholders during the implementation of the project. During the first two years of the project, some of the stakeholders had already worked with various aspects of the IWA, however, the HSEMD wanted to reach out to all stakeholders to learn about their current activity and interest regarding watershed work in Iowa.

In addition to working with the CEA on the content of the survey, the HSEMD provided the CEA with a list of all the parties that they considered to be stakeholders. The list includes several different types of organizations including: government, non-government, conservation groups, agricultural consumer bodies, agricultural industry associations, and others.

The list originally consisted of 40 people designated to represent stakeholder organizations. After the first survey distribution, two emails came back for the various reasons. The CEA worked with Larry Gioffredi (HSEMD) to name alternate representatives and sent invitations to participate in the survey, resulting in a final list of 40.

The CEA sent the original email survey invitation on April 24, 2019 and then followed up with email reminders with the survey link approximately one and two weeks later. By May 22, 2019, 13 invitees of the final total of 40 had completed the survey for a response rate of 33%. Although this might seem like a somewhat low response rate, the information gathered through survey was not intended to be generalized to another population and was primarily intended as a means of compiling information about the current interests of IWA stakeholders.

The survey was written so that if survey respondents chose to, they could remain anonymous. They were advised that answers to open-ended items were anonymous only to the extent that they did not provide information that made them or their organization identifiable. At the beginning of the survey, they were also told that at the end of the survey they would be given the option to fully identify themselves and/or their organization so that HSEMD could follow up with them concerning their interests in watershed work.

The results presented below are presented anonymously for all scaled or multiple choice items. As mentioned above, responses to open-ended items are reported using the words provided by respondents who were aware that they might be identifiable. A list of the respondents who chose to divulge their name and/or organization was provided to the HSEMD for their use, but is not included here. Of the 13 respondents, 10 identified themselves for further contact.

Section I.

The first section of the survey contained items related to the locations of current watershed work of the organizations, where their employees reside, and about the organizations' past direct experiences with flooding. The first item asked respondents to indicate in which of the IWA watersheds their organization currently works or serves populations. They were given the option to designate as many as they wanted. Table 1 reports the results.

Table 1

IWA watersheds in which stakeholders are currently working or serving residents (frequencies) (N=13)

Bee Branch Creek	Clear Creek	East Nishnabotna River	English River	Middle Cedar River	North Raccoon River	Upper Iowa River	Upper Wapsipinicon River	West Nishnabotna River
3	4	6	5	9	8	4	5	6

Respondents most frequently indicated that they already work in the Middle Cedar and the North Raccoon River watersheds, and least frequently named the Bee Branch Creek (Dubuque). Two respondents indicated their organization works in all nine IWA watersheds. Three respondents did not select any of the IWA watersheds.

Respondents were also asked if their organization had employees who lived in one of the IWA watersheds. Most respondents (9) indicated that employees of their organization live in an IWA watershed, two said they did not have employees who live in an IWA watershed, and two said they were unsure.

Of the 13 respondents, eight indicated that their organization or its operations had been directly affected by flooding in the past and five respondents said they had not been affected by flooding.

Respondents were asked to select the type of organization they represented. Table 2 reports their responses.

Table 2

Respondents' organization type (frequencies)

Consumer body	Industry association	Government	Other
0	4	5	4

Those who said other provided the following information as to their organization type: non-profit (2), non-government conservation organization (1), and renewable energy consultant (1).

Section II.

Items in the next section asked respondents to describe their organization's current and future role in the IWA and in water management in the state of Iowa. At the end of the section, respondents were asked to select the aspects of water management in Iowa in which their organization is interested.

Current role in IWA

All respondents gave descriptions of their current role in IWA although seven respondents were quite general using terms like “support,” “co-sponsor,” and “regular interaction.” Some respondents gave multiple ways in which they are currently involved in the IWA, so roles listed below are greater than 13. Other more specific ways that respondents described their organization’s role with the IWA included the following (with frequencies in parentheses if greater than one):

- Provide WMAs with data and other information for watershed planning (e.g., cost/benefits analysis, flood forecasts and warnings) (3)
- Advocate for more funding for WMAs (2)
- Provide technical advice (e.g. related to mitigation strategies) (2)
- Serve on board or take part in WMA meetings (2)
- “Promote activities” and help with other outreach about IWA to farmers and others (2)
- Support implementation of the Iowa Nutrient Reduction Strategy (INRS)
- Work on a “supporting project” (Regional Conservation Partnership Program (RCPP))
- Provide feedback on communications
- Fund wetland restoration in IWA watershed
- Partner on grant applications
- Help with conservation planning

Future role in IWA

All respondents also supplied a description of the ways they’d like to be involved with IWA in the future. Four respondents said they’d like to continue with the activities they are now doing with the IWA. One stakeholder said, “We are very eager to continue the work begun with the grant project and want to see it expanded to more of the targeted watershed.” Another stakeholder said, “We will continue to offer ... support to the Iowa Watershed Approach. We will look to further leverage private funding in support of the goals of the IWA in select watersheds. If opportunities develop, we could potentially support mitigation needs.” Additional sources of support for IWA mentioned by those who said they’d like to continue what they were doing included: promoting IWA activities to farmers, supporting implementation of the INRS, supporting watershed planning, partnering on grants, and providing conservation planning.

In addition to those respondents who expressed the ways they’d like to continue working with IWA, several respondents provided descriptions of new ways their organization would like to work with IWA. One respondent said they’d like to provide program and resource coordination. Another said they’d like to see the IWA work expanded into more of their targeted watershed. In some cases, responses were quite specific and unique. Therefore, they are included below in their entirety:

Our organization is working to develop strategies which would enable perennial cropping systems on the landscape which improve water quality, enhance soil health and would lend itself to a biomass cropping system for the biomass-based economy. We are focused on models and data collection to support that vision.

Providing educational resources to distribute locally on urban stormwater issues as well as watershed resources. We also conduct training programs.

Protection of our source water supplies - surface water intakes and wells that are near waterways - is of utmost importance as is the protection of the quality of the water drawn from those sources.

We would like to advocate for a statewide watershed approach with dedicated funding. We promote the watershed approach to our members and supporters as the best way to work on water quality improvement. We work in law and policy and would like to learn ways we can support the watershed approach from a law and policy standpoint.

Expand our upstream watershed nutrient reduction strategy efforts and document projects in State of Iowa RIBITS [Regular In-lieu fee and Bank Information Tracking System] program.

Current role in water management in Iowa

Twelve of the thirteen respondents described their current role in water management in Iowa. Their responses were divided into the main focus of their efforts: water quality/conservation; flood control and mitigation; or both water quality and quantity issues. Seven respondents talked primarily about being involved in conservation efforts, two described work on flood issues, and three respondents mentioned work in both water quality and water quantity management. Several respondents talked in somewhat general terms about conservation which has the potential to have an impact on both flood mitigation and water quality, but unless they referred directly to its flood impact, their responses were categorized as primarily being water quality related.

Water quality and conservation work

Two respondents provided general information about conservation related water management work. One respondent said their organization “promote(s) the increased adoption of conservation practices by farmers,” and the other respondent said their organization “provides technical and financial assistance to plan and implement conservation at a variety of different scales – from fields to watersheds.”

Two respondents talked in particular about water quality as it relates to drinking water. One stakeholder said that their organization works with both source water protection and with wastewater treatment and the other respondent said, “Safeguarding drinking water sources and water treatment systems, and protection of water quality are essential/critical components of community’s overall well-being. The ready and reliable availability of high quality water will promote public health.”

Individual respondents talked about specific ways that their organizations work with water quality issues in Iowa.

One respondent said they are working with the US Department of Energy to develop a template titled, *Enabling Sustainable Landscape Design for Continual Improvement of Operating Bioenergy Supply Systems*. The respondent said the purpose of this work is to “improving profitability for landowners, maintain or enhance the environment and sustain rural economies.”

Another individual described their organization’s support of Iowa Nutrient Reduction Strategy (INRS) implementation. They said that their organization does this through support of “watershed planning, outreach, conservation planning, technical assistance, partnering with WMAs in grant opportunities.” This organization denoted specific watersheds in which they work (including IWA watersheds, North Raccoon and Middle Cedar watersheds), but said they also work on “statewide efforts on outreach.”

Another individual described a somewhat different focus for their organization's efforts, saying that they work statewide to "advocate for improved water quality in Iowa, work to increase transparency of water quality data and funding sources, act as a regulatory watchdog to ensure the Clean Water Act is being upheld, and research law and policy solutions for improving water quality."

Flooding issues

Two respondents referred briefly to their organizations' flood efforts with one saying that they work on urban storm water issues and the other saying they are involved in finding "funding to complete buyouts" and that they are also involved in "completing a levee improvement project."

Both water quality and quantity involvement

Three respondents described ways that their organization is involved in both water quality and quantity work in Iowa. One respondent said generally that their organization is involved locally with "conservation planning which affects flood resilience and water quality." Another respondent said that they are involved in flood control in Des Moines and operate an MS4¹, "so we are in the water quality conversation, too." The same respondent went on to say that many neighborhoods are affected by "more intense and more frequent rainfall, so we are working on enhancing community resilience, too."

The third respondent described their work with other agricultural partners on nutrient reduction process called 4R Plus² which is a "soil health outreach campaign" including a "statewide media campaign" and working with "ag advisors to deliver conservation information to farmers." The respondent detailed work they have done with researchers to understand how practices like oxbow restorations can "improve water quality and downstream flows and are working to establish this as a state recognized practice." The respondent also described work on "floodplain wetland easements" and establishment of conservation lands. The organization also is involved in the Natural Resource Conservation Services' (NRCS) technical committee and is involved in policy work at both state and federal levels aimed at improving funding for "natural infrastructural solutions to reduce flood impacts, enhance community resilience, and improve water quality."

Future role in water management in Iowa

Twelve respondents described their future role in Iowa water management. While about half of respondents said they would be continuing the efforts in which they are currently involved, several of the respondents described ways in which they would "scale up" and diversify their work. These responses were again coded as to whether they focused on water quality, water quantity, or both.

Water quality

Three respondents described expanded efforts toward improved water quality in the following ways:

- "Usher in new agriculture production systems utilizing perennial cover on the landscape"
- "Scale up our efforts and support the main efforts of partners in Iowa. This includes Iowa's Natural Resources Trust Fund for soil and water conservation."³

¹ <https://www.epa.gov/npdes/stormwater-discharges-municipal-sources>

² <https://www.4rplus.org/>

³ <http://www.iowaswaterandlandlegacy.org/about-us/>

- “Protection of our source water supplies - surface water intakes and wells that are near waterways - is of utmost importance as is the protection of the quality of the water drawn from those sources.”

Water quantity

Two respondents described ways their organizations’ water management efforts in Iowa could continue and expand.

- “Continuing buyouts and regulations that discourage and prevent building in areas prone to flooding.”
- “Continue to operate the flood control system, build community resilience, and improve water quality in Des Moines forever.”

Both water quality and quantity involvement

Four respondents talked about ways to continue to contribute to both water quality and quantity issues.

- Providing “education resources for water quality and flood management.”
- Working on ways to obtain “multi-faceted benefits from upstream watershed investments - source water nitrate reduction, wastewater nutrient reduction offsets, enhancing options for water detention/infiltration.”
- “Helping better connect cities and ag interests through the ecosystem services that ag land can provide through water storage and reduced runoff via practices like cover crops and no-till that improve soil health and reduce flood peaks.”
- “Working more on rural issues, such as private well contamination, and flooding mitigation/climate change resilience.”

After responding to the open-ended items about their organizations current and future interest in the IWA and in water management in Iowa, survey respondents were asked to rate the extent of their interest in being involved in strategy development and/or implementation in: FEMA’s four phases of emergency management (preparation, response, recovery, and mitigation)⁴; water quality improvement; and funding watershed management. Respondents rated their interest on a five-point scale where 1 was *Not at all interested* and 5 was *Very interested*. Table 3 reports the response frequencies.

Table 3

Respondents’ interest in strategy development and implementation in different phases of emergency management and other potential areas of involvement (N=13)

	Not at all intereste d 1	2	3	4	Very intereste d 5	N/A
Flood preparation						
Strategy development	2	1	1	3	6	0
Implementation	2	2	2	4	3	0
Flood response						
Strategy development	3	0	3	4	2	1
Implementation	3	0	4	4	1	1

⁴ https://training.fema.gov/emiweb/downloads/is111_unit%204.pdf

Flood recovery							
Strategy development	3	0	1	4	5	0	
Implementation	3	0	2	5	2	1	
Flood mitigation							
Strategy development	1	1	1	2	8	0	
Implementation	1	1	2	5	4	0	
Water quality							
Strategy development	0	1	1	1	10	0	
Implementation	0	2	2	1	8	0	
Funding water management work							
Strategy development	2	0	1	1	7	2	
Implementation	3	0	1	3	4	2	

At least some of the respondents indicated interest in each aspect of each phase or category. As was seen in the open-ended items about organizations' involvement in IWA and in water management in Iowa, slightly more of the respondents indicated strong interest in water quality strategy development and implementation (10 and 8, respectively) than in the other categories. Eight respondents were very interested in flood mitigation strategy development and four in flood mitigation implementation. In all cases, respondents were more likely to indicate interest in strategy development than in implementation.

Other opportunities for collaboration

Survey respondents were also asked what other opportunities (if any) they saw for their organization and Iowa WMAs. There were six responses from survey participants. Two respondents said they were open to any collaborations with WMAs. One respondent said they welcomed the opportunity to partner "when and wherever we can," and another said, "As the downstream beneficiary of any and all water quality/quantity work in the WMA, we are interested in supporting and collaborating on all of the undertakings of our WMAs."

Individual respondents commented that they would be happy to collaborate in: planning, providing "technical knowledge for upstream communities," support for the WMA boards, help with engaging the agricultural community, and with identifying and addressing natural resource issues, including assistance in developing proposals for the NRCS Regional Conservation Partnership Program (RCPP).

How WMAs can engage with these organizations

Eleven respondents described ways in which they are available to engage with WMAs. Four respondents said generally that the WMAs should let stakeholder organizations know what their needs are. Others provided more specific ways to reach out to their organization, as listed below:

- "I will seek out WMAs in areas where we might be able to put a biomass based system in place commercially."
- "We have staff on the ground in select watersheds but also have staff that work at a broader, state level. Our organization also has capacity beyond Iowa working on natural solutions and soil health and water quality issues in throughout the Mississippi basin. We engage with decision makers at local, state and national levels to utilize sound science and practical solutions to addressing flooding and water quality issues."

- “Develop regional conference on WMA engagement and best practices so WMAs in close geographical area could connect and create and expand internal work support relationships.”
- “Public outreach (presentations, publications etc.) that will inform stakeholders as to who you are and what your mission is.”
- “Each WMA should reach out to local ag organizations directly, and WMA state leadership (including IIHR/UI IFC) should reach out more to state level ag organizations (IAWA [Iowa Agriculture Water Alliance], Iowa Corn, Iowa Pork, IFBF [Iowa Farm Bureau Federation], etc.).”
- “Keep us informed locally and at the state level of your priorities and activities, and stay informed about NRCS programs and services. Please call us either in Des Moines or at your local NRCS office if you have any questions or if you would like to discuss potential project ideas.”

Questions about IWA

Respondents were offered the opportunity to ask questions about IWA, but there were no questions.

Self-identification of organization and/or representative

As mentioned above, respondents were given the opportunity to identify themselves and/or their organization for future direct contact by IWA and HSEMD. Ten of the 13 respondents identified themselves. All responses provided by these ten respondents were supplied to IWA and HSEMD for their use.

Appendix K- Flood Resilience Team Partners: Luther College

During the late summer of 2018, the as part of the evaluation of the Iowa Watershed Approach (IWA) the University of Iowa Center for Evaluation and Assessment (CEA) conducted interviews with two key stakeholders from Luther College who are partners with the IWA Flood Resilience Team (UI FRT). Luther College is funded through a subcontract with the IWA UI FRT as a local partner in flood resilience work being carried out in the Upper Iowa River watershed. The purpose of the interviews was to learn about the progress of the resilience activities that the Luther College group has undertaken in the watershed, their collaboration with the UI FRT, and what comes next from their collaboration.

In August, 2018, the CEA sent email invitations to the two potential interviewees asking them to take part in the telephone interviews. Both invitees agreed to participate in the interviews but asked that the interviews take place in September once their school year was underway. Interviewees were informed that taking part in the interviews was voluntary and that the interviews could be discontinued at any time or that they could skip particular items if they wished.

The CEA also informed participants that in order to be optimally useful, when reporting the information from the interviews to the IWA (and in particular, to the UI FRT), their contributions would not be anonymous.

The CEA interviewed the following individuals:

Rachel is an Assistant Professor of Environmental Studies/Political Science at Luther College. She became involved with the UI FRT during early visits by the IWA partners to the Upper Iowa watershed. The Luther College website¹ says that her research interests are in “how we use governmental policies to respond to new and emerging environmental issues. [Rachel said,] ‘In particular, I’m interested in the ways that policies might respond to transboundary environmental problems. These are issues that don’t pay attention to political, environmental, and social boundaries.’”

Jon is a Professor of Philosophy and Environmental Studies at Luther College. Jon also serves as the Director of the Luther College Center for Sustainable Communities.² The Center coordinates all of Luther College’s sustainability activities and its mission is to “promote sustainability and be a catalyst for change on campus and in the region.” Jon also became interested in working with the UI FRT early in the first year of the IWA.

The CEA conducted the two interviews during September 2018. The following report is a combined summary of the two interviews prepared for the internal use of IWA personnel. A tandem report with identifiers removed will become part of the annual evaluation report to the US Department of Housing and Urban Development [In the external report, Interviewee 1 and 2 will be used along with pronouns that may or may not reflect the gender presentation of the interviewees]. The protocol for these interviews was approved by the University of Iowa Institutional Review Board.

¹ <https://www.luther.edu/academics/faculty-stories/rachel-brummel/>

² <https://www.luther.edu/sustainability/education/facultyaffiliates/jonjensen/>

Resilience Activities of the Luther Collaborators

During the first part of the interviews, Rachel and Jon were asked to describe the components of the work they are doing with the IWA resilience funding and provide an update on their process and progress. They described the following elements of their work (listed here and described below):

- Freeport Case Study
- Upper Iowa Watershed Resident Survey
- Emergency Management Personnel Meeting
- Decorah Flood Plain Zoning Issues
- WMA meeting participation

Freeport Case Study

Jon and Rachel talked about their group's (the group included the two of them, two other Luther College faculty members, and six Luther undergraduates) work on the Freeport case study. The case study work took place primarily during the summers of 2017 and 2018 because of their academic year schedules and because they hire undergraduates to work on the project during the summer. Rachel said that they had completed about 18 interviews including 14-15 Freeport residents with the remainder of the interviews composed of "Emergency managers or other people that are not residents, but [who] intersected directly with the [flood] response." They were also able to talk with people who received buy-outs for their homes and those who have remained in their homes.

Rachel said the interviews were complete and had been transcribed and some preliminary analysis had been completed. She said they plan to provide a preliminary look at the case study interview findings at the November 2018 Upper Iowa River Watershed Management Authority (UIRWMA) meeting. Jon said they will also be sharing the case study report with the Winneshiek County Director of Emergency Management and with the county Board of Supervisors. He explained that the case study town, Freeport, is in fact not a municipality, but that leadership comes from the county through the Sheriff's office and the county Board of Supervisors, particularly because the county works with FEMA to do buyouts.

Rachel said she was very pleased with the amount of data they were able to collect. She said the case study work in Freeport focuses on looking at a community that experienced extensive direct impact of flooding. Jon also was pleased with their success with the interviews and said he believes there is "value in gathering and telling stories." He said that in order for people to understand the impact of flooding, "It's not just statistics or images, but it is stories that are sometimes important for people to see." He said that they hope that the forward looking piece of it is, "What can we learn from this particular event, this particular community, and how can that help us do a better job of...preparing for the future." He added that the task of improving resilience is particularly important in lower income and single parent households.

Rachel commented that it can be difficult to share qualitative data, but that she hopes that with survey data (see below) and the case study, they will find a way to present both.

Upper Iowa River Watershed Resident Survey

Both Rachel and Jon talked about the survey the Luther group conducted with local residents: *Understanding Flood Impacts in the Upper Iowa Watershed*. Rachel said they sent out 2250 surveys

and had a response rate of greater than 20%. They were both happy with this response rate. Jon said all the survey data was entered over the summer by students and they are in the process of early analysis. Both said the instrument is a way to look at financial and displacement burdens experienced by area residents. Rachel described this survey as examining how people are impacted by flooding “even if they don’t have flooding in their backyard or standing water,” with the objective of learning more about “the broader ways that communities are impacted by flooding.” She said it is not completely clear who the primary audience for the survey findings are beyond the WMA, adding that they will talk about that in partnership with the Iowa Flood Center and the IWA UI FRT with the guiding question for this conversation, “What do we do to build resilience?” Jon echoed Rachel’s uncertainty of the potential audience for the survey report, but indicated that they had decided that the primary audience would be the general public in the watershed: they did not want it to be a report just for “experts or decision makers, but really for the general public.” He hoped that this would make the information accessible for anyone.

Rachel also described the survey and case study [see previous section] as “two different lenses to look at the same issue of how flooding impacts our communities and what are potentially some things that we might do more broadly to build our flood resilience.” She said they are learning about the flooding experiences of area residents, but that “doesn’t necessarily tell us about how to become more resilient.” She said they plan to present preliminary findings at the November 2018 UIRWMA meeting along with some case study findings.

Jon also described their process for conducting the survey. He said they wanted to build on the information that the Northeast Iowa Resource and Conservation Development group had done earlier with landowners only, by conducting a survey of the general population in the area, not just landowners. Therefore, they used a random sample of all households in the watershed that went to “rental properties, farmers...trying to get to a representative of everybody that lives in the watershed.” He said they received a few surveys back that simply said that flooding didn’t affect them, but that was the “downside of the broad sample.”

Jon said the survey will provide some demographic information that will help them “get a better sense of the communities in the watershed...and at some fairly basic level, how much people were impacted by the flooding, particular the most recent flood in 2016.” He said the financial and displacement burden objective came out of their work with the UI FRT on understanding how to look at the financial impact of flooding as not just as the cost of buying out inundated homes, but also the extent to which area residents experienced “lost work, extra travel time – really trying to get dollar figures on the cost of flooding in this community.” In addition to that information, Jon said the survey addressed aspects of resilience in terms of “how people did in fact respond to the most recent flood” and whether they have made changes in their own household to improve their personal resilience.

Rachel described some difficulties in developing the survey saying that it took a long time, and that it felt like “It was a little of a moving target about what the goals were and who was driving the bus...if it was a survey that we were doing, or whether it was we were going to put out the survey that the Flood Center [Iowa Flood Center] put together.”

Jon said a key piece for them in being involved in the work with the UI FRT, conducting the survey and the case study, was to “have a local, on the ground presence in the short term....but then also to have a longer term presence...somebody who is here at an institution with individuals who live

here, are in the community, and that can make sure the work continues in a sense.” He said they sought to be “the local partner within the watershed.” When asked to expand on the role of the local partner, he said, “To be honest, we have been sort of figuring that out as we go along.”

Both Jon and Rachel described their work as potentially contributing to the ways in which flood impact and resiliency are studied in the future. Jon followed up his comments about being the local partners by saying they wanted to gather information specific to their community and watershed, and use that to learn both about how to best inform flood resilience planning locally and “in conversation with folks in other watersheds, but specifically at the Flood Center about how flood resilience works.” Jon said there was particular interest in also sharing information from the survey and case study with “decision makers” particularly at the county level. He said he was unsure of how useful this will be to other watersheds in the state or to the UI FRT in other areas of the state, but that he hoped others could learn from their work. He said that it sometimes it feels like a bit of a challenge “trying to figure out what exactly we’re doing – the nature of the project – and who’s the audience of this report.” He said that they knew going into the project that I was going to involve some defining of the goal for their work and that it would involve “figuring it out as we go along.” He said that they would probably provide a shorter “accessible” report and then a more detailed report would go to the Iowa Flood Center and would provide some information that would be “in conversation with other literature that’s out there.”

Rachel said that they hope to use the results from the two big data pieces (survey and case study interviews) to look at broader goals and to define interventions they may want to do locally, but she also described they she hopes that what they are learning about the methodology of what they’ve been doing “may help inform what other people do as well.” She said for them this has been part of the process all along and therefore they are “documenting their methods...and thinking about what works and what doesn’t.” Rachel also presented a paper on their work at a professional conference during summer 2018.³ Rachel described making additional contacts in the field of flood resilience research as a result of this presentation.

Emergency Management Meeting

Jon and Rachel said that in December 2017, the Luther partners coordinated and led a meeting that included emergency managers from several counties and municipalities in the watershed, and staff from Northeast Iowa Resource and Conservation Development. Jon said the intent of the meeting was to get people together to begin sharing ideas about flood resilience in their area. He commented that the UI FRT had talked with the Luther team about the existence of similar groups in other watersheds [Community Organizations Active in Disaster (COAD)]. He said that although law enforcement groups currently get together in their area on a regular basis, there is not a group that involves additional entities (e.g. public health, social services, schools) in the Upper Iowa watershed. He said it can be difficult to schedule meetings for people in those roles, but they would like to help formalize this kind of a group and are trying to schedule another meeting of the same group later in 2018.

³ Brummel, R., Rhodes, B., Jensen, J. & Holland S. (2018). *Exploring Social Vulnerability and Community Flood Resilience through Applied Research*. Paper presented at the annual meeting of the Association for Environmental Studies and Sciences Annual Conference: Washington, DC. [Abstract retrieved on 12/2/2018 from: <https://aessconference.org/schedule/?ps-uid=33398&ps-v=815-15993>]

Involvement in Decorah Flood Plain Zoning questions

Rachel and Jon both described an activity not listed on the activities they planned to carry out as part of their contract: their participation in the discussion around a flood plain zoning request that came before the Decorah City Council. They both indicated that if not for their involvement in the IWA resilience work, they might not have been as involved in the zoning question as they were. Rachel explained that the issue involved the potential for rezoning an area in the Decorah flood plain to build a Menard's store.⁴ [She also briefly mentioned another potential for rezoning for a storage facility.] She said people from the Freeport area who had been impacted by the 2016 flooding were involved in questioning the rezoning proposal and this came to her attention because of her involvement in the Freeport case study. She said the Freeport community was "much more organized and very visible at community meetings" and attributed this to their having been "brought a little closer together through the 2016 flood events." She said that the Luther group's primary involvement in this issue was through monitoring the process by collecting newspaper articles and said it would potentially be part of their case study. Jon also described the potential rezoning question and said he had attended public hearings and been in conversation not only with local citizens, but also with the city council and planning and zoning commission.

In addition, Jon said they hosted a meeting with a former city council member and flood plain expert from Cedar Falls, Iowa⁵, about lessons learned there as a community that made changes to their flood plain policies after catastrophic flooding was experienced in 2008. He said that although this activity was not in their plans, but, "That's kind of the nature of the work. Sometimes a decision comes up that takes up space in the room because that's what everybody's thinking about – they think about flooding right now." Jon said that bringing in the Cedar Falls speaker gave them a good opportunity to "play a positive role in the community conversation about the zoning issue." He added that it was good to be seen as a local resource for decision making.

WMA meeting participation

Rachel talked about their involvement in the UIRWMA. She said that they were "trying to plug in a little bit more" to their community and being a visible presence at the WMA meetings has been part of that effort. She says being at the meetings also gives them a better understanding of how people in the community are thinking about the issues and about their priorities. She said the WMA has been focused on the hydrological aspects of flooding and how the IWA money is spent on projects, and that the Luther group would like to get people interested in the resilience aspect as well so they need to think about how the resilience work fits in for that group. She added, "The concept of resilience is a hard thing to talk about with the public. It is jargon – they don't know what it means....Sometimes people just see it and are like, 'Who are these academics and what are they talking about? What does this mean for me?'" She added that at the meeting they want to find a good way to combine the quantitative data from the survey with the "story telling qualitative piece."

Jon said they are trying to have a presence at the meetings and, as described above, they want to come to be seen as "local, on the ground presence" of the flood resilience work.

⁴ <https://decorahnewspapers.com/Content/Home/Home/Article/Every-speaker-opposed-to-Menards-plan-to-build-in-flood-plain/-2/-2/45684>

⁵ https://wcfcourier.com/news/local/education/floodplain-expert-to-speak-at-luther-college-june/article_6f0137b7-79b4-51ae-a7b6-a533b4af4027.html

Collaboration with the UI FRT and looking forward

The second part of the interview was centered on understanding the nature of the collaboration between the UI FRT and the Luther group. Jon said that it has been great to have the funding from the UI FRT to do the project and that, in general, communication has been good with the UI FRT. He described working with the UI FRT to build the survey based on the UI FRT's discussion of the financial and displacement burden. He said the UI FRT has been responsive and provided them with good feedback on their survey drafts and that in general, "It's been enjoyable and productive" to work with them. He said that it would have been beneficial to the work they were doing if they could have worked more at the beginning with them to establish a "realistic time frame" and to have more communication about the "final action plan." He said he understands that this is part of the evolving project. Jon said, "I feel like the biggest thing that we need to get out of this, and the 'we' is not just our group, but everybody, is a strong useful Flood Resilience Action Plan." He said he is still waiting to see that come from the UI FRT. He said they want to have a plan that is something that "people can use to in fact enhance our community flood resilience as we go forward... and having a plan that doesn't just sit on the shelf, but actually is useful locally."

When asked about the utility of the social vulnerability mapping tools that the UI FRT is creating, Jon said that while it is a useful endeavor in general, "I'm not sure they're going to be particularly useful in our watershed." He said that with their low population, "I think people have a pretty good ideas of where the more vulnerable areas are...they're [the maps] are probably less useful here than they might be in some other places." He also indicated that it is important to him that the resilience works feels like "really long term work" that necessarily must extend beyond the involvement of the Flood Center and the UI FRT. Rachel said she had not extensively reviewed the social vulnerability mapping tools that the Flood Center has online, but that she had mentioned the tools to some of the people interested in the Freeport flooding (and the Menards rezoning discussion) as something that they might find useful so that they would have "something other than just their story to talk about." She said, "In a world where we ostensibly make evidence-based policy decisions...it's really hard when the community is super vulnerable and not super well-resourced to just say, 'Hey, tell your sob story over and over again.'"

She said it will be valuable to be able to say that engineers and scientists did this work that allows decision makers to look at different flood levels and how flooding at those levels would have an impact on people. She added, "It's clear to me that people – the city council – they're desperate for some input to help them make a decision."

Rachel said the UI FRT has "helped us define the scope of work," but said that this has been "a little bit of a moving target." She said conversations with the UI FRT have helped clarify their ideas, and occasionally sent them useful literature to frame their thinking, but communications from UI FRT would sometimes be delayed and the Luther team would go ahead and make decisions on their own. When asked to describe whether in the end their work was directed by the UI FRT or done more autonomously, Rachel said it was somewhere in between those two extremes and that they have "informed each other a little bit" in ways of thinking and in finding their focus.

She commented that Luther's original approach to the resilience work was more at the "systems level" rather than on thinking about the impact of flooding on individual homeowners. She said that the Luther group is happy with where they landed on the approach and that she hopes the UI FRT is too. She said that she did not want to "only do surveys...I didn't only want to look at census data." She said they wanted to get in and have conversations with people and to make it clear that they are

“members of the community, and it helps people to know that we’re here and what we’re doing.” She said it is important that the community recognize that it’s not just the data they’re collecting, but the fact that community members from Luther are doing it because they also are part of the community.

Rachel continued to say that sometimes they wished they had more input from the UI FRT to make sure that if they had particular ideas or wants, they were giving those ideas to the Luther group. She said that in defining the audience and purpose for the case study, they sought out additional feedback from the UI FRT that they did not receive. [Rachel was given the opportunity to review this summary and wrote that subsequently she received an email from the UI FRT with one example of how the Luther work might be used.] However, she added, “We are capable enough individuals that we can come up with our own ideas, in the face of uncertainty of what it should look like. As long as there is openness and continuing conversations about what we want that to be, I think it’s fine.” She indicated that part of this process was probably because they are the first cohort to be doing this project and “They [the UI FRT] don’t necessarily have a clear idea of exactly who the audience is or where it’s going to end up or what format we should use.” She said they need to know that they have good communication because “What I wouldn’t want to have happen is not hear back from them, to us to do something, and them to be like, ‘Oh no, that not what we wanted at all.’” She emphasized that they are happy to be doing what they are doing and “put this case study together in the way we want to.”

Rachel talked about the reciprocal benefit of the resilience work for Luther (and for her personally) and for the IWA and other similar projects in the future. Rachel expressed that the resilience work has been “exactly the kind of work that I want to do” because she is eager to find ways to blend her teaching, research, and service. She said the IWA work has been of great value to the Luther students who have worked on the project, allowed her to pursue a research project in her area of interest, and has great potential to provide service to the greater Decorah community. She said they are eager to work with the UI FRT in Year 3 to complete the data analysis and writing, and to engage with the community in a ways that is service-oriented and informative. She is excited to be able to do things that explore the upstream-downstream relationships and “questions of equity and fairness and how we see people bearing different burdens at different points on the river.” Rachel also said that in addition to the benefit for the Upper Iowa community in doing this kind of work, she also hopes that their work “helps crystallize what people might do in other places....More broadly, I hope we help communities. I hope this has some impact beyond just proving to the funders that we’ve done what we said we were going to do.”

Appendix L - Social Vulnerability Visualization Information Usability Interviews

During the spring and summer of 2018, the Center for Evaluation and Assessment (CEA) collaborated with the Iowa Watershed Approach Flood Resilience Team (IWA UI FRT) to develop a usability interview for potential users of the social vulnerability information (SVI) available on the IWA information system (IWAIS). The purpose of the interviews was to provide early information about: the purposes for which intended users would access the system; whether they were able to find the information they were seeking; whether and how they would use that information; how trustworthy they thought the information was; and any problems they encountered when using the system.

The UI FRT created a list of 12 individuals for the CEA to interview that they identified as “power users;” that is, potential users who would have the technical ability to use the system, as well as recurring need for the type of information found on the IWAIS social vulnerability tool. The CEA asked the UI FRT to reduce the list to five to make the interview process more feasible and to save some users for a potential second round of interviews. There was some confusion in winnowing the list to five and the CEA ended up contacting four of the five people who were on the UI FRT’s list of five, and one person who was on their list of 12. In the end, the CEA interviewed the four people who were on the UI FRT’s short list and the fifth person did not end up agreeing to be interviewed. The CEA asked the UI FRT to contact the power users and ask them to access the IWAIS social vulnerability maps. The UI FRT also told potential interviewees that the CEA would be contacting them to conduct short, voluntary interviews about their experiences using the SVI.

The CEA sent email invitations to the five potential interviewees asking them to take part in the telephone interviews. Potential participants were told that the function of the interviews was to learn their purposes for using the social vulnerability tool, how easy the tool was to use, whether using the tool fulfilled their needs, and any problems they experienced while using the tool. Four individuals agreed to take part in interviews.

The CEA also informed participants that in order to be optimally useful, when reporting the information from the interviews to the IWA (and in particular, to the UI FRT), their contributions will not be anonymous. Participants’ particular expertise and how people with that expertise might use the SVI was seen as important for using the results of the interviews. When reporting to the funding agency, the interview findings will be reported with a description of each participants’ role rather than their name.

The four people who CEA interviewed included the following:

Interviewee A is a Natural Resources Specialist for the planning team in one of the IWA watersheds. He had expressed interest in the resilience team’s work on social vulnerability mapping.

Interviewee B is a Watershed Planner & Geographic Information System (GIS) Specialist for the planning team from one of the IWA watersheds and also had expressed interest in the social vulnerability mapping.

Interviewee C is a staff member with the Bee Branch Healthy Homes (BBHH) Project, a sub-project of the IWA charged with increasing resilience in the Bee Branch Creek watershed in Dubuque, IA, a neighborhood with a large low-to-moderate income population. She works closely with the UI FRT to consider flood resilience at the neighborhood scale.

Interviewee D is a staff member with a Resources Conservation and Development office, a non-profit that is a sub-contractor for one of the IWA planning agencies and for the UI FRT for its IWA case study work.

The CEA conducted the four interviews during October 2018. After the interviews, the CEA provided the UI FRT with quick-turnaround, informal feedback concerning interviewees' experiences using the IWAIS SVI so that they could begin planning how to alter the site and/or the training provided for potential users. The following report is the complete summary of the four interviews prepared for the internal use of IWA personnel. A tandem report with identifiers removed will become part of the annual evaluation report to the US Department of Housing and Urban Development.

After confirming that the interviewees had taken time to access and explore the IWAIS section on SVI, the interviewer used a semi-structured interview protocol to learn about the participants' experiences. Prior to use, the procedure and interview protocol had been approved for use with human subjects by the University of Iowa's Institutional Review Board. Because users' experiences and needs were different, the semi-structured protocol allowed interviewers to focus on topics and concerns interviewees wanted to talk about and to omit questions that were not relevant to the user. Therefore, for each of the interviews summarized below, the focus questions may differ slightly. Each interview is described separately below and a summary of the four interviews follows.

Individual Summaries

Interviewee A:

What would be your main purposes for using the social vulnerability information on IWAIS?

Interviewee A said that coming from a planning context, he would be most likely to be using the SVI to help identify "where those most vulnerable populations are to help direct projects, activities, outreach, and actions."

When you accessed the IWAIS sections related to flood resilience or social vulnerability, 1) What did you find that would be useful to you? 2) What were you looking for? 3) Were you able to find that information?

When asked if he had found what he was looking for Interviewee A said, "It wasn't bad; I feel like the mapping geographic piece behind it is pretty broad." The interviewer confirmed that he meant the census tracts used to display SVI are large, and he said, "It's definitely a starting point, I understand the limitations behind what data is available to use, but it would be much better if was a smaller or spatially tighter scale."

When asked what kinds of information he was looking for Interviewee A had several questions related to the information about "the top vulnerability indicators" found on the site: "Even downloading the data that comes with it, it's hard for me to understand, how does one or the other

of these [indicators] make it more vulnerable?" He said he needed more information about how they came up with those indicators, adding, "Some of them make sense, but others, it's not quite as clear." He elaborated by saying that when he clicked where it says *top vulnerability indicators* for one tract, "Maybe it's the way it's displayed, but [it said] children is 26.7%, black or African American shows up there, but as 0.0%, and unemployed is 2.5%" [Census Tract 216 in West Nishnabotna]. He continued, "It's kind of confusing – I don't know if that's like the percent of the population or if the percent of the children are vulnerable? It's hard to say exactly what it is and then, why is one at 0.0% talking about the top indicators?" He said that given these questions, he would be unlikely to do any additional analysis using the data. He said his main concerns about the indicators would be "Why does that make them more vulnerable and what do the percentages indicate?"

Would you recommend IWAIS to other people in your organization or to other people you know who do work related to what you do for finding flood resilience/social vulnerability information?

Interviewee A said that from the planning perspective and working with watershed to put together plans with information that is ready to use he thought, "Ideally if I'm going to cite this, I'd like to be able to tell the watershed manager or county emergency manager...go to this website, click on it, and it'll help tell you essentially what to do....And to me, there shouldn't be a whole lot of interpretation needed from their side of things. If I'm going to reference this...I would want it to be used for the end audience."

He said that in order to recommend it to others, he would have those caveats adding that it was something you could start to use the information in the planning context, but in order to use it to plan implementations or to devise action plans, "I think it's a little more limited in that sense." He recommended that they add "potential actions you take to reach out to those segments of the population...or 'Here's why they're vulnerable and here's ways you could help to address their specific vulnerable situation.'" He also wondered about identifying ways to talk about why an indicator "doesn't necessarily mean that they actually are vulnerable." He inserted that he hopes his comments are helpful and that while you can't always address everything, "It's always good to know what your limitations are."

[There were three scaled items during the interview, all on a 1-5 scale with five being the most positive on each scale.]

How easy was it for you to navigate the system?

Interviewee A preferred to describe rather than quantify and said, "Getting to the social vulnerability piece was relatively easy, but I feel like there's a lot of stuff buried in the website, in the mapping, sometimes it gets tough to click around between each one or get some of them to turn off so that you can look at others." He added, "In general, some of it's a little clunky, and I don't know if that's the way the system is built or if it's because there's so much in there." He continued, "It almost makes me wonder if there's too much there."

How easy was it for you to find the information you were looking for?

Interviewee A said that actually finding the place to look for social vulnerability information was a "4."

How confident are you in the data provided?

He said he was not concerned about the data – “they pulled data from somewhere... it’s not that kind of confidence I’m worried about.”

Do you think more training would be helpful and in what areas would you want more training?

When asked about additional training to use the site and the data, Interviewee A said that something would be helpful “whether it’s built into the map itself, some sort of guidance, or somewhere you go to get a little more [information] would be helpful.” He mentioned that he backed out of the maps and went to the main Iowa Watershed Approach information system website (“before the maps”) and found a few more pages that provided some context, and said, “That helped, but it’s still lacking I think.” He said that training should be focused on what the data is and “how it should actually be used for interpreted.”

Do you have any other questions related to the system’s interface and navigability?

Interviewee A focused his final comments on the value of getting feedback on the social vulnerability maps and how they will be used. He said, “I definitely think going through and talking to people like what we’re doing now is really valuable to continue doing and hopefully they’ll reach out to somebody like the emergency managers or other folks more on the ground – local folks who would potentially use this – talk to them, too.” He also volunteered to review the next iteration of the SVI site.

Interviewee B:

What would be your main purposes for using the social vulnerability information on IWAIS?

Interviewee B said he would be looking at it from the planning perspective and asking, “Does it help prioritize where upland flood reduction practices or mitigation efforts...should be prioritized not just based off water quality or a certain watershed...but [can we] also take into account the social vulnerability?”

When you accessed the IWAIS sections related to flood resilience or social vulnerability, 1) What did you find that would be useful to you? 2) What were you looking for? 3) Were you able to find that information?

Interviewee B said that it was helpful to have the information laid out on a map that showed the river and all the tributaries, but said the fact that the census tracts don’t line up with watershed boundaries made it “kind of tricky.” When asked about what information he tried to find, Interviewee B indicated that he is familiar with IFIS from using it for other information so he just kept “clicking on and off and seeing what all the different tools were.” He said he was hoping to find inundation maps and didn’t find those for the areas he is interested in. He also said the fact that the census tracts are so large in the rural areas and that makes it less useful than it might be in a larger urban area.

The UI FRT had indicated to the CEA that they hoped that the users would access the social vulnerability table, an Excel file with the values and formulas for all the social vulnerability indicators. He had not opened up the SVI data table. He said that they will use some of the information found on the site in the watershed plans that they are doing. When asked what they would use, he talked first about using the BMP and ACPF mapping information. He said they’d probably use that information to see in which areas practices would have the greatest impact on the

areas designated as being high social vulnerability. Since he had not looked at the data table, the interviewer asked what information he would use and he said that he would probably just refer to the “low to high” differences. He said that he would look at “lower resilience” areas, but asked if there was another area where he could find out more. He said he knew some of it from hearing it presented by the resilience team at WMA meetings, but that “It would be helpful to have a link to more information about what the definition of that means.”

[There were three scaled items during the interview, all on a 1-5 scale with five being the most positive on each scale.]

How easy was it for you to navigate the system?

Interviewee B said “5.”

How easy was it for you to find the information you were looking for?

“5”

How confident are you in the data provided?

“5”

Interviewee B indicated that he did not experience any situations in which he was unable to use the system successfully.

Do you think more training would be helpful and in what areas would you want more training?

He said it would be helpful to have additional training. He said that he’d be looking to understand more about “What everything means and how the data is collected.” He continued by talking about how to use flood gauge information in conjunction with the social vulnerability data: “If you’re a decision maker or something like that and you’re looking at a flood gauge – an actual flood event in relation to social vulnerability – ‘Why is this [the flood gauge] turning yellow and what does that mean.’” He said there is a lot of misunderstanding of how to interpret the flood gauges “and what the data actually mean and how to get the most out of it.”

Do you have any other questions or comments related to the system’s interface and navigability?

He said he would be interested in having the potential to overlay SVI maps with the other maps (e.g. BMP, ACPF). Also, since his group has been working on improving flood mitigation for critical infrastructure (e.g. bridges, roads), he said it would be great information to show bridges that, if washed out, cause long detours, and that is especially important information for emergency responders so that they can consider, “If this bridge goes, that’s a big deal.”

Interviewee C:

What would be your main purposes for using the social vulnerability information on IWAIS?

Interviewee C said that the information would be helpful to her so that she could talk about it with others and “[The information] really hit home the point that the neighborhood that we’re working in in Dubuque is vulnerable on a lot of different scales.” She added that she would use the information for presentations to help explain “why we’re doing what we’re doing.”

When you accessed the IWAIS sections related to flood resilience or social vulnerability, 1) What did you find that would be useful to you? 2) What were you looking for? 3) Were you able to find that information?

Interviewee C said that she “had a lot of follow-up questions.” She indicated that she thought that some of that was “probably the next phase” of development, but that she wants to “work with the folks that put it together to...dial it in and talk about what it really means.” When asked what her follow-up questions were, Interviewee C said, “What are the items that are being measured?” She said she wants to “have the map layout” in such a way that they can compare the things that are displayed on the IWAIS compared with the things they are measuring in Dubuque. She said that she had just “seen it at the high level so I know that is probably forthcoming at future meetings.” She continued that she would like to see the information at a finer scale: “It’s not that it’s not useful, clearly it is...just the more granular we can get, I think, obviously the better.”

She also said that there were some acronyms used on the site that she was not familiar with, however, the example she gave was “BMP” (an acronym for Best Management Practices) that would have been on a different section of the IWAIS. She also said that she thought that some of the information on the site would be interesting to some of the people in the BBHH neighborhoods. However, in talking about what would be useful in that context, she again referred to features that were not part of the social vulnerability section; for example, she said it would be great for residents to share information with their neighbors about a “potential flash flooding event coming.” She said that she, “Clicked through all of the items on the right hand side,” some of which led her to other IWAIS features.

Interviewee C commented that the system did not work well on her iPad and described having issues where the maps would “restart on me or reload a lot.” She wondered whether the problem was due to her platform or security measures on her work computer, but said, “If they have a training class in the future...”

Interviewee C said that the colors used to indicate the different levels of vulnerability in the neighborhoods were helpful. She said that she looked at what she was doing on the site as basically “exploratory” rather than for fulfilling a specific function. She had also explored some of the maps for rural Iowa because she grew up in rural Iowa, and said, “It starts telling the story of the difference between the rural and the urban.” She said that hopefully this site will help fulfill some of the goals of the IWA grant in education and outreach.

When asked if she had accessed the SVI data table in the social vulnerability section, she said that she had clicked on a box and gotten more detail “but I might have missed the actual indicators because I wrote myself a note about it, ‘What were some of the factors in this particular area?’” She said that she was concerned that she had just missed it, “I got some of the more detailed boxes to come up...but none of them ring a bell in my head on a specific group, so I probably didn’t go deep enough.” To clarify, the interviewer provided a brief description of the type of data to be found on the site. Interviewee C replied, “Census tracts?...I need to find that then.”

Would you recommend IWAIS to other people in your organization or to other people you know who do work related to what you do for finding flood resilience/social vulnerability information?

Interviewee C said that she would recommend the IWAIS site to people in their economic development, human rights, and engineering departments because they “all have directives to look

at equity and just think about the populations we're serving." When asked about people outside of her organization, she said, "I would see myself recommending it once I understand it well enough to help them navigate it as well." The interviewer asked her to describe some of the parts she thought she'd need help understanding. Interviewee C said she must have missed the indicator information and "the exact percentages or data pieces that often people ask for in this... They'll ask, 'Where did this data come from? What does it mean? How reliable is it?'" She said she wants to be prepared to answer those questions.

[There were three scaled items during the interview, all on a 1-5 scale with five being the most positive on each scale.]

How easy was it for you to navigate the system?

Interviewee C said, "3" adding that it "kept bouncing out and back again" but saying that could have been "user error" or the fact that she was using a touch screen.

How easy was it for you to find the information you were looking for?

She said "4" without elaboration.

How confident are you in the data provided?

Interviewee C said "4" adding, "Just for the fact that I don't know where it came from, but I trust the people that put it together."

In what situations (if any) were you not able to use the system successfully?

Interviewee C said that the security warning came up early, and she was never able to access it through the Dubuque system.

Do you think more training would be helpful and in what areas would you want more training?

The interviewer alluded to Interviewee C's early statement that she needed more information about the indicators, and Interviewee C added that she was wondering if there is any "printability or reportability" to get aggregated reporting specific to their questions.

Do you have any other questions related to the system's interface and navigability?

Interviewee C said she did not have any issues other than her problems with the maps "zooming back out."

Interviewee D:

What would be your main purposes for using the social vulnerability information on IWAIS?

Interviewee D said her primary use for the SVI would be for watershed planning including some information about emergency management aspects. She emphasized that it would not be used for emergency management "in the moment", but would be most useful "after the fact if you're doing some research or you want to verify data or dig a little deeper into some of the vulnerability aspects." She said that there is a lot of information there so, "It may not be a one-stop shop, but it's a really good starting place."

When you accessed the IWAIS sections related to flood resilience or social vulnerability, 1) What did you find that would be useful to you? 2) What were you looking for? 3) Were you able to find that information?

Interviewee D said she wasn't quite sure what she was looking for. Before visiting the site, she thought it might be more of a "story-mapping" type site. She imagined a site where the user can "slide from left to right and it shows, kind of like a before and after." She expected the site to be something "you can play around with...more dynamic." She said that she found the census data and thought it would be helpful because she's "always having to search for that kind of stuff." She said that made the site unique.

The interviewer asked if she found the categories, as depicted by the different colors on the maps, useful. Interviewee D said that she liked that they kept it "simple" adding that professionals in her field are "constantly critiquing or looking for more details...[that] don't make it [the data] digestible or relatable." When asked if she had clicked on the census tracts to access the indicator lists and the percentages in the pop-up windows, she said that she had not: "I did not even think to click on that." She said she had not noticed those features and that she was looking more at the icons in the margins of the page.

Would you recommend IWAIS to other people in your organization or to other people you know who do work related to what you do for finding flood resilience/social vulnerability information?

Interviewee D said she would recommend the tool to others in and outside of her organization.

[There were three scaled items during the interview, all on a 1-5 scale with five being the most positive on each scale.]

How easy was it for you to navigate the system?

Interviewee D said "4."

How easy was it for you to find the information you were looking for?

Interviewee D said she wasn't really looking for anything in particular so couldn't answer that question.

How confident are you in the data provided?

Interviewee D said "5".

In what situations (if any) were you not able to use the system successfully?

Interviewee D said that everything worked well.

Do you think more training would be helpful and in what areas would you want more training?

Interviewee D said, "Absolutely" and suggested that an online one-page description or some sort of tutorial would be helpful.

Do you have any other questions related to the system's interface and navigability?

She said that since she wasn't trying to use it for a particular purpose, she didn't really have specific questions, but she might if she was trying to accomplish something specific.

Summary and recommendations

As described in the introduction to this report, the four “power users” who were interviewed for this study were recommended by and had existing relationships with the UI FRT. While interviewees were asked to be honest and objective about their use of the SVI and the IWAIS site, it was anticipated that feedback would be constructive, but more likely to be positive than critical. This was the interviewers’ perception in all cases, however, the feedback provides direction for the ways in which the SVI visualization section of IWAIS might be improved to meet potential users’ needs. This section provides a general summary of the key outcomes from the interviews with a primary focus on suggestions for improvement and recommendations for modifications of the site based on the input from the selected users.

This section provides a general summary of the key outcomes from the interviews and recommendations for modifications of the site based on the input from the selected users.

Summary

Users’ intended purpose for accessing the site: When asked what their purposes would be for accessing the SVI found on IWAIS, three interviewees said they would approach the site from the planning perspective looking for information to help them: identify vulnerable populations to guide them in directing projects and resources; prioritize the placement of conservation practices; and provide information about emergency management needs. The fourth interviewee said the site would be used to provide information to help communicate the needs of vulnerable populations to other people.

Utility of SVI: When planning for the interviews, one aspect that the UI FRT thought would be important for users was the *Vulnerability Table* with the indicator values for each census tract. Unfortunately, three interviewees did not open the table and reported that they did not notice the table. The interviewee who opened the table indicated that although he opened the table, more explanation of the data was necessary for the table to be useful to him. He asked that they provide more information such as definitions of the indicators, why certain populations would be vulnerable (some are more intuitive than others), and how the indicators can provide recommendations for action. The other users indicated that they either looked only at the maps (mentioning the different colored census tracts) and/or at the pop-up box that provides quantitative vulnerability indicators for each of the census blocks.

While users commented that indicator values (or the census tract color distinctions) would be useful for them, they had questions about what the indicators meant, where the data came from, and how knowing the top vulnerability indicators helped direct action. Some users indicated that they appreciated the simplicity of using the low-medium-high composite vulnerability distinctions. However, one of the people who liked the simple distinctions said they had not tried to actually use the information yet, and while talking they realized that they would need more definitions for the indicators.

Recommending the SVI to other users: Several of the interviewees were asked if they would recommend the tool to others inside and outside of their organization. While several of the users

said they would recommend it, most qualified their recommendation by saying they'd need to know more about the tool before they could recommend it. A couple of the users indicated that they were comfortable with the tool and could recommend it primarily because they trusted the UI FRT. While establishing the trustworthiness of the source is an important aspect of sharing information, bolstering this trust by clearly communicating the definitions, methods, and data sources would be to the benefit of users of the SVI system. Users were also asked how trustworthy they found the information (on a five-point scale where 5 indicated the most trust). Two people rated their trust as "5" and one as "4", while the fourth person described that while they were sure the information was accurate, they needed to understand more about it to be able to actually have confidence in it.

Technical aspects of the SVI site: Interviewees were asked to rate the navigability of the SVI portion of the site by rating the easiness of using the system and whether or not they had found what they were looking for. Ratings were mostly positive (3-5 on a 5-point scale where 5 meant was the most positive) for navigability with some indication that there was a lot on the site to go through to find what you really wanted and one person saying they hadn't been looking for anything in particular and couldn't rate it.

Additional training: All four interviewees suggested that additional training in how to use the information provided by the site would be helpful, possibly in the form of an online tutorial. Echoing other comments throughout the interviews, all four users said that additional training should be focused on providing clear explanations of how the social vulnerability indicators were derived, their definitions, and how they provide an agenda for action.

Recommendations

The four people interviewed for this study indicated that they found the information about socially vulnerable populations provided by the site to be interesting and were positive about its ultimate utility; however, they strongly indicated the need for additional information to make the site truly useful in their work. Therefore, based on the interviews, the main recommendations for modifications to the site are:

- *Provide more information about the indicators themselves.* The website would benefit from clear definitions of indicators, well-defined sources for data, and clear direction for action based on the indicators. Links to external sources used to create and compile the indicators is also essential.
- *Provide training on how to use the information effectively.* While additional information about the SVI on the website itself would be helpful to participants, additional professional development (in the form of an on-line tutorial and/or other technical training) is necessary.

Appendix M- Resilient Vinton Partner Meeting Survey Findings

As part of the overall program evaluation of the Iowa Watershed Approach (IWA) resilience programming, the University of Iowa Center for Evaluation and Assessment (CEA) conducted a survey at the first partner meeting of the Resilient Vinton (RV) project in Vinton, IA on February 7, 2019. The meeting was held at the Benton County Service Center in Vinton, IA. Vinton was selected by the IWA Flood Resilience Team (UI FRT) as a case study town for their work as part of the IWA.

There were 14 people in attendance including representatives from organizations related to Vinton (8), Iowa Valley Resource Conservation and Development (IVRC&D) (2) (sub-contractors for the resilience case study work), IWA UI FRT (2), and CEA (2). The eight people who were in attendance as potential partners in the resilience work represented the following organizations:

- Benton County Public Health
- Benton County Social Services
- City of Vinton, City Administrator
- City of Vinton, Mayor
- Hawkeye Area Community Action Program
- Iowa State University Extension and Outreach – Benton County
- Vinton-Shellsburg Community School District
- Vinton Unlimited (merged Chamber of Commerce and Economic Development Group)

In collaboration with the IVRC&D and the UI FRT, the CEA had prepared a survey for meeting attendees with the primary purpose of learning about partners' interests, questions, and opinions following the meeting. This paper and pencil survey was approved by the University of Iowa's Institutional Review Board. Only the eight Vinton partners were asked to complete a survey. All eight completed the survey for a response rate of 100%.

The meeting was characterized by a great deal of positive, productive discussion of the work that the IVRC&D will be doing, and of the needs and resources available in Vinton. To honor the constructive communication during the meeting, when it came time for the survey to be administered, a CEA staff member told the group that the survey seemed like it would be asking them to repeat a lot of the things they had already said. Instead, the CEA staff member asked them to look at the questions and answer as they wanted, and to add whatever they wanted including names and contact information for people they had mentioned during the meeting as important resources. Therefore the summary below is an informal summary of the survey responses. Because of the informal, open-ended administration of the survey, response rates for individual items will not be reported. For the use of the UI FRT and IVRC&D, names and contact information are included below, but individual identifiers will be removed in CEA's official reporting to the IWA funding and administrative agencies.

What is one important thing you learned from this meeting?

The following important things were mentioned by respondents:

- The actions of this group are intended to serve the most vulnerable population in their community
- The proposed timeline of the project

- Some other resources that are available – “We are not alone.”
- “I love the relationship aspect of resilience.”
- “I had not heard of ‘Frog Flats’ before.”

What is one thing you plan to tell others about this meeting?

Respondents planned to tell others the following (frequency in parentheses when more than one):

- The project is more than just about flooding – general disaster (2).
- Community leaders are wanting to help people who live here.
- There are more resources available than they knew about.
- They need to include others in the process.
- There are lots of opportunities to engage in the work.
- They will tell others about the process of this project.
- They will be part of “proactive planning for disasters.”

Who else should be involved in the work discussed during the meeting?

Respondents listed the following people and contact information:

- Vinton Ministerial Association (2)
- Linda Laugh (319) 472-4761, 202 E 4th St. Vinton, IA 53349
- Most vulnerable – “Will email you ☺”
- HACAP Head Start
- Operation Backpack
- Steve Berry – Berry Lanes 319 560-4451
- Virginia Holstein – City Librarian

What questions do you have about the work discussed during the meeting?

Respondents raised the following questions:

- “What are we going to help people with: flood insurance, buyouts, etc.? Help renters move out of a 100 year flood plain?”
- “What does the end look like? Maps to success?”

What other comments do you have about this meeting or flood resiliency efforts for Vinton?

One person crossed out “flood” in the question and changed it to “disaster” and added a smiley face drawing. Other comments included:

- “This is a great start.”
- “Lots of opportunities for us to work together to strengthen our community.”
- “Very informative - long process - but we need to mitigate rather than react.”

Three people provided their names on the survey, Mary Jo Hainstock (school superintendent), Bud Maynard (Vinton mayor), and Greg Walston (ISU Extension), however their names are not associated with responses here to avoid making other responses more identifiable.

Appendix N- Semi-Structured Interview Protocol for Key Informant Interviews

Half-way point interviews to be conducted during May-June 2019

4-17-19

Read this section to all interviewees:

As part of the evaluation of the Iowa Watershed Approach Project, the Center for Evaluation and Assessment is conducting interviews with key personnel from each of the eight watersheds. The purpose of the interviews is to learn about your perceptions of the Iowa Watershed Approach as it is happening in your watershed now that we are past the halfway point of the five-year project. You have been asked to complete this interview because of your particular role and expertise in the _____ Watershed. In order to use the information from these interviews effectively, the project staff needs to know who is providing the information so that your particular knowledge and interests can be taken into account. Therefore, the findings from this interview **will not** be reported in an anonymous way. In reporting beyond project staff, your comments will reference your role in the project and your watershed (e.g., emergency management director, _____ Watershed), but will not identify you by name. This limits the possibility that you will be identifiable beyond the people working directly with the project, but does not provide complete anonymity.

Your participation in this interview is voluntary. You may decline to be interviewed, you may decline to answer particular questions, and you may ask that the interview not be used even after we have completed the interview.

The interview will take approximately 15-20 minutes. You may end the interview at any time. Please let me know if you need to leave or if you'd like to take a break and finish the interview later.

We will be asking the same general questions of all interviewees. Findings from all interviews will be summarized and you will be given the opportunity to review the summary of your interview and make comments, corrections, or additions before the summary is considered final. When it is finalized, it will be given to the IWA project partners for their use in improving the project over the next two and one-half years. The summary will also be attached to our annual evaluation report to the project funding institution, HUD, at which point it becomes part of the public record for the project.

In order to make this process smoother and make sure we capture your words accurately, we would like to tape record the interview. Is that okay with you? [If no, "That's fine, I'll just take some notes then."]

Do you have any questions before we start? [If no and have permission to record, "Great. I'll start the recorder now."]

In the last couple of weeks, when we confirmed the time to call you to talk, we also sent you a list of the topics we would ask you to talk about with us. So the five general topics we wanted to talk with you about are your perceptions of:

- The benefits of taking part in the IWA for your watershed
- Challenges remaining in the last half of the project and approaches to face challenges
- What (if anything) would you do differently as a watershed in working on the IWA now that you know what you know now?
- Strengths and weaknesses of your WMA
- Sustainability of your WMA after the IWA project is complete

So let's start with:

1. What do you see as the greatest benefits of taking part in the IWA for your watershed? (These can be things that you are already experiencing or things that you think will be happening in the future.)

Possible prompts (depending on what they say):

- *In what ways has it been beneficial for the community?*
- *In what ways has it been beneficial for the water resources?*
- *In what ways has working with the IWA partners been beneficial for your watershed?*
- *Need to work on these two bullets: IWA goals?*
- *IWA effectiveness?*
- *How beneficial has this project been compared with similar projects you have been part of in your WMA?*

2. Thinking specifically about finishing up the last two years of the IWA in your watershed. What challenges do you still face? What would help your WMA face those challenges?

Possible prompts:

- *Maintaining board interest*
- *Social capital – what do they need to do to involve more entities on the board?*
- *Missing stakeholder groups? Too many members (quorum issues, lack of involvement?)*
- *Is everyone included in decision making?*
- *To what extent is/should the WMA board be involved in day-to-day operations of the IWA (especially engaging with project coordinator work?)*

3. What (if anything) would you do differently as a watershed in working on a project like the IWA knowing what you know now?

4. What do you see as the particular strengths and weaknesses of your WMA?

Possible prompts:

- *To what extent are the goals of your WMA being accomplished?*
- *WMA leadership? (including project coordinator)*
- *Missing stakeholder groups? Too many members (quorum issues, lack of involvement?)*
- *Is everyone included in decision making?*

5. What are your thoughts on what happens after the IWA project is complete?

Possible prompts:

- *Sustainability of the WMA*
- *Strategies for implementing watershed plan after the IWA*
 - *Top implementation priorities*

- *Project coordinator position?*
- *Maintaining board interest*
- *Ways to procure funding*
- *Political and economic challenges*

6. Anything else you'd like to comment on concerning the IWA or your WMA?

Thank you for taking the time to talk with us. You will receive a summary of this conversation sometime this summer and you'll be given the opportunity to comment.

Appendix O- 2018 WMA Board Member Survey Findings

Introduction and Methods:

The University of Iowa Center for Evaluation and Assessment (CEA) collaborated with Iowa Watershed Approach (IWA) partners and project coordinators to create a survey to learn about the experiences of member entities in the eight Watershed Management Authorities (WMA) who are funded by the IWA. The IWA is a project of the National Disaster Resilience Competition funded by the US Department of Housing and Urban Development. This survey is part of the program evaluation of the IWA conducted by the CEA. The stated purposes of the survey were to learn:

- Who is involved in WMAs
- Their motivations to work with a WMA
- How they think their WMA is working
- Their perceptions about the WMA work occurring in the watershed
- What they hope their WMA will accomplish

During the fall of 2018, the CEA requested lists of all member entity representatives and alternates from the project coordinators and/or another representative of the WMA. The survey was submitted to and approved by the University of Iowa Institutional Review Board for review regarding its policies regarding research involving human subjects. On October 24, 2018 the CEA sent email invitations to complete the survey to all WMA representatives and alternates listed for each of the eight WMAs. The email provided a link to the survey and the opportunity to request a paper copy of the survey with postpaid return envelope if they preferred that mode of completing the survey.¹ The email indicated that the survey was to be completed by November 1, 2018 and that reminders to complete the survey would be sent at one and two week intervals. The email informed participants that the survey was anonymous, and that all reporting would be done such that they could not be identified by their responses.

During the first week after the survey distribution, the CEA received an email from a board member questioning whether people would have time to complete the survey during the harvest season. For this reason, the CEA delayed sending reminders such that the first reminder was not sent until November 9, 2018 and the second reminder was sent on November 19, 2018.

The survey was collected using the Qualtrics platform supported by the University of Iowa. Data analysis for this report included analysis of quantitative items using the Qualtrics platform and Microsoft Excel. Analysis of qualitative items was completed by individual CEA staff members.

The survey introduction provided respondents with the following definitions of two terms used in the survey:

WMA refers to the group in your watershed (whether it refers to itself as a WMA or a coalition) that has filed a 28e agreement with the State of Iowa to create a Watershed Management Authority as a mechanism for cities, counties, Soil and Water Conservation

¹ Ultimately, one person requested that paper copies be sent to them on behalf of three board members who did not regularly use email, and two of the three surveys were returned to the CEA.

Districts (SWCDs), lake districts, and stakeholders to cooperatively engage in watershed planning and management.

Board Member is defined as anyone who is the primary or alternate representative for their member entity to their WMA.

Executive Summary

The CEA conducted a survey of all member entity representatives of the eight Iowa Watershed Approach Watershed Management Authorities (WMAs). The overall survey response rate was 37%. Response rates varied across the WMAs from 10 to 75% with most of the WMAs' response rates ranging between 37 and 44%. The purpose of the survey was to learn about representatives' experiences and engagement in the work of the WMAs.

Who responded: Respondents fairly evenly represented the three main membership groups, municipalities, counties, and Soil and Water Conservation Districts. Approximately half of the respondents indicated they are elected officials and more than one-third said they are public employees. The remainder of the respondents described themselves as concerned citizens, producers/farmers, landowners, and business owners. Most of the respondents indicated that the member entity they represent is in an area eligible for IWA funding. The great majority of respondents do not own land that has been directly affected by flooding in the past. Most respondents indicated they are involved in the WMA because of their concern about flood mitigation, water quality, or both, while a few provided other or additional reasons for their WMA engagement.

Involvement in WMA: When asked a series of questions about their involvement in the WMA, responses were strongly positive about their WMA and its work. Respondents understand and agree with the mission of their WMA, are familiar with its current work, feel well-informed enough to make decisions on behalf of their WMA, and agreed that they have the opportunity to provide input to their WMA. When asked what kinds of additional information they need to make good decisions for their WMA, the four most commonly mentioned topic areas were information about: potential flood mitigation impact of BMPs, potential additional funding sources, how other WMAs have successfully implemented BMPs, and the impacts of improved soil health practices.

Most respondents indicated that being a part of the WMA is valuable for them and, to a somewhat lesser extent, that they recommend being involved with the WMA to others and actively promote the work of the WMA to their member group. When asked what aspects of WMA involvement were valuable for them, they mentioned the following: receiving information about the watershed, having representation in the WMA, networking with others, leveraging previous experience, looking at the big picture outcomes, providing input on projects, connecting with other WMAs, and having a role in reducing flooding. They said being involved in the WMA would be an even more valuable experience if they could see actual impacts on the watershed, secure additional funding, expand the current implementation areas for IWA-funded best management practices, and see more conservation practices on the ground. They also indicated that they would change the way that meetings are organized to allow more networking time and less technical information, and do more field trips to see installed practices. Respondents said that being involved with the WMA would be more attractive to *other people* if their WMA had completed successful projects, had more funding, was more focused on the "big picture," received more publicity, and if there were more active ways to be engaged.

While more than a third of the respondents indicated that the IWA is an important reason for their involvement in the WMA, most respondents said they plan to stay involved in their WMA after the IWA funding is done.

WMA effectiveness: Respondents also were strongly positive about the effectiveness of their WMA. They said meeting locations work well for them, subcommittees are effective, and that their WMA communicates effectively. They agreed that meeting time is used effectively and that useful information is presented at meetings. To a lesser extent they agreed that their WMA has enough people at meetings to make decisions and were nearly neutral on whether they have enough landowners and interested citizens who attend WMA meetings. When asked who else should be involved in the WMA, respondents listed: local/county/regional officials; federal entities; agricultural/commodity/farmers groups; farmers/landowners; non-governmental environmental groups; and members of other watershed groups.

WMA goals: Respondents were asked to describe both their short- and long-term goals for the WMA. In the short-term, board members said they want to get BMPs implemented, begin to improve flood mitigation, and complete their watershed plan and begin implementation. They also want to secure additional WMA funding, have a measurable impact on water quality and soil health in their area, and get the public more engaged in watershed issues. Long-term goals were similar, but were more focused on the big-picture: respondents described long-term goals to improve flood mitigation, improve water quality, and establish a future path and funding for their WMA. They also talked about encouraging the use of better farming practices in general and having a focus on working for the greater good.

The future of the WMA and WMA funding: Two of the most positive responses on the survey were related to the need for funding for WMAs in the future and, in particular, the need to secure a steady stream of funding for watershed coordinators. When asked to rank different potential funding methods for WMAs, approximately half of the respondents indicated that state funding would be their first choice and another one-quarter of respondents named state funding as their second choice. About one-third of the respondents named grant funding as their first choice for WMA work.

In general, the findings of this survey reflected respondents who are strongly engaged in their WMA and who are committed to being involved in work related to the watershed in the future. One respondent said, “I hope we can continue these efforts well into the future and help address major issues affecting our state including flood mitigation and water quality improvement.”

Survey Findings

Who responded to the survey

This report includes analyses of all responses for all WMAs combined. Response rates ranged from 10% in one WMA to 75% in another. The WMAs represented include: Clear Creek Watershed Coalition, East and West Nishnabotna River Watershed Management Authorities (combined), English River Watershed Management Authority, Middle Cedar River Watershed Management Authority, North Raccoon River Watershed Management Coalition, Upper Iowa Watershed Management Coalition, and Upper Wapsipinicon Watershed Management Authority. Additional reporting will be completed for the five watersheds whose response rate was greater than 25%. Table 1 reports the response rate for all watersheds in order of their response rate. [Watersheds are not listed by name to avoid any sensitivity over differing response rates.]

Table 1. *IWA WMA Representative Survey Response Rates (from highest to lowest)*

WMA	%
A	75
B	44
C	42
D	38
E	37
F	23
G	10
TOTALS	37

Although an overall response rate of 37% is acceptable, a few cautions on interpretation are offered here. First, as described above, response rates are not equal across the eight watersheds nor is the size of the membership of the WMAs equal. As few as eight board representatives and alternates were sent surveys for one WMA, while another WMA provided a list of 63 representatives and alternates. Second, the people who responded appear to be quite involved in their WMAs. For example, two-thirds of the respondents indicated they served on the WMA executive board and/or a sub-committee. In addition, nearly half of the respondents indicated that they typically attend all WMA quarterly meetings and another quarter of the respondents indicated they attend two or three of the four quarterly meetings annually. Only 12 respondents indicated that they had only been to one meeting or to none at all in the last year. Thus, survey findings do not represent the IWA WMAs equally and characterize the viewpoints of board members who are quite engaged in WMA work. Therefore, all findings should be interpreted with caution.

Respondents were asked to select the type of member entity that they represent in their WMA. Table 2 reports the distribution of respondents by member entity type.

Table 2. *Type of Member Entity Respondents Represent*

Municipality	County	SWCD	Lake District
32	22	25	0

Respondents were then asked, "In addition to the groups listed above, what other kinds of groups (if any) do you think should be involved in the WMA to make its work more effective?"

Respondents provided a diverse collection of ideas for other groups who they thought should be involved in the WMA. Two respondents provided specific clarification that they did not necessarily think that the groups they suggested should be voting members of the WMA, but that these groups should be involved in the WMA. Since the item does not specify *voting members*², interpretation of this list should be limited to the idea that respondents indicated these entities should be *involved* in the WMA. Twenty-eight of the 79 respondents (35%) provided at least one suggestion for others who should be involved with many respondents providing more than one suggestion so total number of suggestions is greater than 28. Response categories included the following (with frequencies in parentheses if greater than one):

- Local/county/regional official entities (15)
- State or federal entities (10)

² At the current time, legislation for 28e formation limits voting representation to the four groups listed above.

- Agriculture/commodity/farmers' groups (10)
- Farmers/landowners (5)
- Non-governmental environmental groups (3)
- Other watershed or sub-watershed groups (3)
- None (3)

Specific descriptions of the categories described above are provided below with subcategory frequencies also in parentheses.

Local/county/regional official entities (15): The suggestions in this category included: drainage districts (5); county conservation directors (3); lake protectives [already eligible member entity]; levee districts; township trustees; county engineers; planning and zoning commissions; city parks or public works departments; and emergency managers. One respondent said, "If tiny, rural communities can have representation, then so should every major drainage district."

State or federal entities (10): Suggestions included: Iowa Department of Natural Resources (4); Natural Resources Conservation Services (2); Iowa Department of Agriculture and Land Stewardship (2); legislative liaison; and US Army Corps of Engineers.

Agriculture/commodity/farmers' groups (10): Suggestions included: Agriculture and commodity groups (5) including Iowa Soybean Association (2), Iowa Corn Growers Association (2), and Cattlemen; farmer groups (non-specified) (3); Farm Bureau (county and unspecified) (2).

Farmers/landowners (5): Five respondents mentioned farmers/landowners in general. One respondent said, "I don't know if they should be on the board, but more farmer engagement and interaction with the board would help the work be more effective."

Non-governmental environmental groups (3): Three respondents gave multiple suggestions in this category including: Pheasants Forever, Ducks Unlimited, Iowa Rivers Revival, Trees Forever, Whitetails Unlimited, and Iowa Whitewater Coalition.

Other watershed or sub-watershed groups (3): Three people suggested other watershed groups be included with two suggesting a specific larger watershed that included their HUC 8 watershed or a HUC 12 watershed within their HUC 8.

None (3): Three people said they had no other groups to suggest.

Other suggestions provided by individuals included: Any group that can help encourage "landowner buy-in;" private groups interested in investing; the press; "appropriate colleges and universities;" Councils of Governments groups; and consultants.

Respondents were asked whether the member entity they represent is located within one of the HUC 12s eligible for IWA funding. Of the 79 respondents, most (50, 63%) indicated that the entity they represent is within an eligible area, and 20 respondents (25%) said their member entity was not in the eligible area. Nine respondents (11%) indicated they did not know whether their entity was within an IWA eligible area.

Respondents were also asked whether they own land that has been directly affected by flooding (either riverine or flash flooding) in the last 20 years. Of the 77 people who responded to this item, approximately one-fifth (15, 19%) said they owned land that had been affected by flooding, while the large majority (62, 81%) had not been directly affected by flooding.

Respondents were asked to select the terms (from a list provided to them) that best describe their role in the watershed. They could select more than one role, therefore the total adds to more than 79. The percentage column uses the total number of respondents as the denominator. That is, 37 people described themselves as “Elected officials” meaning that nearly half of the respondents (47%) self-identified as an elected official. Table 3 reports the way that respondents described their role.

Table 3. *Self-described roles of respondents in watershed*

Role in watershed	N	%
Elected official	37	47
Public employee	31	39
Concerned citizen	15	19
Producer/farmer	14	18
Landowner	11	14
Business owner	5	6
Other (see below)	4	5

Those who selected “other” identified their roles as: consultant, town council representative, local watershed organization, and enthusiastic whitewater kayaker.

Respondents were asked two questions to learn more about the intensity of their involvement in the WMA: whether they served on the executive committee and/or a WMA subcommittee and how often they attend WMA quarterly meetings.

Of the 75 respondents to this item, approximately two-thirds (66%) said they serve on the WMA executive committee or a sub-committee (or both).

Figure 1 reports the frequency with which respondents indicated they attend WMA quarterly meetings.

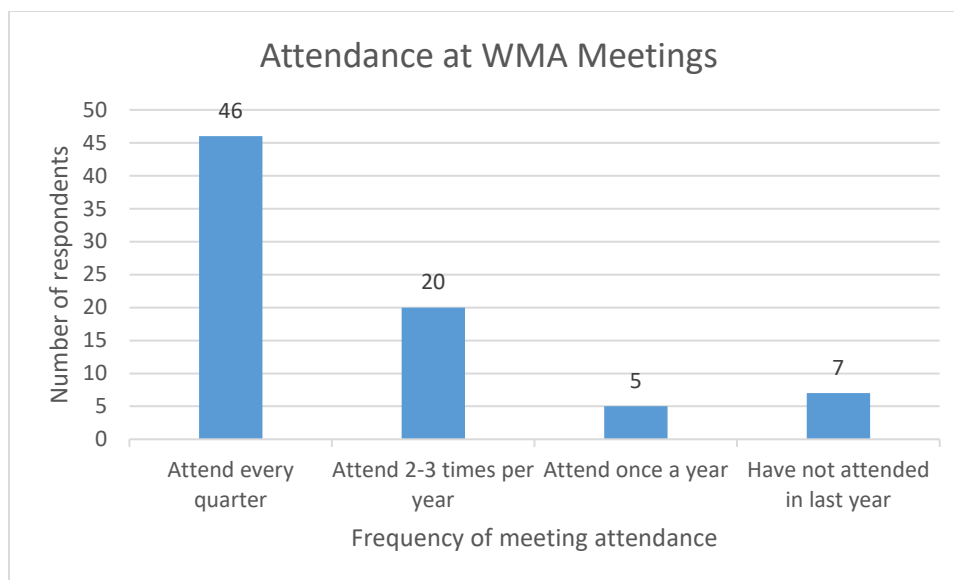


Figure 1. Frequency of WMA Quarterly Meeting Attendance

Most of the respondents were frequent WMA meeting attendees with 59% indicating they had attended all of the WMA quarterly meetings and another 26% indicating they had attended half to most of the meetings. Seven respondents indicated that they had not attended any WMA quarterly meetings in the last year. Respondents were also asked if they thought that having quarterly meetings was the right frequency for meetings. Of the 77 people who responded, nearly everyone (72, 94%) said that quarterly was “just about right,” four (5%) said quarterly was “not often enough,” and one respondent said quarterly was “too much.”

Board members were also asked to indicate the main reasons for their involvement in their WMA from three choices: water quality improvement, flood mitigation improvement, or other. They were allowed to select more than one response. Figure 2 reports the results.

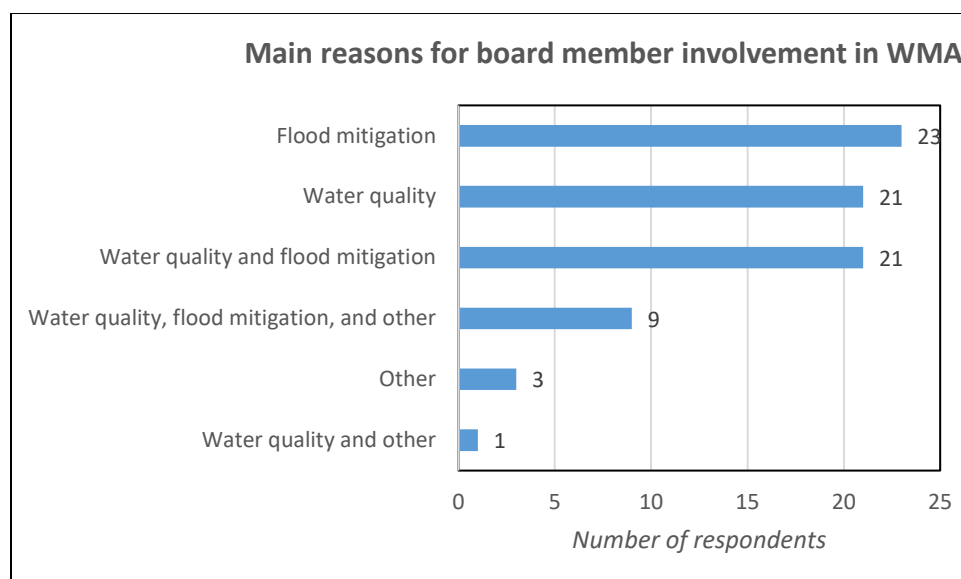


Figure 2. Main motivations for WMA participation of board members

Board members were nearly evenly divided between those whose main motivation is water quality, flood mitigation, and those who are involved for both reasons. Respondents who selected “Other” were asked to describe their reason for involvement in their WMA. The following categories emerged from the 13 respondents who supplied responses to this item (with frequency of responses in parentheses if greater than one):

- Conservation concerns (4)
 - Implementation of conservation measures, both urban and rural
 - Improve soil and air quality
 - Soil conservation
 - Other environmental concerns
- Wildlife habitat improvement (2)
- Supporting health and recreation (2)
- Represent member entity's interests (2)
- Economic development
- Intergovernmental collaboration
- Monitor what is going on in area

Perceptions of WMA Work

The second section of the survey focused on WMA board members’ perceptions of their work with the WMA. Respondents were asked to indicate the extent of their agreement or disagreement with a series of items about their involvement in the WMA, perceptions of the WMA effectiveness, the role of IWA on their involvement in the WMA, and the future of the WMA. Responses of *Strongly disagree* were scaled as 1 and *Strongly agree* as 5. Respondents also had the option of selecting, *I don't know/Not applicable*. For most of the items in this section, there are one or two *Strongly disagree* responses. Most of these responses came from one or two respondents. Tables 4-7 report the results.

Table 4. Respondents’ involvement in the WMA (Frequencies, means, and standard deviations)

Item	N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	IDK / NA	Mean SD
<i>Involvement in WMA</i>								
I agree with the mission of my WMA.	79	1	1	5	36	31	5	4.39 0.85
I am familiar with the mission of my WMA.	79	1	1	5	37	32	3	4.35 0.82
I am familiar with what is happening in my WMA right now.	79	1	2	8	34	30	4	4.29 0.91
I have the information necessary to vote on WMA decisions.	79	2	2	6	35	31	3	4.27 0.94
There is enough opportunity to provide my input into the work of the WMA.	78	1	1	6	48	18	4	4.19 0.81
Being involved in my WMA is a valuable experience for me.	79	1	3	12	38	20	5	4.11 0.96
I recommend being involved in the WMA to other people I know in my watershed.	79	1	4	20	33	14	7	3.96 1.06
I actively promote the work of the WMA to my member group.	79	1	5	20	37	13	3	3.82 0.96
I would like to be more involved in the work of my WMA.	78	0	4	44	19	6	5	3.54 0.95
Being involved in the WMA takes more time and effort than I thought it would before I agreed to be involved.	78	3	17	38	14	2	4	3.09 1.06

In general, respondents were strongly positive regarding their involvement in their WMA. To a great extent they indicated that they knew and agreed with the mission of the WMA and were aware of current WMA activity (Means=4.35, 4.39, and 4.29, respectively). They also agreed that they had the information necessary to make WMA decisions (4.27) and that the WMA provides them with enough opportunity to provide their input (4.19). Respondents also agreed that being involved is a valuable experience for them (4.11). To a somewhat lesser extent, but still positive, respondents indicated that they recommend WMA involvement to others (3.96) and that they actively promote the work of the WMA to their member entities (3.82). On two items, response means were close to neutral. However, on both of these items, a neutral response actually indicates satisfaction with the status quo rather than a less positive responses. For example, more than half of the respondents (44 of the 78) indicated they neither agreed nor disagreed with the statement *I would like to be more involved in the work of the WMA* and 25 people indicated that they'd like to be even more involved. The last item in this section asked whether being involved in the WMA required more time and effort than they had anticipated, thus a neutral response (given by 38 respondents) suggests that the amount of WMA work was what they expected.

Table 5. *Perceptions of WMA effectiveness (Frequencies, means, and standard deviations)*

Item	N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	IDK / NA	Mean SD
<i>Perceived WMA Effectiveness</i>								
The location(s) of most WMA meetings works well for me.	77	0	5	8	39	20	5	4.16 0.93
The subcommittees for my WMA are effective.	78	1	1	28	23	8	17	4.11 1.23
Time is used effectively at WMA meetings.	79	2	3	9	47	11	7	4.05 1.00
Communication in my WMA is effective.	79	1	4	7	51	11	5	4.04 0.90
The information presented at WMA meetings is useful for me.	78	1	4	11	42	17	3	4.01 0.92
Enough people attend the WMA meetings for us to make decisions.	77	3	6	9	43	9	7	3.91 1.13
There are enough landowners and interested citizens who attend the WMA meetings.	79	6	26	21	16	3	7	3.06 1.34

To a great extent, respondents also indicated that their WMA works well. They were pleased with the meeting locations (Mean=4.16), and said that subcommittees are effective (4.11) (although 17 people indicated that they didn't know about subcommittee work). They also agreed that meeting time is used effectively and provides important information (4.05 and 4.01 respectively), and that WMA communication is also effective (4.01). The two items with means closer to neutral both dealt with *who* attends the meetings. Although most people (52 of the 70 respondents who used the scale to respond) agreed that there were enough people in attendance to make decisions, nine respondents disagreed. The final item in this section asked whether there were enough landowners and interested citizens at the meetings. Although the mean was near the neutral point (3.06), 32 people indicated that there were not enough landowners or interested citizens at meetings.

Table 6. *Perceptions of the role of IWA in their involvement (frequencies, means, and standard deviations)*

Item	N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	IDK / NA	Mean SD
<i>Role of IWA</i>								
I plan to stay involved in my WMA after the IWA funding is done.	79	1	1	17	44	9	7	4.01 0.93
The IWA is an important part of why I am involved in the WMA.	79	2	14	26	23	7	7	3.51 1.21

When asked about the role of the IWA in their personal involvement in their WMA, respondents indicated that they plan to stay involved in the WMA after the IWA funding is gone (Mean=4.01). The near neutral response (3.51) as to whether the IWA was an important reason for their WMA involvement suggests that respondents would be involved in the WMA even without the IWA funds.

Table 7. *The future of the WMA (Frequencies, means, and standard deviations)*

Item	N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	IDK / NA	Mean SD
<i>The future of the WMA</i>								
My WMA needs a project coordinator after the IWA funding is done.	78	2	1	16	28	19	12	4.24 1.14
My WMA needs to secure additional funding.	78	2	3	14	28	24	7	4.15 1.11

Two of the most positive responses on the survey were related to the need for funding for WMA needs in the future with respondents agreeing that they need to secure additional funding (Mean=4.15) and that their WMA will continue to need a project coordinator after IWA funding is done (4.24).

WMA Funding

WMA board members were asked how the work of the WMA should be funded. Currently, there is no long-term source for WMA funding in Iowa. The survey asked respondents to rank order several sources of funding including:

- State funding
- Local funding (private)
- Local funding (public)
- Grant funding
- Other source of potential funding

They were asked to not include a funding source in their ranking if they did not think that source should be used to fund WMA work. Table 8 reports their rankings of the suggested sources

Table 8. *Respondents' rankings of desired WMA funding sources*

Funding Source	Rank selected (frequency)				
	1	2	3	4	5
State funding	31	17	6	5	5
Local funding: Private	5	11	27	17	6
Local funding: Public	4	18	26	14	2
Grant Funding	20	17	3	16	1
Other	6	1	2	0	13

Approximately half of the respondents (31 of 66; 47%) selected state funding as their first choice for funding for their WMA. Another 17 respondents selected state funding as their second choice resulting in approximately 75% of respondents indicating state funding as their first or second choice for WMA funding. The second most popular “first” choice in the ranking was grant funding selected by 20 (30%) respondents as their first choice. Those who indicated that WMAs should use grant funding were asked to specify a particular source for grant monies. Four people mentioned federal grants (Federal Block Grants, USDA, EPA, and one undesignated) and one respondent said the Walton Foundation.

Local funding (both public and private) were typically respondents’ lower-ranked sources for funding, with neither of these sources receiving more than five “first” designations.

Approximately one-third of respondents (22) selected “other sources” as a potential funding choice (at any ranking) with most (13) ranking “other” as their fifth ranked choice as a source for funding. They were asked to describe the other source. Only a few respondents described the potential “other” source of funding mentioning the following potential funding sources (frequency in parentheses if greater than one): federal funding (2); landowners; agricultural commodity organizations; Iowa Resource Enhancement and Protection (REAP); and drainage districts (where they exist). One person said, “The WMA should disband.”³

In the third section of the survey, WMA board members were asked to respond to several open-ended items related to their means of sharing information with their member entity, their perceptions of the work of the WMA, the goals of their WMA, and the value of involvement in the WMA for them and for others.

Information Sharing

As representatives of member entities to the WMA, there is some expectation that the representative will share WMA information with their member group. The survey asked board members to indicate the methods they use to share information. The instructions for this section prompted respondents to select “All that apply,” however, the survey only allowed them to report a single choice. Four respondents used the “Other” box to say that they use multiple modes of communication to share WMA news with their member entities. Two of these respondents said they used written and verbal reports, one said they used all the named methods, and one said they used “multiple options.” The fifth “other” response simply stated that they provide “reports to County Board of Supervisors.” Table 9 reports the results as they were counted. Although the item

³ Several strongly negative comments (like this comment) are included in this summary as individual comments. It should be noted that all of the strongly negative comments were made by the same respondent.

was not written this way, one interpretation could be that respondents chose their *primary* method of communication, but this should be interpreted with caution. (Percentages are rounded and do not total 100%.)

Table 9. *Ways in which board members share WMA information with their member entity groups (N=78)*

Method of communication	N	%
In-person verbal reports to your WMA member entity at official meetings	34	44
One-on-one conversations with people from your WMA member entity	15	19
Emails to your WMA member entity	13	17
I do not typically share WMA information with my WMA member entity.	6	8
Other (Please describe)	5	6
Written reports distributed to your WMA member entity	2	3
Emails or written reports sent to the general public	2	3
Press releases	1	1

Board Information Needs

In order to inform the potential of the IWA to support the WMAs in their work for the duration of the grant, the survey asked the WMA board members what topics they (or other board members) needed to learn more about to make informed decisions. Twenty-four board members responded (30%). Some people provided more than one response, so the total is greater than 24. Two board members said that they did not have additional information needs and one respondent said they just needed more time to get to the meetings. Other responses either fell into four main categories or were unique and will be described individually. The four most common categories of responses regarding board needs for information to support their work were:

- Potential flood mitigation impact of BMPs (4)
- Sources for potential funding (4)
- How other WMAs have successfully implemented BMPs (3)
- Impact of soil health practices (2)

Potential flood mitigation impact of BMPs: Four respondents suggested getting more information to the board on the expected impact of BMPs on floods. One person mentioned in particular needing more information on the value of upstream agriculture practices on urban flooding problems. Another respondent wanted to know about the “most cost-effective” practices for improving flood mitigation

Sources for potential funding: Four respondents suggested that providing more information to the board about other potential funding sources is important.

How other WMAs have successfully implemented BMPs: Several respondents said it would be valuable to hear from other WMAs about their successes in BMP implementation. One respondent

said, “It would be beneficial to have actual residents/cities who have put in place some of the practices presented to hear their feedback on the pros and cons of the practices.”

Impact of soil health practices: Two respondents want board members to learn more about the beneficial impacts of improved soil health practices. One respondent said it would be helpful to have more information on the ways in which “water infiltration rates are improved with no-tillage; can help with both flood mitigation and water quality improvement.” Another respondent asked to have a presentation on the general role of soil health in “lowering the risk of flood damage.”

Other individuals provided unique responses about WMA board member needs including the following (each mentioned by individuals): water quality data; potential to expand funding to additional HUC 12s; IWA timeline; data collection practices; landowner concerns; other things going on in state that may affect WMAs; potential for compensating landowners for things they are doing on their own that align with WMA mission; and the urgency of need for changes in conservation practices.

A single respondent suggested multiple topics they thought the board should hear more about including: “primary intent of HUD project;” differences between purpose of IWA and “legislative authority granted to WMAs” (and “why the former is advocated by DNR”); how IWA funds will be allocated toward improving flood resiliency or water quality; whether there is an intent to “create permanent WMAs” and to empower them as they are in Minnesota; and how WMAs will work with drainage districts.

WMA Board Members were asked two questions related to planning for the future in terms of what they hope the WMA accomplishes in the time left on the grant (approximately three years) and for the scope of their watershed plan (20 years).

Perception of WMA Goals

Short-term WMA Goals

When asked what the most important WMA goal is for the next three years, 45 survey respondents (57%) provided at least one goal. Some provided more than one goal, so the total of responses is greater than 45. The responses for the short-term goals for their WMAs fell into eight major categories as listed below (with frequencies in parentheses):

- Implement BMPs (22)
- Improve flood mitigation (9)
- Complete watershed plan and begin to implement the plan (8)
- Secure additional funding for the WMA (7)
- Improve water quality and soil health (7)
- Engage the public in watershed issues (7)
- Fulfill the HUD grant requirements (4)
- Expand BMP implementation to other areas within watershed (2)
- Other (4)

BMP implementation: The most common goal, named by nearly half of those who responded (22), was to get best management practices (BMPs) installed in their watersheds. Most responses in this category (16) were concise and direct, simply stating, for example, “Build conservation practices out on the landscape” or “Put initial practices into place” or “Get practices on the ground.” Another six respondents referred to the potential impact of BMP installation including the potential for

implementation to reduce runoff and flooding or “improve soil health and water quality.” One respondent said that watersheds must become more resilient by “...using the allotted resources to put strategically chosen, high-value, enduring practices into the landscape that will provide demonstrable results.”

Improve flood mitigation: Nine respondents said that they wanted to see improvement in flood mitigation in the watershed in the next three years. Although most respondents’ comments were general, one person said the goal should be flood mitigation because, “Too much public infrastructure and private property is threatened each time we have flooding.” Two people also talked specifically about the need to work with upstream communities to ensure their involvement in solving downstream flood problems.

Complete and begin implementation of watershed plan: Most of the eight respondents’ comments about the watershed plan were also general, simply indicating that they should begin to implement the components of the plan. One person said that they should use the plan to identify priority projects and another person said that they also need to “educate all in the WMA on the plan and execute projects and policies” called for in the plan.

Additional funding: Seven respondents said there is a need to secure additional funding for the WMA. Although most comments did not specify particular uses for additional funding, for example saying there was a need for “consistent, secure funding,” two people said there must be funding to continue employing a watershed project coordinator. One respondent referred to policy implications for future funding saying they need to, “Promote legislative action to establish stable funding for all WMAs.”

Improve water quality and soil health: Seven respondents also cited water quality or soil health improvement as a goal for their WMAs. Three respondents mentioned soil health specifically with one person commenting that the WMA should support landowners in adopting practices that are not currently funded by the IWA. The respondent continued, “Highest on this list would be soil health management plans which include practices such as conservation crop rotation, cover crops, no-till, mulching, nutrient management, planned grazing, and pest management.” The respondent said that such practices are “the most cost-effective way to increase water infiltration, reduce soil and nutrient loss, and improve farm profitability and resilience throughout the watershed.” Another person also mentioned the need to establish baseline monitoring of watershed water quality so that success could be demonstrated.

Engage the public in watershed issues: Seven respondents talked about the need to engage their community in watershed issues. While one person addressed this at the “buy-in” level, others spoke to the need to get more general public involvement and to educate “residents, consumers, and farmers.” One respondent said there was a need to, “Educate locals on how to help improve the land to help all in the watershed.”

Fulfill the HUD grant requirements: Four people specified the goal of spending the HUD funds in the allocated time. One person said they must, “Spend the federal money on good projects,” while another said they should make sure they are “completing projects in a timely manner and meeting grant requirements.”

Expand BMP implementation to other areas within watershed: Two people said they want to expand the area in which BMPs are being considered to include areas outside the currently eligible IWA areas.

Other: Two people made general comments about having success and showing improvement. One person said that there is a need to “Get the right board members,” and another said there is a need to “Connect urban and ag interest in common goals.”

Long-term WMA Goals

The survey also asked respondents to describe their long-term (20-year) goals for their WMA. Again 45 respondents provided at least one goal (57%). Although some of the most common three-year goals remained in respondents’ goals for the next 20 years (flood mitigation, improved water quality, funding sustainable funding), some new long-term goals emerged as well. Some responses fell into more than one category, for example naming finding sustainable funding as a goal for the specific purpose of improving water quality. The categories that emerged from responses regarding 20-year goals included the following:

- Improve flood mitigation (17)
- Improve water quality and soil health (13)
- Continue the work of the watershed/WMA (10)
- Secure additional funding for the WMA (9)
- Encourage the use of better farming practices (8)
- Modify the watershed plan as necessary (4)
- Work for the greater good (3)
- Other (4)

Improve flood mitigation: Nearly all of the 17 respondents who named improving flood mitigation did not elaborate other than often by pairing their goal for improved flood mitigation with either the goal of improved water quality or with the use of better farming practices. For example one respondent said their goal was, “Improved flood control and water quality,” and another respondent commented, “Find ways to employ better farming practices to reduce flooding.” Two respondents mentioned focusing on the downstream impacts of upstream practices.

Improve water quality and soil health: Of the 13 respondents in this category, seven called for improved water quality, three for better soil conservation, and three mentioned both water quality and soil health improvement. Two respondents specified decreasing stream bank erosion as a goal in improving water quality.

Continue the work of the watershed/WMA: When asked to think about the long-term goals of the watershed, ten respondents described the need to continue the work that has been started. Three of these respondents mentioned that their WMA needs to continue as an organization. One of these respondents said the WMA must “stay viable as organization promoting the watershed,” and another respondent said the WMA should “keep active and provide leadership.” Two respondents stressed the need for long-term maintenance of practices that are implemented. Five respondents made general comments regarding continuing the work including, “Keep up the good work,” and “Continue to build on success.” One respondent also mentioned making sure to use all the funds available to their watershed.

Secure additional funding for the WMA: As in the shorter term goals, nine respondents emphasized the need for finding sustainable funding. Four respondents specified the need for money for implementing additional practices, three simply mentioned funding in general, and two respondents mentioned the need for funding for personnel.

Encourage the use of better farming practices: While responses concerning changing farming practices were included in the water quality category in the three-year goals summary (see above), for this item, several of the seven responses in this category seemed to be more focused on the bigger picture of farming practices. For example, one person named as a goal, “Find ways to keep and/or prevent farmers from further damage to the water and the environment.” Three others said, “Improve farming,” “Employ better farming practices” to reduce flooding, or simply, “Improve land use.” Other respondents were more specific including one who asked for the promotion of cover crop use and “finding a sustainable use for swine waste.” Another respondent suggested looking for sustainable practices that “require little to no annual costs.”

Modify the watershed plan as necessary: While the three-year goals were focused on completing and implementing the watershed plan, four respondents said they should use the plan, but modify it as necessary to meet their goals. One person said that while the WMA needs to make progress on the plan as written, they should also, “Modify the plan as needed for new situations and conditions.” One respondent said, “Move ahead with new and changing goals,” and another said, “Continue building on the plan.”

Work for the greater good: In looking at the long-term goals mentioned by respondents, a few (4) stood out as being oriented toward achieving *the greater good* in their watershed and beyond. These responses included reference to “Finding ways to embrace nature in making our way to reduce the damage and frequency of floods” and normalizing land management “to the benefit of the environment and downstream.” One person characterized the impact they could have in their WMA by saying, “Improve Iowa’s now tarnished reputation as a water polluter!” A fourth respondent said, “As important as aiding and encouraging widespread adoption of conservation practices in the watersheds is the chance to bring about a sense of unity and the common good by striving toward a common goal. Since that goal will require gaining knowledge of nature and natural systems, it will be step down the path to living more harmoniously with nature and each other.”

Other: A goal that occurred more frequently in the three-year responses, but was also mentioned by two people was to work on landowner buy-in and general local engagement in the watershed. One person named the goal of showing the results of their original goals to demonstrate progress. Finally, in direct contrast to the responses detailed above on continuing the work of the WMA, one respondent simply said, “Disband.”

Value of WMA Involvement

WMA board members were also asked three questions about the value of being involved in a WMA for themselves. They were asked what they thought was valuable for them, how it could be more valuable for them, and how they thought being involved in the WMA could be make more attractive for others.

Most Valuable Aspect for Board Members Themselves

The survey asked board members to describe the most valuable aspects for them of being involved in the WMA. Thirty-eight respondents provided at least one aspect (48%). Respondents mentioned the following topics in their responses. Frequencies are reported in parentheses. Responses provided by individuals are listed below.

- Information (13)
- Representation (11)
- Networking (5)
- Leveraging previous experience (5)
- Big picture outcomes (3)
- Inform projects (3)
- Connection to another WMA (2)
- Reducing flooding (2)

Information: Thirteen respondents said they value the information they get from their involvement. Seven mentioned specific information that was valuable to them: implemented practices, watershed projects and their progress (or “lack of progress”), regional and state level water quality improvement efforts, water quality initiatives, best practices, research, and “knowledge from many perspectives on how water and land is being used in the WMA.” Four mentioned valuing information generally. Two described valuing information from specific sources: UI IFC, “other technical agencies/organizations,” or “many perspectives.” One described their intentions for the information saying, “Learning info that can be shared elsewhere.”

Representation: Eleven respondents said they value the opportunity to represent their entity or provide input into the WMA process. Six stated specific purposes for engaging: having a role in watershed work (2), “having a say in the evolution of the WMA,” reducing the frequency and severity of flood events, making connections to opportunities for primary WMA, and, one person said more specifically that SWCDs will “contribute input for rural interests and their portion of water management and flood mitigation at ground level.” Five described the member entities who should be represented: their member entities (3), their primary WMA (HUC 10), and SWCDs. Two respondents highlighted the importance of involving elected officials in this work. One person said simply that they valued having the opportunity to provide input.

Networking: Five described networking opportunities or efforts in their responses. Three specifically described working together toward a common goal. For example, one respondent said, “Interaction with other governmental agencies who are all working towards improving water quality and reducing flood impacts.” Two highlighted the opportunities to network with others in their watershed.

Leveraging previous experience: Five described how they were bringing their previous work experience into this work. One respondent provided several responses, so the total will not sum to five. Highlighted work experience included: NRCS, local and regional government; watershed board; RCD board; “all aspects of land use: zoning, agronomics, forestry, and native plant restoration;” work with “project erosion and flood control work;” and lobbying.

Big picture outcomes: Three respondents said they value big picture outcomes related to this work. Full responses are provided here:

- “I help to form public policy and projects to improve the quality of life for my constituents.”
- “The chance to shape the beginning of a generation-long effort to fix the landscape.”
- “Making a difference and showing why we are all connected.”

Inform projects: Three respondents described the ways they plan to inform projects including: informing and identifying projects and “everything encompassed in being involved in the planning and carrying out of projects.”

Connection to another WMA: Two described a connection to another WMA. One described being on another WMA’s board that provided them experience in WMA work, and the other said that this connects them to “opportunities that might be useful in my primary WMA (HUC 10).”

Reducing flooding: Two mentioned flood reduction in their responses. One said they hope to “reduce flood impacts” and the other said they are working to “reduce the number and size of flood events.”

Individual respondents mentioned the following topics:

- Balancing perspectives/interests
- Improving water quality
- Informing public policy
- Being a landowner interested in BMPs
- Watershed planning
- Supporting advocacy
- "Make sure the projects at the north end do not cause more flooding problems for the south end."
- "This is an opportunity for me to learn, to give, and to have moments of satisfaction and happiness."

Increase Value of WMA Involvement for Themselves

The survey asked board members what would make being involved in the WMA more worthwhile for them. Thirty-five respondents provided at least one aspect (44%). Respondents mentioned the following topics in their responses. Frequencies are reported in parentheses. Responses provided by individuals are listed below.

- Actual impacts on the watershed (8)
- Funding (5)
- Expanded implementation areas (5)
- Practices implemented (3)
- Modify meetings (3)

Actual impacts on the watershed: Eight respondents said they would want to see actual results. The most common responses were something like “results” or “seeing progress.” However, two respondents provided more complete answers saying: “Seeing the benefits on the land of our work,” and “It will become more worthwhile once best practices are actually constructed and results evident.”

Funding: Five respondents made comments related to funding. These comments addressed securing consistent funding (2), information about funds for implementation, an “ability to fund projects,” and “more funding.”

Expanded implementation areas: Five respondents said that expanding the implementation areas would make this work more worthwhile. Two said they wanted to see projects in their entity, two said they wanted to expand beyond the pre-determined study areas, and one mentioned a specific county for implementation.

Practices implemented: Complementary with the preceding three factors, three respondents were interested in seeing practices on the ground.

Modify meetings: Three respondents described modifications to the current WMA meetings to make that time more valuable. Responses were unique and are provided below:

- “More time to get to know other board members and farmers in the watershed.”
- “Less specific technical information and overviews to shorten meetings to one hour.”
- “Field trips to observe installed projects.”

Individual respondents mentioned the following topics:

- Already involved
- “An alternate attends for me because of the timing of meetings”
- Better communication regarding fundamental topics of concern.
- Having entities represented beyond cities and counties
- How to work with a larger HUC in a small HUC's interest
- If they could make longer term plans
- Making decisions about actual programs/projects
- More cover crops
- More momentum
- More urban involvement
- Public recognition

Involvement in WMA More Attractive to Others

The survey asked board members what would make being involved in the WMA more attractive to other people. Thirty-two respondents provided at least one aspect (41%). Respondents mentioned the following topics in their responses. Frequencies are reported in parentheses. Responses provided by individuals are listed below.

- Successful projects (11)
- Funding (7)
- Focus on the big picture (2)
- More publicity (2)
- Representation (2)
- To be determined (2)

Successful projects: Eleven respondents talked about success as a factor for making involvement more attractive. Five talked about success or outcomes generally. Five talked about demonstrated successes including: water quality improvements (2), flood control (2), projects in close proximity to one another, “management improvements,” and “seeing the benefits on the land of our work.” One respondent cited the “actual work being done by the WMA.”

Funding: Seven respondents mentioned funding as a factor to keep people engaged. Two respondents said funding for projects. Two said “financial incentives” for landowners. Individuals cited the following: maintaining momentum, funds for the respondents represented entity, funds to

be used outside of the implementation areas, and more funding for project areas to “demonstrate what can be done.”

Focus on the big picture: The two respondents who focused on the big picture said, “Make it less about local politics and more about the ‘big picture’” and “Vision of outcome.”

More publicity: Two respondents mentioned increasing publicity. One said publicity should be focused on improvement plans, and the other said publicity was needed to “gain grassroots support.”

Representation: Two respondents said active roles in the decision making process and the work of the WMA would make people feel more engaged.

To be determined: Two respondents indicated that they did not know what should be done. One respondent said, “That’s the puzzle.”

Individual respondents mentioned the following topics:

- "Education on WMA and plan"
- "Personal benefit"
- Cost control
- Implemented projects
- Meetings at site-specific practices
- Purpose of the WMA
- Topics of interest to stakeholders at the meeting
- Value for small HUC interests

Additional Comments

What additional comments do you have (if any) about your WMA, the IWA, or the IWA program evaluation?

There were sixteen responses to this item. They were categorized as to those who had questions or concerns, and those who chose to make positive comments. Eight respondents voiced concerns or questions. Comments are provided in full below.

- I'm curious to know how the nine watersheds were chosen.
- It's a new process. [There is] much to learn. [It is] important to make it as successful as possible and have input later on how the WMA process could change and improve.
- IWA needs to acknowledge that there are other WMAs in Iowa without the grant funding and that all the WMAs legally recognized need to move forward together with clear goals and objectives - All need to become members in WMAs of Iowa.
- The purposes of the legislation establishing the WMAs and not the purposes of the IWA should be dominant. It is of concern that flood resiliency is not being given the emphasis deserved, it being the basis for the HUD Grant.
- The WMA needs to get something built. So far all that had been done is study and report.
- There is a need for increased funding to reduce flooding and improve water quality.
- Very important to have quorums.
- Not sure this survey work helps.

Eight respondents provided positive comments, provided in full below.

- I am glad we have the HUD grant and have an organized WMA.
- I think great progress is being made throughout the state given that the WMA language in the Iowa Code... has only been in place since 2010, and no immediate funding was available for implementation.
- I think it is great to be bringing so many partners to the table to have discussions on ways to improve our communities collectively. I hope we can continue these efforts well in to the future and help address major issues affecting our state including flood mitigation and water quality improvement.
- Project Coordinator is doing a good job.
- We are extremely fortunate to have access to/partnerships with our University of Iowa colleagues.
- Thank you for doing this.
- Thanks for asking about what's important and effective!
- Excellent.

Appendix P- Clear Creek WC Board Member Interview Summary

Benefits of participating in the IWA

Both John Lundell and John Gahrning mentioned the collaboration between Iowa and Johnson counties and urban and rural communities and the focus on the watershed as a whole. John G. spoke about the benefit of collaboration among different groups in the watershed. “In the community as a whole, rural and urban, people are getting together and working together to try and come up with some solutions on what we can do to create a better watershed as a whole.” In particular, he cited the benefit of having representation from both Iowa and Johnson counties, whose populations are uniquely different. Speaking about this convergence of perspectives, he said, “I represent Iowa County... We don’t really have urban, we have small towns, but essentially border on Johnson County, and all of our water runs downhill, they get it all. So, there’s two different perspectives from the two different counties on [the WMA].” Taking a broad perspective on the impact of the IWA in his watershed, John L. has appreciated the level of attention being focused on the watershed as a whole, looking at issues of water quality and quantity as being a partnership between rural and urban.

Additionally, John L. recognized the importance of high-quality information about the Clear Creek Watershed and the engagement of the Iowa Flood Center. He said, “I think at the highest elevation, the greatest benefit has been the opportunity to really draw attention to specifically our watershed and do a very scientific or research-based evaluation of what’s going on.” In addition to the benefit of working “a little closer with our neighbors in Iowa county,” he acknowledged “the support and knowledge of the Iowa Flood Center being part of this project.”

Challenges remaining

On a more practical level, John L. mentioned the challenges associated with the identification of best practices and implementation of projects in the rural areas. Throughout this process he underscored the importance of evaluating and documenting the outcomes of the various projects. In addition to “making sure that we continue to evaluate what we did and identify what worked really well,” he added that we need to “draw attention also to what we wish we had done a little differently.” A specific opportunity that he described as originating as a result of the IWA was how Coralville has been taking a closer look at “the runoff and flooding issues associated with Biscuit Creek, which is directly related to the flooding that’s happened in Clear Creek.”

Consistent with these comments about considering what could have been done differently, John G. described how there are persistent “communication gaps between the landowners and the watershed itself on projects.” He described receiving feedback from landowners indicating that project plans are being changed or denied, which has been particularly frustrating for them.

Additionally, one of the more significant challenges John L. mentioned was bridging the different perspectives in the urban/rural divide. Whereas it’s admittedly easier for urban residents “to talk amongst ourselves because we all face similar issues, it’s a little more politically challenging to go out and speak with Iowa and Johnson county board of supervisors about rural water quality and water management issues.” So, maintaining interest and finding common ground between the two groups can be difficult.

Strengths of the WMA

From John L.'s perspective, the WMA's affiliation with East Central Iowa Council of Government (ECICOG) has been incredibly valuable to their formation. He stated, "to have them kind of shepherd the process from the beginning from a staff perspective has been a real strength. It would have been so much more difficult without their experience."

John G. spoke about the diversity of the urban and rural representatives as being a major strength of their WMA. "When you combine farmers and soil and water people and city people, you get an entirely different perspective." He also acknowledged the proximity of the Iowa Flood Center as having a huge impact on their watershed. Having "access to people with vast amounts of knowledge is wonderful, because I learn something new every meeting that I go to."

Weaknesses of the WMA

Continuing the discussion of balancing the multiple perspectives in the watershed, John G said the perceived weakness is their ability to communicate effectively and "get the word out that we want to be helpful, we don't want to be authoritarian." He shared that it has been challenging to fight that perception, especially among the rural population. He said that they seek to be collaborative and supportive. Emphasizing the point in his own words, "That's why we don't call it the watershed authority, because that word instantly turns off rural people. Well, that's not what we are and that's not what we're about."

Sustainability of the WMA

From both interviewees, much of the issue regarding the sustainability of the WMA beyond the grant is dependent on the ability to secure additional funding. To that end, John L. admitted that, "we, the WMA board and staff, need to start planning for the future and looking for opportunities long before the funding stream ends so that we have a plan in place of what's going to happen." Complementary with that, John G. expressed concerns about being able to obtain the necessary funding to maintain the level of activity that has been initiated through this grant. "I hope that we haven't spent all this time and money and effort into nothing," but if the state votes to fund watershed work, "I will be pleasantly surprised let's put it that way." He commented that there are different levels of interest and prioritization of these efforts between the urban and rural divide, as well as between communities with varying levels of flood risk. Absent of funding, "it's hard to get everybody on the same team, not gonna lie." Regardless, he planned to continue advocating for continuation and seeking funding where possible.

Referring to the need to maintain engagement and membership in the WMA beyond the life of the grant, John L. pointed toward the long-term nature of this work: "It'll always be an ongoing process to maintain the best practices and develop new ones, both upstream and look at opportunities in the urban areas as well. So, definitely we need to continue the process whether there's funding or not." He added that it is helpful in their two-county context to have "so much emphasis in this area on water quality and water management." Nevertheless, John described having a certain level of apprehension regarding the viability of the WMA, especially once the "attention and the awareness goes away." He added that, "it would be a shame if some of the opportunities or best practices weren't identified and followed up on, or even worse, if some best practice was somehow reversed." While, admittedly being more well-versed in the urban perspective on water quality and quantity, he hoped that that these best practices would continue to remain "at the forefront of discussion and considerations from decisions being made" in both urban and rural sectors.

When asked about strategies for continuation of these efforts, John L. first underscored the importance of actively publicizing the results of the practices through a myriad of media and organizational outlets. “I think it’s so important to continue to highlight what’s been done and how successful it’s been, and that’s one of the most important things I think we can do.” With respect to the coordinator position, he agreed that it would be ideal to maintain that role; however, they haven’t yet begun those discussions as a WMA, and it would need to be in “partnership with the other governments, to just see how we could accomplish that.”

Looking back

The thing that John G. wished could have gone better was the pace at which projects have been moved through the process. He described receiving a large amount of negative feedback, especially from the rural community that is less accustomed to the nature of large-scale grant funded activity. He realized the significant effort that it took to implement the IWA and appreciated the input and assistance from the leadership as they established this approach. “They’ve all been super-helpful, and their knowledge is vast, but the wheels of government turn slow.” Admittedly, he was not sure how the timeline could have been accelerated; however, it was a challenge for him to interpret and communicate the process to folks that are not used to dealing with the many layers of bureaucracy.

John G. expressed optimism for the potential that this project’s lessons hold for others that may wish to pursue a similar model. “Hopefully it helps people down the road. If other states can use this as a model for what they want to do to have an impact. I hope that it does.”

John L. did not offer any lessons learned beyond regretting his own limited personal investment and involvement in the activities of the WMA: “From a personal standpoint, and it’s my own fault for time management, I wish I would spend more time on the technical advisory side of things, just as an observer and a listener and trying to learn more about it.”

Additional thoughts

In reflecting on the outcomes of the IWA thus far, John L. shared how encouraging it was to see the level of engagement by both urban and rural community members at the three public meetings they held.

John G. reported being anxious to get the projects on the ground and to see the results of their collective efforts. “I mean, I’m a results guy, that’s just how I operate.” He was reportedly looking forward to having a concrete answer to the persistent question he hears, “You’ve spent all this money, what have you done?” He ended by stating, “I’ll be happy when we get some projects going and get to see some completion, but I think it’s been a worthwhile effort all along and the people that we have are great. There’s a lot of knowledge in the watershed and I’m happy with it as a whole.”

Appendix Q- East/West Nishnabotna WMC Board Member Interview Summary

Benefits of participating in the IWA

Sheryl said that the benefit of being part of the Iowa Watershed Approach is “the fact that we have a huge number of people who are working on it, because I don’t think it’s anything that you could even begin to do with just one entity.” When asked to elaborate on who she meant by the people involved, Sheryl said, “The people who come to meetings, the partners – the partners are all fantastic.” She said that as chair at the meetings, she would call on the partners to give a report, and commented, “It’s fascinating how it all works together.”

She said the fact that the local and state stakeholders have “all gotten to know each other is a huge [benefit]” because they could always count on being able to bounce ideas off each other. She specifically mentioned the people from MAPCO and SWIPCO, Iowa HSEMD, and all the different entities in each county in the two watersheds.

For Scott, the greatest benefit of being part of the Iowa Watershed Approach is raising people’s awareness and providing education “on why we should be moving on what we know now about water and its quantity and quality.”

Challenges remaining

Sheryl said that originally, she thought it would be very tough to get everything done in the timeframe allowed by the IWA grant. She said in the first 18 months, it seemed extremely difficult: “There were so many hoops to jump through, so many places/things to do that had to be done to satisfy HUD and everybody else, and it has just taken a tremendous amount of time out of the five-year period to get all of that done.”

She then went on to describe all the flooding they have had in Fremont and Mills counties this year, saying, “We’ve had so much flooding. We have so much damage on our levy system, our roads system, our infrastructure, that I think it’s going to be difficult to get contractors to work on the things that we want to get done. That’s what I see as the biggest [challenge].” She added that she knows that when they have issues with levee breaks on the Missouri River, they are often able to get contractors from everywhere. She said that the Nishnabotna IWA project coordinator, Cara Marker Morgan had said, “You know, maybe that’s good because then we’ll have people that locally will have time to work on our projects.” Sheryl said that there may also be a materials shortage because of local flooding. She again began to describe damages saying, “The flooding is so huge and so widespread. It has done so much damage to people’s home this time, and roads,” specifically highlighting several very high traffic areas including an interstate, saying, “It’s unbelievable.” At the time of this interview, the area continued to have repetitive flooding, and areas that were opened temporarily were closed again. She described an area from the Missouri river over to the interstate [29] that is two or three miles wide – “just a pond.” She said until some of the levee breaks are repaired, there is “nothing that can be done.” She said she expects several corporate entities, including Pilot, Sapp Brothers, Super 8, and Wendy’s to come back, but the question is “when,” adding that until the levee repairs are complete, “there’s no point.”

The interviewer and Sheryl exchanged personal experiences with flooding and said that all you can do is move on; however, Sheryl also said, “Our contention down here in Fremont County, [is that] we’re at the bottom of the [watershed]. These watersheds above us need to have more things to slow down the water, more water-holding capacity, more terraces.” She said it’s always frustrating to see farmland that has very few terraces. She said she has talked with NRCS about it and they say that it depends on the kind of soil they have, whether you need to have the structures. She says people wonder why they are trying to spend the money in the lower part of the watershed when it is needed in the upstream areas, but that the eligible areas were defined by HUD. She said that in her area in the southern part of the watershed, the ditches and the river do not have any additional holding capacity. She said also that the water that comes through during the flooding events “...is awful. It’s been through every sewer plant, it’s been through every feed lot, every hog confine – you know it’s got everything in it.” Sheryl again related a personal experience with flooding where she washed everything with bleach and still had mold recur within a week, saying, “It’s just lethal.”

Scott first said that “the number one challenge is financing.” By that, he meant being able to find the money to do additional projects in the watershed.

He also mentioned that providing education and outreach as an ongoing challenge.

Strengths of the WMA

Sheryl said a strength of the WMA has been that there is “so much interest in the whole thing.” She said they have a quorum nearly every time and said, “I see the same faces every time, everybody that comes is very dedicated to the project.”

Weaknesses of the WMA

Sheryl said the weakness is the “hugeness of it.” She explained that she meant, “All of the requirements that have to be met, all the engineering, all the planning, all the hoops that we have to go through.” She said that at the beginning people were asking if it might take six months to start moving dirt, and said, “Well, here we are, it’s almost three years later and we still haven’t done any moving.” She said she knows that if you want the funding, you must “play the game.”

Sustainability of the coalition

Scott and Sheryl agreed that the issue of where the funding comes from will play a role in the future of the WMA as an entity. To highlight this and the necessity of demonstrating results, Sheryl said that keeping board member interest will depend on “whether we get some work done and see some results... and whether we can get some money – that’s the biggest one.”

Complementary with the discussion of funding, Sheryl spoke very positively about their project coordinator. She said definitively, “Knowing the person that is our project manager [Cara Marker Morgan], I have faith in it because I think she will go after whatever needs to be done to keep it sustained. She is absolutely, I think, the biggest strength that we have in this watershed project.” She added that Cara has already submitted grant applications for additional funding, saying, “She gets how it works and knows that you’ve got to get ahead of what the next step is so that you’re ready for that next step.”

Additionally, in discussing the future of the WMA, Scott said, “I think this is the approach.” However, he appeared to be concerned with how “everyone is just worried about their little piece of [the

watershed].” Instead he advocated that, “everybody that’s in the watershed is benefiting should be contributing, so hopefully we can continue to move in that direction.”

Looking back

When asked to think about whether they might have done anything differently, Scott said, “Boy, I don’t know. I wish I did.” He said he had talked with Senators Grassley and Ernst when the money was first awarded. He had brought up the idea that the money might be better used in census blocks and wondered if spending money in that way “might be a better way to go to get buy-in from everybody.” He acknowledged, however, that they had to “play by the rules with the hand that was dealt.” He thought that lessons that are being learned by the other IWA watersheds that are ahead of them in the process will be helpful for the Nishnabotna and that will make the “communities within the watershed more resilient and sustainable.”

Sheryl said she wasn’t sure she would do anything differently if she could go back and start again. She said she was glad that they combined the East and West Nishnabotna watershed meetings to make that process more efficient. She also said that it has worked well to meet in a central location and that they don’t meet too often so that they won’t lose people’s interest, “because nothing happens” between meetings.

Additional comments

Scott reiterated, “Engagement is a challenge... People are busy. Getting everybody engaged in such a big watershed, in the sense that it encompasses a lot of cities and counties and conservation districts, so hopefully they’ll see positives out of it.” He said that he hopes the member entities will get “more attuned to this approach” so that they can continue to make improvements to water quantity and quality.

Appendix R- English River WMA Board Member Interview Summary

Benefits of participating in the IWA

Mark and Ryan both described the most significant benefit to be engagement and awareness of this work in the watershed. On a broad level, Ryan stated, “I think to be able to accurately project what our goal is and engage those landowners has been probably the most rewarding part to this point that I’ve seen from our watershed with our staff and the level of engagement that we’ve had.” Mark complemented this comment stating that the most significant benefit of participating in IWA is “connecting all the upland with the downstream issue.” For him, this level of awareness is particularly important considering that “we here in Grinnell put a bunch of water into the English, but we don’t have to live with the consequences.” So, the IWA has brought to light the downstream consequences of their actions, “even though we don’t get to suffer them.”

Ryan also commented that he is anxious “to be able to quantify the benefits that we have downstream, for communities and producers and those entities” over the long term. While it has reportedly been wonderful to work directly with farmers and provide the 90/10 cost share, he is particularly excited to see what the collective impact will be on key indicators including flood mitigation and nutrient reduction.

When asked about the English River Watershed’s work with specific IWA partners, Ryan offered that they have maintained strong relationships with the Iowa Flood Center and DNR. Additionally, he cited the benefit of Homeland Security “in helping us craft some solid planning documents,” and how “they’ve been really forthcoming on how they think they can help other communities outside of that targeted area.” He also mentioned the role of the state hygienics lab in providing highly reliable “water quality testing through 20 sites in the watershed.”

Challenges remaining

Ryan readily acknowledged that “we probably came into this with a head start compared to some other watersheds; we had a structure, we had people in place, we had some of those mechanisms that made it a little bit easier.” Regardless, he reported feeling slightly nervous about “the quantity of work that we’re asking people to do under a timeframe.” So, the timing of projects, as well as their cost are the two main areas for concern at the moment. Anticipating the bids for upcoming projects, he shared, “I’m hoping that we’re gonna see good competitive numbers and that we’ll be able to engage those property owners as we’ve kind of laid those foundational reports and estimates in front of them.” Thus, perhaps this is less of a challenge and more of a hurdle to overcome before being able to “take it up a notch as far as our engagement with those individuals that are in the pipeline.”

Ryan also mentioned being sensitive to the higher-level political issues that relate to the work of the WMA. However, he also noted that, “We try to be as non-controversial as we can. We’re not out there to, we kinda want to stay in our lane, and I think we do a good job of that.” He continued, “You know, we try to voice our opinion and our recommendations, but ideally, we hope that our work speaks for itself and that it allows us a seat at the table with some of those other entities.” He also highlighted the benefit of how watersheds “cross those boundaries that typical political entities

have to adhere to, so we're an entity that's driven by the lay of the land and not necessarily county boundaries and city boundaries and so forth."

Mark did not foresee any challenges that lie ahead in carrying out the planned work of the IWA. He did, however, expressed disappointment with the size of the overall impact it will in the following way: "the reality that over so many acres spending a few million dollars is negligible in the context of what we actually need to achieve." Instead he encouraged that, "we fundamentally have to change our farming practices and provide more protection to the river itself so that we can actually start to see an impact." For him, the IWA is a necessary first step in gaining "awareness and knowledge for all the data that's being collected," but the bulk of the effort will remain following the completion of the project. He added, "this is part of the education process that we have to get to be able to get to landowners in the respective towns to acknowledge that they all have an impact."

Strengths of the WMA

Both Mark and Ryan described the engagement of the board and staff as the biggest strengths of their WMA. Mark highlighted the fact that "both ends of the watershed are well represented" and actively participating. Ryan said the biggest strength in his opinion has been the caliber and consistency of their staff. He stated, "We've had what I would feel is good board interaction. We've been able to communicate well with our board; we've been able to get through the processes pretty systematically and efficiently." Additionally, speaking to representation, Ryan did acknowledge that "we do not have every municipality or county present" in the WMA, but that they "do try to be transparent and provide them with resources as we can." In other words, they are very inclusive in their approach and do not treat individuals or communities differently based on their level of engagement or financial ties to the work being done. To that effect, he stated, "whatever level they want to be engaged at is what we're comfortable with."

Considering strengths, Mark described that, "we have been engaging landowners and we've started that process of, 'Ok, what can we do? What are the opportunities in a depressed agricultural market?'" Through these efforts he shared that they are "seeing miniscule changes at this moment, but with the income as it is, we're going to see massive changes and maybe we'll see some younger farmers and younger thinking come into play. That's going to be the decisive force that brings change." So, the momentum they can create represents for him a great opportunity to bring about future change.

Weaknesses of the WMA

Circling back to the current agricultural market, Mark pointed toward the current conventional practices as the root cause of both the environmental impact as well as "this catastrophic revenue situation." He described that, "thanks to the good will of mother nature and getting rain at the right time we have over production, but we're farming too many acres and suffering environmentally for it, as well as financially. So, what are we gonna do to change?" At this point he offered a grain of hope for the future based on the approach to farming and decision-making evidenced by younger farmers. He observed that the "younger generation with the app and the ability to analyze with data can look at this and decide, 'Well, I'm not making any money out of that, I'm not gonna do it!' This is the new way of thinking." This emphasis on profitability combined with an increased desire for recreational pursuits outside of work in the state is something that Mark views as holding the potential to promote and sustain the value of conservation and advocating for cleaner water.

Although Ryan did not cite any obvious weakness in the WMA, he described some of the difficulty in trying to secure consistent sources of funding to “allow for the continuation of good work and good engagement.” To that end, he shared his optimism in the following way: “I’m hoping that through all of our engagement, through all of our effort across the watershed, across the state, that people and legislators and producers and businesses will see that it’s beneficial, the type of work that we’re trying to do and how we go about it.”

Sustainability of the WMA

In his response, Ryan focused on pursuing funding to maintain the current level of activity. With respect to the end of the IWA funds, he shared that about “twelve to eighteen months from now is when we’ll have to really evaluate what’s on the horizon.” Ideally, he would like to be able to showcase their progress as a means to solicit even more funding to achieve their long-term goals. He indicated that, “There may come a time that we’re gonna have to ask members to explore how big of an asset they feel this is, and if there is some financial buy-in to it to help leverage that, but I think right now we’d like to really prove ourselves. And that proof really comes in structures. I’m a big believer that once you build it, people are gonna see the benefit.” However, before that can happen, he stated firmly that, “we’ve got to get it right.” Then, once that becomes a reality, he described that it may “be a little bit easier for some community and county buy-in, to start thinking, ‘Hey this is something that would be an asset for us to be a part of’” at varying levels of fiscal contributions.

In looking toward the effort of seeking new sources of funding, Ryan stated, “How I would envision it is, it’s kind of our foundational report that’s gonna allow us to be able to present our best case.” Thus, the watershed plan, which enabled them “to really take a scientific approach and to be able to see where we need to improve on,” will also serve as a strong resource in applying for any available grant funding.

From Mark’s perspective, the long-term sustainability of the WMA as an entity is wrapped up in sharing information with farmers to ensure accurate decision-making leading to healthier solutions. He provided an example of the potential for farmers to use the data from a local hydro station, or similar such information from an app that would provide valuable data specific to their own farms. Discussing this opportunity, he stated, “if farmers knew to look at it, we would not be behaving like we do.” Instead, equipped with this type of information, farmers “would be able to treat our crops in what I perceive to be a just-in-time approach.” For example, in responding to real time data, “the younger thought process is probably to not administer all my fertilizer and a bunch of treatment in the last three months of the year prior to when I’m actually going to need it the next July.” Addressing the long-term implications of this type of shift in thinking and practices, Mark stated, “if we can get that idea together with the thoughts of the regenerative ag and the cover crop thinking, and what the biology in the soil is actually doing, then we can make substantial changes.” He continued by projecting that this may lead to increased yields and not needing as many people in agriculture or acres in production. However, he admitted that “the reality of that data is mind-bending in as much as how much change do we have to produce to get better?” In other words, while the wheels of time turn slowly, education and outreach are an essential component in the overall equation of supporting healthier soils and better water quality. For him, the WMA should be “the entity that is monitoring and ensuring that those connected communities are aware, because it’s bringing a new level of awareness to what’s going on.” This awareness should extend beyond those who are directly implicated in the effects of flooding while also bearing in mind the myriad

downstream consequences. Ultimately, “we have to start small to be able to get somewhere, and I believe this is how we’re going to do that.”

Looking back

One area where, in hindsight, Mark wished they could have been more strategic, was the selection of sites for the funded practices. He described having “spread ourselves so wide and offered the money to first-in-the-door, and then effectively we scattered it.” If he were to be given the chance to do it over again, he suggested that they “may concentrate it to the landowners along the English river itself, because that’s the biggest impact we can have.” He continued by describing the extent of the soil loss that occurred along the stream bank. “This spring has been so incredibly damaging to the stream bank itself, and even if the rest of the land was perfect, our soil loss off the stream bank is millions of tons this spring. And so, our physical numbers are gonna be horrific.” He reported that nearly all the stream banks are bare dirt, which puts them out of compliance with what the corps of engineers require. In that regard, he thought it may have been more effective to “start to work from the river out.” However, he recognized that “if we only offered it to the people along the river itself, our participation would be a fraction and our awareness would be so much less.” So, there isn’t a perfect solution with the limitations in funding.

One thing that Ryan shared he wish they would have done from the onset of the project was to bring all the project partners together. “When you’re talking a grant of this nature and having to bring entities on, as many as we had to, I think it would have been beneficial to have a very clearly defined scope of what services are to be provided and how to access those services.” Especially given how there is an element of ambiguity following the award of such a large-scale grant, he thought it would have been beneficial “to know where everybody was at and what they’re going to provide” before the work actually began. Having discussed what everybody was “bringing to the table” may have prevented certain instances of confusion about what services are included or not, and “would have just eased a few concerns early on.” For him, “the biggest thing to be able to leverage those things so that we are spending the money as efficiently as we can. If there are project partners that can provide a service, to be able to understand what that service is and how that can fit in so that we’re not duplicating efforts, or that we’re not spending money where somebody said ‘Well, I would have done this if somebody would have reached out.’” While he didn’t recall specific instances where there was money poorly spent for those reasons, he did share that “we learned a few things after the fact that would have been helpful” to know in advance.

Another element that Ryan thought could have been helpful throughout the process was “having one body, one person, one entity that could kind of spearhead some of those questions, comments, and concerns. I think at times, you know, you have to go to multiple entities to really get an answer, and I’m not sure what could have been done, but maybe in hindsight to have somebody oversee the logistics of it and be able to answer some of those core questions that come up.” He continued, “Early on I think it was kind of every group for themselves, and then just ensuring that we’re all working off of the same playbook, that those other entities, that we all have the same scoring, I think that’s important.”

Additional comments

Ryan shared that overall, “We’re in a good position. The next few years will be I’m sure fast. We have a lot of money to spend down in implementation.” He shared that some of their early concerns were quickly put to rest and now they’re excited to start seeing some of the projects come through.

For now, their next step is to ensure that these projects are administered well, and that “we’re getting the buy-in after the fact with those producers and landowners. That’ll be our next thing that we’ll have to really pay close attention to.”

Reflecting on their progress thus far, Mark credited much of their initial success to selecting a project coordinator who was right for the job. By his description, “The watershed coordinator is the entity that needs the biggest skill base to be able to reach out to so many different entities without threatening. And so, we were lucky to have a soil and water commissioner, somebody who’s aware, yet somebody who’s connected to the land to comprehend a farmer’s perspective without telling them what to do.” He described how “that initial task sets everything else in motion. That, I think, is the key.”

While wrapping up, Mark issued a rather strong word of caution about how the IWA needs to be aware of the message they are sending to farmers and landowners. Specifically, in reference to the annual IWA meeting at the end of April, he said, “we already know that [farmers] are the biggest part of the problem, then to effectively not invite them by having it during planting season is horrific.” He feared that, by not being mindful of the timing of the meeting, they may have unintentionally created a level of antagonism among the very stakeholders whose willing participation the project depends on. In other words, “when you isolate those people who are the problem, who could be the solution, then that’s just not good.”

In a final comment, Mark imparted the following: “I would just like to say that there’s 101 ways to grow corn and beans and to market it, but it’s this social science data that is gonna be the key for how we actually move forward, so thank you for your work!”

Appendix S- Middle Cedar WMA Board Member Interview Summary

Benefits of participating in the IWA

Fred shared that, while the WMA itself has been successful in attracting “a new audience,” the IWA has given them a significant boost in funding the project coordinator position. “I don’t think we’d be where we’re at now without that funding, because the project coordinator can zero in on the project” and be fully devoted to carrying out the work that needs to be done.

According to Todd, the most significant benefit of being part of the IWA has been the education and awareness for the sub-watersheds within the Middle Cedar that were identified as being high priority areas.

Challenges remaining

Looking ahead, Fred summed up the challenges in one word, “engagement.” In considering everything that’s involved in making sure that projects are carried out, it requires full participation and cooperation from a range of entities. He referenced a few different urban and rural practices that have already been implemented as examples of what it takes “to get boots on the ground.”

Related to that, from Todd’s perspective, a persistent challenge in executing the work of the IWA is the burden of the cost to landowners of implementing the eligible practices. “Even at a 10% match, I think given the farm economy, I still think that’s gonna be a limiting factor.” Todd mentioned that landowners, as opposed to farmers that rent their land, may have more cashflow and therefore be more likely to commit to the projects. Even still, there has been a common perception among property owners, “that the entire process is cumbersome, lengthy, and in some respects, felt like it’s been overdone.” He offered a specific example of a project that, when other landowners saw the process and the result, “they really started to question if they thought it was overkill.” So, the combination of the cost and the negative perception of the work that has been done thus far are the two biggest challenges to overcome in this watershed moving forward.

Strengths of the WMA

Fred said, “As far as a strength, we’ve got a good project coordinator in Adam. Adam’s got his ducks in a row as far as guiding us through this.”

For Todd, the fact that specific sub-watersheds were identified as “high priority” has been both a strength and a weakness. On one hand, having identified targeted areas has generated buy-in from residents of those areas and helped give clear focus to the WMA regarding the where their efforts are most acutely needed. “Those who are included in the sub-watersheds that are high priority, are heavily vested and they are very interested and devoted to utilizing the opportunity to make an improvement in their areas.”

Weaknesses of the WMA

Both Fred and Todd described lack of engagement as a weakness of the WMA. Fred mentioned having attendance issues. “The last meeting we had we didn’t have a quorum and there were three things we wanted to vote on.” He wasn’t sure if this was indicative of a general loss in momentum or if it was just due to it being a busy time of year. Complementary with his discussion of strengths, Todd described that those board members that live in the counties and communities that were not

identified as high priority sub-watersheds, may have felt left out to some degree. As a result, “they don’t take near as much ownership of the WMA.” In a sense, the identification of high priority areas created a division among the members of the WMA, which likely affected their level of interest and involvement.

Sustainability

Todd prefaced the discussion of the sustainability of the WMA by mentioning “the groundwork that was laid in terms of having an implementation fund” while he was still chair of the board. In his opinion, the only way forward for the WMA “is if they are successful in securing funding long-term, funding that is predictable and consistent year to year.” He suggested instituting “some sort of membership fee per capita” among a variety of participating organizations like “counties, cities, soil and water conservation districts,” etc. More specifically, he recommended that “the funding in that capacity should be more directed towards keeping high quality people in place that can access other funding to be brought in to do projects.” Thus, in addition to maintaining the project coordinator to continue managing the projects on the ground, it is equally if not more important to “have somebody else write grants to keep the funding stream coming to actually do projects that will make a difference.”

As some evidence for capacity to continue to pursue additional funding in the watershed, Fred shared that they just recently received an 18-month grant from IDALS “to create interest in projects.” As a result of these funds they were “in the process of hiring a project coordinator for the Blackhawk Creek.” This funding period will allow them to continue these efforts, “and then at the end of the 18 months we’re hoping to get another grant to get every project shovel-ready.”

Additionally, Fred offered, “it would be nice to keep some of the momentum going, but I don’t know if it will.” He believed that the bulk of the effort, if it were to carry on, should be focused on the North end of the watershed.

Looking back

Although he felt like on the whole, “we did fairly well” with respect to implementing the IWA and getting it off the ground, Todd reported being “somewhat reactionary because we had to be.” He shared that, “we got surprised on two or three different occasions with rules that were handed down that we weren’t aware of or didn’t see coming.” In that sense, he would have appreciated a greater level of communication about the rules from the IWA leadership.

Todd said, “in terms of a local board, I don’t know that we could have done anything differently.” Overall, he reported having played the role of the observer or facilitator and that “I really do think that our exec committee, the advisory people that we put into place, and our technical team did a good job.”

In reflecting on things that he might have done differently based on what he knows now, Fred shared that he wished that his own county would have “gotten involved sooner.” Currently, he reported that at the time of the interview there were none of the recommended practices being implemented in his county. By contrast, he listed a small handful of counties in which there were projects already under way.

Additional thoughts

Fred mentioned that they are continuing their education and outreach by offering a workshop at the Grundy Fair. In years past, “we’ve talked about cover crops and soil health and this year we’re

including a speaker on urban practices.” He is hopeful to spread the word to the local city mayors and include information in monthly newsletters to attract 50-60 people to the event.

Fred also described having started a group called the Blackhawk Creek Water and Soil Coalition two years ago, and a good deal of their effort has been aimed at getting “the urban and farmers and landowners all involved to get success going.”

Todd was especially curious to know how the changes in weather and farming practices used during this past year will affect the water quantity and quality. He mused, “It’ll be interesting to see what our river and stream data look like after the last six months that we’ve been through.” In addition to the weather having “been so different than what we would otherwise consider normal,” many farmers also “had a fair amount of manure that we didn’t get put on that we ended up putting on this spring.” While he agreed that, “agronomically that’s really good, ‘cause those nutrients are right there,” he also recognized that this late application of manure may have compromised the water quality following the deluge of rain that was received during the month of May. In sum, he was “interested to see what all of our water monitors tell us in terms of flow and nitrates and those kinds of things, ‘cause it’s been a weird year.” Relating this interest back to the grant, he pointed out that, “it’s part of that whole awareness component. I don’t know that I would have thought about this as much as I have three years ago before all of this came about. But I think about it a lot now, not that I can do a hell of a lot about it, but I still think about it, which is good.”

Appendix T- North Raccoon WMC Board Member Interview Summary

Benefits of participating in the IWA

Katie and Mark described either the membership, engagement, formation, or support of the Coalition to be the main benefits. Katie said that the most valuable piece of the project so far has been in “engaging, having a board that has local knowledge and local relationships.” She added that figuring out how to engage those boards is “the most critical feature for this watershed coalition going forward.” She said her big concern is to learn “how to share those lessons with other watersheds and vice versa.” Mark described the main benefits of the IWA for the North Raccoon Watershed to be “early money and funding.” He clarified that getting the grant to be part of the IWA enabled the North Raccoon to use those dollars to organize the watershed management authority (coalition) and begin project implementation.

Keri and Katie described support from the IWA partners as a benefit. Katie said that working with the IWA partners has been beneficial for the watershed because she has “learned a lot from them about what is going on statewide, what kinds of resources are available, and what kind of data the assessment can bring.” Complementary to that, Keri said that as part of IWA, Felicia Campbell (IDALS) has been particularly helpful and Larry Weber (UI IFC) was “instrumental in education.” She also said that the DNR has been key for their development. She said that the DNR personnel (naming Allen Bonini and Kyle Ament) helped to “jumpstart” the coalition when it was forming and the coalition: “couldn’t have done it without their input and assistance.”

Keri continued to describe two overarching benefits of the IWA for their community: flood mitigation and water quality improvement. When asked to describe what that means for the North Raccoon community, she said, “the water quality aspect has been a huge benefit to our community.” She expanded to say that in Storm Lake, some water quality projects have already been implemented, but, “as the water drains into the city, we want to be cognizant of the environment around us with the water quality,” and she thinks the water quality piece will be a big impact for them from the watershed planning effort. She added that they have already seen how the IWA infrastructure projects have provided flood mitigation during heavy rainfall events. The water quality has also improved as a result of the IWA infrastructure work in Storm Lake. She said that, at a recent city council meeting, it was mentioned that the water quality is better and that the “lake is so much clearer.”

Challenges remaining

Katie reiterated that the challenge that remains for IWA in its last two years is in really getting the board engaged in the process. She said they did well in getting the RFP out to hire a consulting firm that is doing “high quality work with hydrologic tests,” and the other technical things they are doing. She said that for some people it may seem like, ““These people are the experts and we’re board members, so what more do I need to do?” I think they think that it’s fine to just coast.” However, she said that the consultants have emphasized that “board engagement is really critical, and they know that, and they think it’s important to keep driving that, and that’s hard.”

According to Keri, another challenge has been the size and make-up of their coalition. She said that when they were first getting started, a lot of smaller communities joined the group, but then came

to realize that they do not have the personnel to come to meetings. She said, “They may want to learn, but it’s difficult for them to just come in and join.” They are trying to address this challenge by organizing conference calls (and purchasing a conferencing system) so that these community members can join meetings remotely instead of attending in-person. In addition to the small communities, the watershed is very large and the distance to travel to meetings adds to the difficulty for some entities so that all parties feel represented. She thinks that settling on having the meetings in Lake City has worked well since it is a central location and “the facility works well for what we need.” She said, “A lot has been done in two years.” Keri detailed the creation of their RFPs for planning and engineering, convening a planning committee, interviewing and making decisions on consultants, and communicating decisions to the larger group, all the while making sure that “entities [were] represented throughout the entire watershed and not just one local area.”

Keri said that education probably remains “one of the biggest challenges that we face because it was a new coalition when we started.” She said that while they learned as they got moving in the beginning, they “had a lot of help.” She said they need to do more education beyond the coalition members to the communities, emphasizing that the people who have been attending meetings “understand the goal of the coalition.” She said she hopes that the work that the watershed planner and engineers (EOR and WHKS) are doing will address some of the education needs, particularly concerning flood mitigation practices.

Also considering the impact and outreach as it relates to the broader watershed community, Mark said the biggest challenge for the remainder of the grant period is probably their “ability to reach out to landowners to get cooperation with on-ground practices.” He said that the money in their watershed is in the northern part of the watershed, and, particularly since he is a representative of a southern county, he has no money to offer landowners in his own southern geographical area.

Strengths of the WMA

Katie, Keri, and Mark all commented to the representation and the engagement of the WMA as a strength. Mark said a strength of their coalition is that every county involved is participating. Katie complemented this stating, “We’ve engaged anybody who wants to engage.” She said they “have a good mix of people that represent the geography of the watershed.” According to Keri the biggest strength is the Coalition’s “ability to come together and be willing to listen and think outside-the-box,” particularly since they are “such a mix of urban and rural.” She said that the membership and the executive committee have good representation from cities, counties, and soil and water conservation, and said, “We’ve had a couple new metro communities join the coalition, so I think getting the word out and education on the advantages of joining the coalition has been good.”

Keri said that in her view, working with the IWA, both with the project coordinator and the IWA partners, has gone well. She said that everyone has been “willing and able to share all the information and education,” adding that their knowledge has been greatly appreciated.

Keri also described strategies the Coalition has used to obtain a quorum and continued engagement. She said that in addition to obtaining the conference call system, they also have established a clear procedure for proxy voting that allows member entities to designate proxies so that votes can occur in their absence. She said that the proxy procedure has been absolutely necessary to get a quorum and move forward on items because they had “a lot of deadlines to meet in a very short timeframe.” She said she thinks that people feel adequately involved in decision making.

Weaknesses of the WMA

Katie and Mark considered weaknesses related to representation on the Coalition in two different ways. Katie said having a high level of engagement in the watershed has also turned into a weakness because the coalition quickly became so large. She said that Marius [the IWA project coordinator] and EOR [the planning consultant] have tried to engage people in the planning process by having smaller group sessions “which is good,” but added that it’s still been a struggle to get people involved. She said that sometimes a small group session might only involve two people.

In a later comment, Katie described the awareness that, “We have this great board and people are engaged and we’ve got a great group of right builders, but they’re kind of the choir.” She said they need to make sure they have “space at the table” for those individuals not in the choir, who come sometimes to meetings to witness what is happening.

Related to underrepresented voices, Mark commented that “within the governance structure, it does not allow for landowners to be part of the governance structure.” When asked if landowners had expressed interest in being part of the coalition, Mark said that he wasn’t sure about individual landowners, but “even the commodities groups, whether it’s beef, soybean, corn, agricultural interests, they cannot be part of the governance structure – and they happen to be the landowners who the group wants to be able to try to influence or have participate – so that’s the weakness.”

In terms of weaknesses, Keri said that with “only a couple of years under our belt, we’re still learning as we go.” She also said they need to find another “more solid funding source,” adding that she suspects that would be a common theme throughout other coalitions.

Sustainability of the coalition

Katie and Keri both described finding additional funding and demonstrating results of this work to bring more people in. Katie said that sustaining the coalition after the IWA funding is gone will be “a challenge.” She said that if they want to keep their staff, “We need to find a new pot of funding and I think that’s hanging over everyone’s head,... that we’ve got to show some progress, show some results, show a good structure and good engagement to let people know that we’re here and we’re serious about getting some work done in the watershed.” She said there are groups out there that are aware of all this and “looking to help.” Keri said the coalition’s capacity to be sustainable after the IWA funding is done will be more possible once they make decisions on “appropriate projects” and people begin to see projects on the ground. She added, “Once you start seeing success, it will build on other successes... I think a lot of people will just wait and see how something is going to work.” She said they need to be ready for other grant opportunities that should arise and continued, “By establishing the coalition, that’s already been taken care of and done.”

Keri said that although their plan is still in the early stages, they have an outline of what the plan will be, and the coalition just needs to provide final comments on the outline. She said that having the plan in place will make outreach and education much easier. She believes that the interest of most of the coalition’s entities will continue beyond the IWA funding, although some parties may be less interested. She said seeking funding for a project coordinator would “absolutely” be part of their sustainability plan.

When asked about the sustainability of the coalition after the IWA funding is done, Mark said simply, “I don’t know.”

Looking back

When asked to think about how things might have been done differently Katie and Mark reflected in different ways on the Des Moines Waterworks lawsuit. Mark considered this lawsuit as a driver for priorities in their watershed even if the board members are more focused on flood. He said the lawsuit caused the Iowa Nutrient Reduction Strategy to become a large part of the conversation and steered their coalition toward water quality concerns. He described the North Raccoon watershed as being “very flat... [with a] large number of drainage districts.” However, he said that the “main driver or issue” is that a number of the county participants are there because of their interest in “flood control and property damage prevention.” He thinks that flood concerns are first priority, but that “the general public thinks that these watersheds are first about water quality and they ought to be telling the farmers how to reduce nutrients.” He said most of the other IWA watersheds don’t have that issue because they do not have the large number of drainage districts.

Katie indirectly referenced the lawsuit as a catalyst for organizing referencing that that they probably were off to a rough start in part because they couldn’t get their WMA organized until after the Des Moines Waterworks lawsuit had been addressed. She said it likely caused delays like, “We had almost a year where we could have had a watershed coordinator on the ground.” She said that having that slower year did give them the benefit of learning from some of the other watersheds like the Middle Cedar that were already working during that first year, but if they had it to do over again, getting the WMA running more quickly is “what I probably would like to see changed.”

When asked to look back, Keri said that when applying hindsight, there are “always things that we could learn.” She said it was “difficult” to get things up and running. For example, they had to learn how hard it was for them to get a quorum and figure out how to deal with that. She said they had a great intern at the beginning of the project who collected all the signed WMA 28E agreements and filed the paperwork, but that having more information about who would represent each entity and getting their contact information would have been helpful earlier in the process. She shared that it had been difficult to take over from previous Storm Lake city manager, who had helped with the original organization of the coalition. She commented that it was hard to replace the kind of knowledge that he had of who everybody was and the relationships he had built over many years.

Keri said that there were some economic challenges for this work in the future. Additionally, she cited “cuts to projects, education, and trying to pull in private landowners and get them involved is obviously a big challenge.” She said she has also heard about potential issues in the legislature with land acquisition and that may have people concerned “perhaps on both sides.”

Additional comments

Katie said she is very interested in how the disaster relief package that will come to Iowa in response to the 2019 flooding will have an impact in their area. She said, “I have no idea how that money is going to be spent or what role the IWA would have, but I think it would be smart since we have all these watersheds and all these watershed plans, if some of the disaster relief and disaster efforts could be used in a targeted way that’s in line with this approach that everyone has laid out over the last ten years.” She laughed and added, “That’s above my goal and pay grade,” but said that she will be very curious to hear how this all works out. She reiterated, “If there was a way to take all that we’ve learned from this project - technically and administratively - and be able to say, ‘We have a path forward for Iowa, and if you could give us a \$3 billion relief package, we know how we would spend it.’ That would be nice, but really hard.”

Mark said that he attended the Iowa Flood Center's 10-year anniversary in Iowa City earlier this year and came away with the message, "It's too easy to say, 'I'm for clean water.' Everybody is for clean water, but what does that mean?" He described many conversations about what impaired waterways means, "Does impaired mean you shouldn't recreate on them? You shouldn't fish and canoe and kayak?" He described this a "very wrong message to send to the general public." He said that the "people in Davenport or in Council Bluffs found themselves under water and had their livelihoods destroyed because of what the water did to them, and the fact that there's probably some raw waste treatment that's in those waters because of a flood event (those waters are probably more hazardous because of that), and frankly those people could give a damn about the nutrient aspect." He said that is why the emphasis must be first to "protect property and preserve infrastructure, and if you can slow some of the flow better, you will see those secondary improvements in water quality, soil health." He added that although the science of agricultural practices needs to be taught, "I'm not so sure that's the role of the watershed." In his opinion, "If the focus was more on soil health, reducing soil loss, and on infrastructure flood prevention rather than water quality, I think the agricultural community would not be as immediately turned off." He said that when landowners hear this discussion, they get the message that they are "doing something wrong," that there is a "course correction that needs to happen for that group," but that they have no "input at the table."

Mark said, "The other thing that may not be known as well, is the reason the agricultural community wants to get water away from their fields is so that the root systems aren't flooded." He said that the drainage system carries water away from the fields and that "you can't grow stuff if you can't get the water away from the root system, that's number 1." As number 2, he raised the question, "If the tiles are working, and in fact the water is now away from the fields, when there is a large rain event... does it not increase the soil's capacity to hold the new water? Because the fields are already dry because they're not oversaturated, and they're not flowing over the top of the fields and taking the soil with it?" He said it therefore seems like an advantage to use the tile systems to help the soil hold the water without it becoming "a flush event."

Overall, Keri said that working with the NRRWMC has been a great experience, she has "learned a lot," and met a lot of good people.

Appendix U- Upper Iowa WMA Board Member Interview Summary

Benefits of participating in the IWA

John began by affirming, “we’ve long appreciated the value of the watershed approach in general, but the Iowa Watershed Approach, I think this could be a model for success not just in our own state but around the country. And when you look at the flooding that’s going on nationwide, I think it’s timely.” Specifically, he recognized the contributions of the Iowa Flood Center “and their expertise in modeling, and how that information has allowed us to develop our plan, and most importantly here recently, a way to set goals so that we’ll be able to really measure our progress.” He felt that the ability “to report to the people involved and tell them that we’re having success is a really important reward for them. I also think it’s a strong talking point for us, as water management authorities working together to develop a replicable model for success.”

Complementary with John’s comments about measuring benefit, Mark said the most obvious benefit of being part of the IWA from his perspective has been the “physical properties of working to implement structures and physical projects that help impede water flow and address some of our flooding concerns.” In providing more detail, he expressed appreciation for the fact that they are targeting “projects that can cover the most number of watershed acres, or have a larger impact on our downstream.” In sum, “any time you can obviously reduce water flow that’s good.”

The second benefit, which Mark admitted he didn’t anticipate from the onset, has been the “generation of awareness and hopefully longer-term momentum through the resiliency component.” Serving on the soil water board, he was accustomed to “looking at more quantifiable scientific type stuff with water quality or water flow, and less focused on the human impact.” So, he was reportedly very happy with the watershed plan as a whole, “and I think there is some ability to have long-term momentum of information and some kind of awareness.” He also recognized the importance of not just reaching landowners and farmers, but also “people who are living in communities, that’s important.”

When asked whether working with partners has been beneficial, Mark offered that “our relationship with the Iowa Flood Center has been really good. They helped secure the grant and have provided robust analysis and guidance and support in developing this.” He shared that the soil and water group has had good experiences acting as the primary agency for a lot of watershed projects, like assisting with managing and supervising the project manager. Mark also mentioned that “Our county has been supportive,” both in identifying “mutually beneficial opportunities for projects to help with roadway washing, as well as utilizing existing infrastructure and sharing resources and things that way, have all been positive thus far.” Overall, he offered, “We have had varying levels of participation from all the agencies that technically could be represented by the watershed,” which naturally aligned with the amount of project activity in each of the different areas. And, as a whole, I would say that the agencies we’ve chosen to partner with and the ones that we’re a part of, as far as I know are beneficial.

Challenges remaining

When considering the challenges remaining in the last couple years of the grant, Mark and John both provided multiple different issues to be thinking about.

The first challenge Mark described was related to the geology of the watershed and how that inhibited the progress they were able to make on some of their projects. He stated, “We were further in the process of getting actual projects on the ground and then got feedback, I feel like a little bit late in the game, that they wanted things done differently due to karst topography.” He continued by saying, “That’s probably the only thing that caught me off guard. I just wish we would have known it earlier; we would have started doing different HUC 12s.”

On a related note, the challenge with the karst topography underscored the slow pace of activity on the project as a whole. In reflecting on this, Mark noted wanting to strike a balance between keeping the momentum going by holding meetings and discussing key issues, but also needing “to be mindful of how often we meet,” and not “confusing activity for achievement.” He felt somewhat dismayed to “not have success stories that we can highlight as a selling point to the next landowner because we got set back with the karst thing.” This feeling was accentuated by the feedback received from community members who had been asking questions such as, “You’ve been doing this for how long?” and “What have you got done?” Despite the setbacks, Mark did express confidence in the amount of progress that they have made in the watershed. “We are further ahead, and hopefully we really have a good summer here and get some boots on the ground and see that and continue to tell the story.”

Mark also shared about the challenge of how the WMA board essentially functions as “an oversight and advisory committee” versus one that has more of a hierarchy or direct involvement in the activities. He explained, “We’re all volunteers of some level of affiliation that’s relevant to this, certainly. But, to some extent we have to lean backwards into our one employee, Matt Frana, our other local leaders or professionals within the industry like Todd Duncan of NRCS, or a county engineer or the geology department and the Iowa Flood Center and this and that.” Mark did not necessarily view this as a negative, because, like several other board members who freely choose their level of involvement, “I’m not of the ability to dedicate the amount of time and/or necessarily the true full-blown expertise to get in day-to-day.” Given this structure, Mark described their role as less of a decision-making body and more of a “liaison between the professional the public” for the information they learn at the quarterly meetings. For this reason, maintaining engagement among board members has become a mild challenge. However, Mark reported that, “I think once we start seeing some projects, I think that will reinvigorate some people.”

Whereas with the day-to-day activities the board members participate more out of duty than by reason of their technical expertise, he did share that they felt more engaged with the broader planning and goal-setting initiatives. Specifically, he stated, “The last meeting that we had where they were working to kind of set some long-term, forward goals, I think those kind of visioning stuff allow the board to be more engaged and more qualified on that type of stuff than we are on the day-to-day advice, you know, scientific component.”

The first challenge that John cited for the remaining grant funding period was the amount of time and being able to build enough momentum in shifting the agricultural culture and the practices. “My biggest concern about time is, there’s kind of an inertia in land use practices, and getting producers to change their patterns of production is sometimes pretty hard.” Regardless, he described feeling “encouraged by some of the successes that producers have had in pursuing soil health and regenerative agriculture, and their success is drawing some attention and some following.” Based on these and other activities, he shared the following sentiment: “I feel good about things, even though our time is winding down.”

A second concern that John expressed looking ahead to the final years of the grant was the state of the farm economy. He said, “Bad times make investment in some of the structures that we’d like producers to build more challenging.” Putting a positive spin on the long-term outlook and how farmers may be inspired to be the change so to speak, he hypothesized, “I think when the producers also look at the damage, not just to their land but to their communities from weather and the uncertain economic future in conventional production, I think that’s a challenge to them to see that maybe they ought to try something different.” Adding to that comment he continued, “I’ve always liked, in my own land, putting in structures - there’s a real physical satisfaction to it. I think it’s also satisfying to learn more about the world around you. It’s just astonishing for instance that there could be a billion bacterial cells in a teaspoon of soil, in healthy soil.” Musing about the potential to empower producers to become more invested in soil health on their own land, he offered the following example: “We could have these cheap microscopes to give to producers and have them test their own soil and then become scientists on their own land.”

Strengths of the WMA

John and Mark both described the value of the natural resources in their watershed and their history and experience doing this type of work. John described being very fortunate in their watershed, both for “the natural resources bounty and then the history we have and the relationships that we’ve constructed – those are all wonderful strengths.” He humbly acknowledged that with “the natural beauty that we have here, we’ve been working on water quality for decades now. We’ve had so many groups that have worked together, and so we have this history of doing these kinds of projects.” He mentioned specifically that “these time-forged relationships with our producers and the soil and water conservation people that, that’s really worth a lot.” He takes great pride in the record of success they’ve already had with respect to water quality through these relationships and longstanding partnerships.

Mark said, “We do have awareness and we do have a contingency of people who care quite a bit about our natural landscapes and surroundings and our water quality. He continued by describing how “our Upper Iowa river is a focal point of our area and it makes people aware that we need to protect it because it brings economic, recreational, just enjoyment and beautification of our area.”

Weaknesses of the WMA

According to Mark, the strength of awareness and community engagement led to “a much wider breadth of public participation in the initial meetings,” however he observed, “now that’s essentially all but fallen off to where, unless you’re relevant to the meeting, you’re presenting, or you’re on the board or you’re industry professional that’s within this group, we don’t have as much.” In other words, “trying to keep people engaged in the long-term, we’ve had varying levels of success in rolling that out.” Regardless, he shared that “there’s a lot of information out there that has been high quality information that would be interesting to lots of people... [but] getting people to show up is tough. You can advertise, you can do whatever, you can give away a free meal, whatever it takes, and you still, you know, high levels of participation, unless something is very controversial, is difficult to achieve.”

As far as weaknesses of the WMA, John acknowledged that “we’re still learning. I know that we can do better,” highlighting an apparent desire to continually strive for greater outcomes.

Sustainability of the WMA

Mark and John both commended at varying levels the need and intention to secure funding for a project coordinator in their watershed.

Mark said that a critical component of the WMA's sustainability is being able to secure adequate funding for the project coordinator. While there is plenty of interest in continuing this effort because, "people see value in doing practices on their farm," but it ultimately is a matter of "who's gonna pay the bill and how are we gonna fund it?" If they are not able to fund a project coordinator beyond the life of the grant, Mark believed it would be incredibly difficult to sustain the same level of activity. To that effect, he stated, "I can continue to spread the message, but I wouldn't necessarily be able to advise farmers on practices that they need to do." Speaking about the potential to maintain a project coordinator position in the WMA beyond the grant, John said, "I think we wanna try and do that somehow." Looking at the impact of the projects currently in the works, they are hopeful to be able to attract additional funding to make this a reality.

Regarding the long-term sustainability of the WMA, Mark hypothesized that "if you have people who are empowered or monetarily endowed to continue to send this message, I think things can sustain for a period of time in which they remain relevant, or the information isn't stagnant. But, on a volunteer basis, I don't see long-term, ten, twenty years from now we're still a robust organization that has quarterly meetings and is doing this and that." Additionally, he foresaw enough interest in maintaining the level of participation necessary to maintain the solvency of the board, "so that the organization stays alive so that when the next funding round comes, you have it still built and essentially operating." However, maintaining the current level of activity without funding would be highly improbable. He did mention how "RC&D put together a survey for us that mapped out the things that need to happen in the future," and asked different groups if they were "willing to help support through funding, through people, through resources." He reported that this was "an interesting exercise to help us understand what happens beyond the end of the five-year grant."

When asked about strategies for implementing the watershed plan after the IWA, John reported great optimism for being able to utilize the "living, breathing, evolving" online plan. He is hopeful that this can be used "as a communication tool in drawing people in to support it and giving recognition to people for doing the right thing." He added, "If we can reward some of our producers, that will draw the attention of their neighbors, and I think that's a really exciting thing about that plan as a tool." Additionally, Mark expressed a certain degree of optimism with respect to the utility of the resiliency plan in providing the roadmap or way forward.

John expressed general optimism for the continued sustainability of the WMA following the end of the IWA funding. Speaking about the momentum they've been able to create, he said, "I know that public support is increasing. And I think as we have more success, we'll become more confident." He also was encouraged by conversations he had recently, which gave him hope "that the federal government will come to look differently on hazard mitigation planning." He described that the mentality may be slowly shifting toward looking at flooding through the lens of the watershed, "instead of a county by county approach." Looking ahead, he stated, "when that does become apparent, it should be easier to get federal money going not to each county but to a watershed group, and that would be the most effective way."

Looking back

John briefly mentioned being impatient about the timeline in getting the hydrological assessment from the Iowa Flood Center. Through that, however, they learned that "dealing with Karst geology

was more problematic than we thought.” Indeed, the geology associated with the natural beauty of the landscape posed multiple challenges in carrying out the proposed projects. To that effect, John described, “there was a problem with distance to bedrock and the prevalence of sinkholes, especially in the watersheds that we chose. So, our ability to get the storage was limited by those factors. And so, we’re still going to try and accomplish storage with structures, but we don’t have as many candidates as we’d like to.”

One regret that Mark shared was how they may have jumped the gun in terms of starting to hold meetings before the grant was officially awarded. This was obviously when they had “a high level of public participation.” However, because there was a degree of uncertainty about, “Is this thing even going to come around?” Mark felt that they may have “fizzled some of the interest” before it even got off the ground. In thinking about what they might have done differently, he offered, “maybe we would have started smaller on the front end or just started meeting as an advisory council.”

There were a couple ways that Mark felt they could have more effectively captured some of the initial public interest. One other element that he felt would have perhaps supported their success would have been “setting up a timeline of expectations very clearly on the front end.” He acknowledged that this time around they were acting as the guinea pig since something of this scale hadn’t yet been done. However, his hope for future iterations of similar projects is that, “If you set expectations realistically on the front end for the communities and for board members,” there would be less chance for disappointment or the perception that not enough is happening in a timely manner. Another idea he had was to form “a local advisory council” that was tasked with something meaningful associated with the WMA. For example, he said, if you “grab them as a ‘Friends of the WMA Club’ or whatever to where then they feel more engaged. That way you have repeat participation and they feel more like they’re impacting something too, even though they may not have a vote.” Another area where he felt they could have done better as a WMA was in their communication and support of a wider range of practices. He recalled specifically that that, “we had a bunch of people who were trying to participate and were wanting us to do more things like, incentivize no-till and cover crops.” Their response at the time was, “That’s not how the grant’s written. That’s not how we can spend the money.” He thought this may have pushed people away or discouraged them from continuing to engage with the initiative. He added that “now, ironically, looking back today, those are some of the major components of our resiliency plan.” Reflecting on how they could have responded differently, he said, “While we wouldn’t have been able to cost share them as part of this program, still keeping those people engaged to help execute the long-term plan of this, of spreading that message and having that be a component, may have been a way to keep the public engaged.”

Additional comments

In his final thoughts Mark shared, “I hope that we can still, in this tight window, not just spend money for the sake of spending money, but get some stuff going and make use of some of these funds that were executed for this great cause and make an impact to our communities.”

John reiterated his gratitude “to Larry Weber and the Flood Center for getting the ball rolling.” From his perspective, “it’s absolutely necessary to demonstrate in one of our WMAs or several of them that this is making a really dramatic difference.” He added, “The cost of flooding and doing what we’re doing, it’s just not sustainable. In a sense, this is an existential kind of an effort.” Finally, in true contemplative form, he added, “As I look around the world and the planet, so many of the

challenges that we face seem insurmountable. But someone once said that the greatest renewable resource we have is our intellect. If we use that to really understand the natural world and put that knowledge to work in harmony with these natural designs and natural processes, then we're on our way."

Appendix V- Upper Wapsipinicon WMA Board Member Interview Summary

Benefits of participating in IWA

For Don, the biggest benefit of participating in the IWA has been “cleaning up the water and reducing instances of flooding.” However, he acknowledged the importance of first getting organized as a “viable group.”

The biggest benefit that Kip perceived was related to the interconnected nature of the work being done. He cited the positive impact of how “we see projects at one point affect other points” in the watershed. In other words, the practices being implemented in one place are having an impact not only in that place but also other downstream communities.

Challenges remaining

Kip immediately pointed toward the timeline and the ability to get projects on the ground as the biggest challenge remaining. He described that in reality, “it takes a while to get the process going.” He added, “here we are halfway through and, if I understand correctly from the last meeting, we have not moved any dirt yet.” Acknowledging that “there’s a lot of details to be addressed before you do some of these projects,” he described his fear about how “time is ticking and we’ve got things to do, and I don’t even know if we have all of the funds allocated.” He was optimistic that current projects might also lead to increased interest on the part of landowners. To that effect he described “the hope that one neighbor sees another neighbor benefiting from it and they want to jump on board, too. If that doesn’t happen, we’re going to be in a time crunch to identify more projects, landowners and get the engineering and the dirt moved in time.” In summary, the slow nature of the process getting started has made it such that it may be challenging to get projects completed and money spent within the allotted grant funding period.

Kip also mentioned the time and effort it takes to “convince some of these people to take land out of production.” So, while there has been a sufficient level of interest in the project, public education has remained a challenge to getting enough projects on the books.

Don described that currently, there is an acute challenge being experienced in the management and supervision of the Project Coordinator. Don reported that the NRCS, who was initially hired as the fiscal employer, has overstepped its bounds in dictating the roles and responsibilities of the coordinator. He questioned, “What is the purpose of the WMA if the NRCS has taken absolute control of our project coordinator?” He did agree that it makes sense to house the coordinator in the NRCS “because the information is there at your fingertips.” However, this arrangement has led to several conflicts with competing demands placed on the coordinator’s time and efforts. He said, “It’s pretty hard to hire somebody and then have that authority taken away from you, and you cannot work with that lady that’s the head of the soil and water district here. It’s her way or no way, so that really makes it tough.” Whereas at the onset of the project things were going really well, “when the soil and water district took over, everything is top secret and it’s hard to function when you don’t know what’s going on.”

Strengths of the WMA

Don mentioned being satisfied that there has been a good level of participation in the meetings and interest in the 28-E agreement. He was also reportedly very happy with the partnership with RC&D as the planner for the WMA. Describing the benefit of their support, he commented, "The RC&D is doing a wonderful job. They have worked their tails off for sure!"

Kip reported the positive impact for the Upper Wapsi watershed of having been selected for inclusion in the IWA project, which "put some life into the organization."

Weaknesses of the WMA

Building on the strength of being part of IWA Kip's fear is that once the funding runs out, "people could lose interest" and stop coming to the meetings.

Beyond the personnel issues with managing the project coordinator as described above, Don said that there were no additional perceived weaknesses in the Upper Wapsi WMA.

Sustainability of the WMA

Reflecting on the future of the WMA, Don mentioned, "If people start seeing what it'll do, I think it'll keep moving along." He emphasized the importance of maintaining a project coordinator to continue the efforts that have been started. To that effect, he cited the importance of applying for additional grant funding prior to the completion of the IWA project.

Kip mentioned the positive aspect of having the watershed plans in place. However, similar to Don's concerns about funding, he reiterated his fear that, without adequate funding, the future outlook for the WMA is somewhat blurred. "Let's say no money ever comes along then I can see it fizzling out because people are going to lose interest." But, despite lamenting how "you're forever chasing the dollar," he was reportedly "hopeful [that] more money will come along and that we'll be made aware of more opportunities." He repeated his optimism for the future of the WMA in this way: "The money always seems to come along. Until the weather patterns change, we're going to continue to see people want to invest in mitigation efforts. I'm hopeful that's the direction it'll go."

Looking back

When asked what their WMA would have done differently knowing what they know now, Don quickly offered that they "would have had INRCOG instead, because the coordinator would have probably been in an office at INRCOG. If INRCOG would have been involved because of the strength they have, they would have gone head-to-head with the soil and water head with getting cooperation."

Kip offered that he would have liked to invest more in public education "and getting the word out" in their WMA from the onset of the project. "I'm a firm believer that, the more knowledge you give people, the more opportunities they see and the more they can do with it." He recognizes that they could still make greater efforts at public outreach and education moving forward. In fact, speaking collectively on behalf of state-wide WMAs, he stated, "I think that unless we start tooting our horns and boasting of our accomplishments, the public is not going to recognize the value of the WMAs." In particular, Kip felt this outreach should be used to convince legislators of the need for continued funding to increase the overall effectiveness of the approach.

Additional comments

Citing how the project was originally earmarked to help those who were affected by past flood events, he encouraged focusing on implementing projects upstream. "If you're going to do a project and you want to help the people that were impacted, you probably need to do the projects upstream. If you do the projects in the area where the people were impacted, it actually helps people downstream from the people who were impacted. So, I think we need to be looking at where are we investing these dollars to get the results?" Repeating this call to action, Kip emphasized, "if you want to minimize the impact on the people that were hit so hard, don't build in the backyard... build it upstream so we slow it from ever getting to that point."

Appendix W- BBHH Program Participant Interviews: Fall 2018

This is a summary of interviews with participants in the Bee Branch Healthy Homes (BBHH) program carried out by the Center for Evaluation and Assessment (CEA) during the fall of 2018. This was the second of a series of interviews to be conducted every six months with BBHH participants whose home improvement project was completed at least six months prior to the interview. For a full description of the program, the role of the CEA in the program, and development of the interview protocol and process, consult the *Summary of Bee Branch Healthy Homes Resiliency Program Participant Interviews* submitted to BBHH Resiliency Coordinator, Sharon Gaul, in May 2018.

Methods

In October and November 2018, the BBHH home advocates contacted the program participants for whom construction had been completed in the previous six months to provide them with information about the opportunity to participate in the interview. Of the 10 participants who expressed interest in being interviewed, the CEA was able to connect interview seven. The seven participants were composed of homeowners (4), landlords (2), and tenants (1).

All interviews were audio recorded and transcribed. One CEA team member read all the interview transcripts and wrote the summary below. Because the interviews were conversational and short, the report summarizes participants' responses, but also honors the words of the interviewees by including direct quotes throughout.

Pronouns used in the summary below have been assigned randomly to improve readability and protect anonymity.

Survey Findings

What was the best part of working with the Bee Branch Healthy Homes Resiliency Program?

Responses about "best parts" fell into two categories: physical home improvements done and the project staff made the process easy.

Five participants said the actual work done on their homes was the best part. Two people specifically mentioned that the work will prevent flooding. One described the work done on their home including installation of a sump pump and dehumidifier. A landlord said that the best part is that their buildings are being improved for their tenants in ways that would either not be feasible without the BBHH funding or would have required rent increases.

Two respondents said the process was easy and the staff were helpful. One said, "They arranged for all the contractors and the work and basically, it was worry-free for me." The other, a landlord, described that the application process was easy, the staff were helpful, and the process ran smoothly because the program team worked directly with the tenants instead of the landlord "having to be the mediator."

What problems, if any, have you had working with the BBHH?

Five out of seven participants stated that they did not have any problems while working with BBHH.

One participant stated that the time from original application to contractor work took too long. In the case of one of the landlords, during the wait time, tenants changed, and they needed to re-start the paperwork with new tenants. She detailed that wait times had caused some frustrations as the tenants wanted to know what was going to be fixed and on what timeline. Another participant said that he did not like the contractors since they are not “very good at the lead removal part of the project”. He explained that the mold in his basement had not been removed.

Did you work with a home advocate?

Five participants were asked whether they have worked with a home advocate. If they indicated that they had worked with a home advocate, they were asked in what ways their interactions were helpful. One participant stated that she did not work with a home advocate but also said that Amanda was at her house a few times. Two participants said that they worked with a home advocate, but they did not remember anything about their interaction. One participant stated that the project was good for the whole community and that the home advocate was accessible and had good communication skills. Another participant stated that the home advocate was very helpful, and added, “I didn't need anything that they were offering, but I thought they were very thorough.”

Interviewees were asked to use a five-point scale to rate (five being the most positive and one being the most negative) the following questions about the project. The table below reports response frequencies from the seven interviewees.

Item	1	2	3	4	5	Don't know/ No answer
How easy was it to complete the application for the BBHH	0	0	0	1	6	0
How easy was it to work with contractors on construction work?	0	0	1*	1	3	2**
How helpful was it to work with the home advocates?	0	0	0	0	5	1
How likely would you be to recommend the BBHH to friends or neighbors?	0	0	1	1	5	0

*Note: Respondent indicated 3.5 in their answer. This has been classified as 3 for this table.

**Note: One respondent did not provide a rating for work with their contractor. He simply indicated, “They did what they had to do.”

In what ways do you think participating in the BBHH (either the construction itself or any assistance you may have received from the home advocate will have an impact on your life?

Two participants did not report any positive impact of the project on their life. One participant said that flood does not affect her since she lives in the second floor. However, she said the project will protect the neighbor on the first floor from flooding. Additional respondents indicated the following (frequency reported in parentheses if greater than one).

-
- The value of property increases, and the property is more attractive and safer for tenants. (2)
 - The interviewee's house doesn't get rain inside anymore when it rains heavily.
 - The participant met with people at City Hall [Dubuque] and the staff there connected them to other city departments so they learned about other resources that they can have.
 - Improved the house but doesn't know how they will be affected since they don't know how long they will live in that house.

Do you have any other thoughts about the BBHH you'd like to share?

At the end of the interview, participants asked about any other thoughts about the project that they would like to share. Six participants responded to this question and their responses are paraphrased below.

- He is thankful to the project team for helping them.
- The project was very helpful, especially financially. This person said, since he was retired, he could not have afforded the home improvement done by the project team.
- He has recommended the project to other people.
- The program is great, and staff is helpful but the amount of time to get things done is long.
- The project should have been started earlier ("a year ago").
- She did not like that contractors could change plans without discussion with the homeowner. Additionally, she said that when they would add work, there would be paperwork, but if work was not done, "It just got taken off, nothing to sign, no money returned." She continued, "I think that's wrong."

In October and December 2018, the University of Iowa Center for Evaluation and Assessment conducted telephone interviews with seven volunteer participants in the Bee Branch Healthy Homes Resiliency Program (BBHH). The interviews were intended to provide BBHH staff with information to help them improve the program. The following is a brief summary of the interviews.

Pronouns used in the summary below have been assigned randomly to improve readability and protect anonymity.

What was the best part of working with the Bee Branch Healthy Homes Resiliency Program?

Responses about “best parts” fell into two categories: physical home improvements done (5) and the project staff made the process easy (2).

Physical home improvements: the work will prevent flooding (2), participant had a sump pump and dehumidifier installed, and buildings are being improved for tenants

Project staff made the process easy: the program staff arranged for all the work (“It was worry-free for me.”) and the application process was easy, the staff were helpful, and the process ran smoothly because the team worked directly with the tenants.

What problems, if any, have you had working with the BBHH?

Most participants reported having no problems with the program. One participant said that the application process took too long causing extra paperwork due to tenant turnover and frustrations about the work and the timeline with tenants. Another participant said that he did not like the contractors. He explained that the mold in his basement had not been removed.

Did you work with a home advocate?

Five participants were asked whether they have worked with a home advocate (non-landlords). Three people described that they either didn’t receive services from a Home Advocate or they did not remember.

- One participant stated that the project was good for the whole community and that the home advocate was accessible and had good communication skills.
- Another participant stated that the home advocate was very helpful, and added, “I didn’t need anything that they were offering, but I thought they were very thorough.”

Rating Parts of the Program

Participants were also asked to rate parts of the program on a 1-5 scale (where 5 was most the most positive and 1 was the least positive). The four questions asked:

- How easy it was to complete the application (All rated the ease of applying for the program as a 4 or 5.)
- How easy it was to work with the contractor (Most rated the ease of working with the contractors as 4 or 5, one rated this 3.5 and two didn’t provide an answer)
- How helpful it was to work with the Home Advocate (All five who had interacted with a Home Advocate rated the helpfulness of the Home Advocate as a 5.)

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- How likely they were to recommend the BBHH to friends and neighbors. (All but one said they'd recommend the BBHH to others (4 or 5) – one person indicated 3.)

In what ways do you think participating in the BBHH (either the construction itself or any assistance you may have received from the home advocate will have an impact on your life?

Five of the participants said it would have a positive impact on their lives. One participant said that flood does not affect her since she lives in the second floor. However, she said the project will protect the neighbor on the first floor from flooding. Additional respondents indicated the following (frequency reported in parentheses if greater than one).

- The value of property increases, and the property is more attractive and safer for tenants. (2)
- The interviewee's house doesn't get rain inside anymore when it rains heavily.
- The participant met with people at City Hall [Dubuque] and the staff there connected them to other city departments so they learned about other resources that they can have.
- Improved the house but doesn't know how they will be affected since they don't know how long they will live in that house.

Do you have any other thoughts about the BBHH you'd like to share?

At the end of the interview, participants asked about any other thoughts about the project that they would like to share. Six participants responded to this question and their responses are paraphrased below.

- He is thankful to the project team for helping them.
- The project was very helpful, especially financially. This person said, since he was retired, he could not have afforded the home improvement done by the project team.
- He has recommended the project to other people.
- The program is great, and staff is helpful but the amount of time to get things done is long.
- The project should have been started earlier ("a year ago").
- She did not like that contractors could change plans without discussion with the homeowner. Additionally, she said that when they would add work, there would be paperwork, but if work was not done, "It just got taken off, nothing to sign, no money returned." She continued, "I think that's wrong."

Appendix X: BBHH Program Participant Interviews: Spring 2019

This is a summary of interviews conducted with participants in the Bee Branch Healthy Homes (BBHH) program carried out by the Center for Evaluation and Assessment (CEA) during the spring of 2019. This was the third of a series of interviews to be conducted every six months with BBHH participants whose home improvement projects were completed at least six months prior to the interview. For a full description of the program, the role of the CEA in the program, and development of the interview protocol and process, consult the *Summary of Bee Branch Healthy Homes Resiliency Program Participant Interviews* submitted to BBHH Resiliency Coordinator, Sharon Gaul, in May 2018.

Methods

In April 2019, the BBHH home advocates contacted the 26 program participants for whom construction had been completed in the previous nine to 11 months to provide them with information about the opportunity to participate in an interview. A list of interested participants was shared with the CEA including their contact information and availability. Of the 11 participants who expressed interest, the CEA was able to connect with and interview a total of 10 during the second week of May 2019. Eight of the interviewees were individual homeowners, one was both a homeowner and landlord of a multi-unit dwelling, and the final participant was a tenant. An important note about this sample is that many of those who did not respond to the home advocates (10 out of 15) were tenants; therefore, the feedback summarized herein may not be representative of the participant population.

All but one of the 10 interviews were audio recorded and transcribed to ensure accurate representation of the feedback provided by participants. One CEA team member read all the interview transcripts and wrote the summary below. Because the interviews were conversational and relatively brief, the report summarizes participants' responses, but also honors the words of the interviewees by including direct quotes throughout. Pronouns used in the summary below have been assigned randomly to improve readability and ensure anonymity of the participants.

Survey Findings

Introduction

The feedback from a majority of participants about their involvement in the BBHH program was overwhelmingly positive. Recurring themes that arose throughout most of the interviews were the deep and sincere appreciation for the financial benefit that the program afforded its participants, as well as the safety and security they experienced as a result of the completion of the various home construction projects. Moreover, select individuals reported feeling an increased sense of pride in their homes and surrounding community and a desire to continue carrying out home improvement efforts of their own. However, two participants expressed considerable frustrations with the lack of quality and timeliness of the work that was completed by the contractors and construction crews assigned to their homes. Their cases will be explored in greater detail below in order to better understand the nature of their concerns and the potential for process improvement moving forward.

What was the best part of working with the Bee Branch Healthy Homes Resiliency Program?

The most frequently cited “best part” of participants’ involvement in the program was the effectiveness of the staff and the quality of their communication. In different ways, four of the 10 interviewees indicated having a positive experience interacting with the home advocates and contractors alike throughout the process. For example, one participant stated, “The staff were great, they always made sure to contact me and let me know what was going on.” Another participant who appreciated having a staff member handle the communication with the contractors reported, “It’s been a really good experience as far as communication between the contractor, the Bee Branch people, and myself. When things came up, they were dealt with and addressed them as they happened.” Particularly, as such changes in the construction plans happened, effective communication was an essential component in ensuring positive outcomes. As one participant exclaimed, “I couldn’t believe the efficiency of the personnel of the program overall.” Thus, the human element and connections that staff were able to make with participants appeared to have an impact on their experience.

Three participants indicated that the actual work done on their homes was the best part of working with the program. One such interviewee stated pointedly, “We have no water in our basement and that was the goal, so that’s a plus.” The other two echoed similar sentiments about the benefit of the various projects that were done to improve their homes. Even one of the two participants who had an overall negative experience still acknowledged the fact that water infiltration was no longer an issue. To that effect, he stated, “You know, my basement’s not leaking.”

Two interviewees indicated that the financial benefit was the best part of participating in the program. One recalled, “When I first bought the place, I was scratching my head, ‘How am I going to get this done or that done?’” So, the availability of direct financial support in accomplishing those home improvement tasks was critical. In similar fashion, a second participant described how he had recently been trying to save up for some “things that I wanted to fix, and this gave me the ability to do that.”

The foremost positive outcome of this program for the participant who was both a homeowner and landlord, was the degree to which she now felt secure in the safety of her home. This participant described that having the work done “really made me feel a lot safer.” She continued by saying, “the feeling as a landlord, too, that I want to make sure I’m providing a safe home for people that would rent from me... [and] with my grandchildren being at my house all the time.”

What problems, if any, did you have in working with the Bee Branch Healthy Homes Resiliency Program?

Client responses to this question varied widely and appeared to depend mostly on the quality of the contractors’ workmanship and effectiveness of their communication. Of the 10 participants, three reported having no problems whatsoever, three had only minor issues that they did consider to be disruptive, two had problems that required additional attention or repair, and two clients’ experiences were markedly negative.

Among those participants who described only having minor issues, one initially stated that they did not have any issues, but then recounted how “it took a very, very, very long time to get the process rolling.” Still, they expressed a great deal of understanding regarding the nature of large-scale projects taking time to get underway, and ultimately the delay in the projected timeline was not of

great consequence to them. A second participant mentioned that he never received the rebate for the furnace he was initially promised, but he remained extremely grateful for the work completed and the financial assistance received. The third client reported being unsatisfied with the cement work that was done on the driveway, but that it was remedied after reaching out to the program staff. Each of these clients was very sympathetic toward those that completed the work and were very forgiving of such minor nuisances. For example, they stated things like, "That's no big thing" and "We never complained. I mean we were grateful that we even were able to get it done without paying for anything."

Two participants expressed moderate frustration with the quality of the workmanship and the lack of attention to detail on the part of specific contractors. One commented that after the contractor received payment for the job, "There were a couple of things that never got fixed or never got re-addressed." The other noticed that the windows were not installed properly and described, "I really had some concerns about it, but I was afraid to say anything." It was only when a different contractor noticed the issues that he was encouraged to speak up and have the work inspected, which led to the eventual repair of the windows. However, this participant also reported other instances where contractors did not fully clean up after their jobs, leaving debris and leftover materials on site.

Finally, there were two individuals who reported having rather significant problems with the process and outcomes of the work completed on their homes. One elderly woman was most upset by the fact that the external stairs leading out of her basement were sealed off, something that she felt could have been avoided. Especially given her limited mobility and the narrow access to the basement through the inside stairwell, she described no longer being able to make use of the downstairs level of her home. Additionally, she reported that a basement window was unexpectedly bricked in, the furnace was of poor quality and broke down within a year, a downspout blew away, her yard was left a mess, and carpet was unnecessarily torn away, which exposed lead-based paint on the ground. Much of these issues she attributed to the lack of quality workmanship and cheap supplies being used to cut corners. She lamented the fact that her contractor hired out many of the projects to other businesses whose employees were inexperienced and unreliable. Summing up how her participation in this program could have been better, she simply stated, "I just wish I had a different contractor... that guy, I don't think he cared about anything."

In a similar vein, the lone tenant from among the interview participants, who had a family with young children, experienced a 14-month long whirlwind of constant disruption, incomplete projects, and even damage to their possessions and home. The laundry list of issues reported by this participant included holes in the floor and wall, exposed electrical wiring, windows left uncaulked, and the exterior being left without siding for months on end. At one point, the family was displaced for a period of multiple weeks for certain projects to be completed. "They took over our whole house. They threw stuff around, they broke stuff... everything they did, they left garbage." Upon their return, the house was allegedly in such disarray that they "were up until 3:30 in the morning cleaning, just so that we could come back in because there was so much dust and debris." The participant described that the crews hired to work on the various projects were of questionable repute, didn't show up when anticipated, and often left hazardous work incomplete and with significant messes to clean up. What made this situation even more alarming for the participant was the fact that the contractor responsible for overseeing the work being completed on the home was

also her landlord. This led to a very contentious relationship, which resulted in the participant and her family eventually leaving the home and moving away from Dubuque.

Despite some of the challenges that arose on individual projects, three clients expressly indicated that their home advocate or program staff members were helpful resources in responding to issues. For example, when recalling the benefit of having a point person to be able to call when the work was not completed to specification, one such participant stated, “I called Sharon up and they came right back and, you know, re-did it.” Another client described that, “It helped having the Bee Branch doing the talking with the contractors instead of me going to contractors.” Thus, the BBHH team members were able to act as intermediaries, ensuring the eventual quality of the project outcomes. In some cases, however, there was either a reluctance on the part of clients to reach out to their advocate, or perhaps a lack of awareness of the scope of their role in the program. As one client described, “I was just so grateful to be having this work done that I was afraid to say anything if I felt it was sub-par.” Meanwhile, another expressed regret for not contacting them sooner to help resolve issues as they came up.

Ratings of Program Components

Interviewees were asked to use a one to five scale (where five was most the most positive and one was the most negative) to indicate how they felt about four different aspects of the program. The table below illustrates the response frequencies for the 10 interviewees.

Item	1	2	3	4	5	Don't know/No answer
How easy was it for you to complete the application for the BBHH?	0	0	1	2	5	2
How easy was it for you to work with the contractor on the construction work?	0	0	2	2	3	3
How helpful was it for you to work with the Home Advocate?	0	0	0	1	7	2
How likely are you to recommend the BBHH to friends or neighbors?	0	0	1	0	8	1

Participants' responses were predominantly positive regarding all aspects of the program, apart from the ease of working with contractors. As reported above in the section on problems with the BBHH program, contractors were a strong indicator of participants' experience. Despite the varied responses to this aspect, participants still reported a high likelihood of recommending the program to others. Thus, even minor complications with completing the application and less than flawless interactions with contractors did not preclude participants from being satisfied with the outcomes of their participation in the program. The conversational nature of the interview allowed for participants to make additional comments while providing their rating. Comments are quoted or paraphrased below.

Program Application

- “Oh that's a five. Yeah, that was real easy!”

- “It was a little confusing because I was also a landlord, but they helped me go through the paperwork.”
- “It was a lot of work to do, but in the long run it was worth it.”
- “Yeah, that was good.”

Contractor

- “The one contractor was very good and followed up with me. The other contractor, there were delays and things like that.”
- “I really thought that the contractors did a really good job.”
- “If you have a contractor, you’re gonna get the cheapest work possible. I was just unhappy with the whole thing.”
- “I had absolutely no problems at all... When they said they were gonna be here at 8 o’clock, about one minute to 8 they’d be at the back door.”
- A couple were just ok, but the rest were great.

Home Advocate (or City Staff)

- “Oh, 5. Any time I had problems I could call her.”
- “Any questions I had I called her, and she would answer them and right down the line.”
- “If I needed something, or something wasn’t right, I’d just tell em and they’d stop up or look at it.”

Recommend program

- “I’ve already recommended it to tons of people.”
- “I believe 5, because I did recommend it to a neighbor.” *(Note: the individual to whom this participant recommended the program also participated)*
- “I’d recommend it to anyone that qualifies. You bet.”
- “Oh, I’m still recommending it.”

In what ways will participating in the BBHH have an impact on your life?

All interviewees reported that participating in the BBHH program had an impact on their lives in some way, with eight providing strongly positive descriptions of the benefits they experienced. The three main categories identified as areas in which the program had an impact on their lives were financial, safety, and stress reduction.

The financial benefit was the most pronounced among the reported impacts, with seven of the 10 interviewees citing the importance of receiving monetary support and/or the value that the projects added to their home. For example, their comments regarding the financial help included:

- “Financially it helped greatly, because at the time I wasn’t working. I don’t know how we would have done it without them.”
- “They took care of the stuff we couldn’t fix on our own. You know, we couldn’t do any of that.”
- “Well, it made my home worth more money than what it was.”
- “It makes it a more desirable property in the neighborhood.”
- “When I go to sell the house, it’ll help because the basement isn’t leaking in that corner anymore.”

Several participants also mentioned the personal impact the program had on them and their families, centering on the improved safety and the benefit of having a healthier environment in which to live. To that end, participants shared the following comments:

- “It gave me the ability to make my home safer... I have children and grandchildren over all the time. So that was something that really made me feel a lot safer.”
- “It makes it a healthier environment to live in.”
- In reference to the detection and mitigation of radon completed on his home, a participant stated, “You don’t know what adverse effects this could have possibly had on our health... They’re just, outstanding. They find these things that I wasn’t even aware of.”

Perhaps related to the increased safety afforded by the work completed, a few participants indicated that the outcomes of the project helped alleviate their stress levels. In their own words, they shared the following:

- “I have less worry right now, which is huge, you know, stress is a big part of people’s lives.”
- “It took a lot of work, away that I didn’t know how I was going to do.”

Finally, one participant cited the impact as simply being the mitigation of the water issues for which he applied to be part of the program. In reference to the recent precipitation, he said, “It’s already had an impact cuz I don’t have the drainage problem.”

Final Remarks

Participants were asked to share any closing thoughts or comments that they felt would be pertinent to for the program personnel. For the most part, they were very appreciative for the outcomes, as well as the individuals that offered genuine assistance. For example, one participant mentioned repeatedly how grateful they were to have the work done. “We’re grateful. It’s a very good program to help people out that really need it.” One simply offered, “I’m thankful, very thankful.” Another encouraged, “Just keep it going, because everybody down here loves it!”

Brief Summary of May 2019 Bee Branch Healthy Homes Resiliency Program Participant Interviews

In May 2019, the University of Iowa Center for Evaluation and Assessment conducted telephone interviews with ten volunteer participants in the Bee Branch Healthy Homes Resiliency Program (BBHH). The interviews were intended to provide BBHH staff with information to help them improve the program. The following is a brief summary of the interviews.

What was the best part of working with the Bee Branch Healthy Homes Resiliency Program?

The “best parts” mentioned by participants included the following (with the number of people who named each category in parentheses):

- Working with the City of Dubuque staff who ran the program and with contractors (4)
- The actual work done on their homes to prevent further water damage (3)
- Financial benefit for low- or moderate-income residents to get work on homes done (2)
- Safety of the home and sense of security
- Benefit to homeowners and to the City of Dubuque

In their own words, BBHH participants described the best parts as:

- "The staff were great, they always made sure to contact me and let me know what was going on."
- "It's been a really good experience as far as communication between the contractor, the Bee Branch people, and myself. When things came up, they were dealt with and addressed them as they happened."
- "I couldn't believe the efficiency of the personnel of the program overall."
- "We have no water in our basement and that was the goal, so that's a plus."
- "You know, my basement's not leaking."
- "When I first bought the place, I was scratching my head, 'How am I going to get this done or that done?' They took care of it for me."
- "I'd been trying to save and fix things that I wanted to fix, and this gave me the ability to do that."
- "Just the safety features with my grandchildren being at my house all the time. And the feeling as a landlord, too, that I want to make sure I'm providing a safe home for people that would rent from me."

What problems, if any, did you have in working with the Bee Branch Healthy Homes Resiliency Program?

Participants' responses to this question varied widely and depended mostly on the quality of the contractors' workmanship and effectiveness of their communication. Of the 10 participants, three reported having no problems whatsoever, three had issues that they considered to be only minorly disruptive, two had problems that required additional attention or repair, and two participants had rather significant problems with the process and outcomes of the work completed on their homes.

Examples of problems experienced by those who reported having minor to moderate issues included a lack of timely completion of the project, work not adequately performed or left unfinished, unreliable or inexperienced workers, the use of cheap supplies, and contractors leaving debris and leftover materials on site.

The first of two participants that had a negative overall experience was an elderly woman with limited mobility who expressed disappointment about the fact that the stairs leading out of her basement were sealed off, something that she felt could have been avoided. The second participant, a tenant with a young family, reported experiencing a host of challenges that ultimately resulted in them leaving the home and moving away from Dubuque.

Rating individual elements of the program

Participants were also asked to rate parts of the program on a 1-5 scale (where 5 was most the most positive and 1 was the least positive). Most strongly agreed that the application was easy to complete and that the Home Advocate was helpful during the process. However, responses regarding the ease of working with contractors was somewhat mixed, with a slightly positive average. Finally, eight out of ten participants said they would strongly recommend the program to friends and neighbors.

In what ways will participating in the BBHH have an impact on your life?

All interviewees reported that participating in the BBHH program had an impact on their lives in some way, with eight providing strongly positive descriptions of the benefits they experienced. The three main ways the program impacted their lives were financial, personal, and safety and stress reduction. In the words of the participants, they shared the following:

Financial:

- “Financially it helped greatly, because at the time I wasn’t working. I don’t know how we would have done it without them.”
- “They took care of the stuff we couldn’t fix on our own. You know, we couldn’t do any of that.”
- “Well, it made my home worth more money than what it was.”
- “It makes it a more desirable property in the neighborhood.”
- “When I go to sell the house, it’ll help because the basement isn’t leaking anymore.”

Personal:

- “It gave me the ability to make my home safer... I have children and grandchildren over all the time. So that was something that really made me feel a lot safer.”
- “It makes it a healthier environment to live in.”
- In reference to the detection and mitigation of radon completed on his home, a participant stated, “You don’t know what adverse effects this could have possibly had on our health... They’re just, outstanding. They find these things that I wasn’t even aware of.”

Safety and stress reduction:

- “I have less worry right now, which is huge, you know, stress is a big part of people’s lives.”
- “It took a lot of work, away that I didn’t know how I was going to do.”

Final Remarks

Participants were asked to share any closing thoughts or comments that they felt would be pertinent to for the program personnel. For the most part, they were very appreciative for the outcomes, as well as the individuals that offered genuine assistance. For example, one participant said, "Just keep it going, because everybody down here loves it!"

Appendix Y- BBHH Resiliency Team Interviews Summary

Introduction and Methods

The following is a summary of six interviews with Bee Branch Healthy Homes Resiliency Program (BBHH) team members. The purpose of the interviews was to document the processes of the BBHH and inform program improvements. Interview protocols were designed during Year 1 in collaboration with Sharon Gaul, Resiliency Project Coordinator for the City of Dubuque and were minimally modified for Year 2 and 3 interviews. All six interviews were conducted via telephone by Center for Evaluation and Assessment (CEA) staff members during July 2019. BBHH staff provided the CEA with contact information to invite eight BBHH team members to take part in an interview and six agreed to be interviewed. Interviews were audio recorded, transcribed, and then coded and analyzed by one CEA staff member.

The same general interview protocol was used for all interviews. As in the Year 2 evaluation report, when possible in this report, responses are aggregated to provide anonymity for the respondents. All interviewees were advised, however, that their anonymity could not be guaranteed because of the small number of respondents and potentially unique responses based on their varied roles in the program. The two home advocates (HAs) are the only two people who serve the same role in the program, and in all cases their input is recorded as either “both of the HAs” or “one HA” to provide them with some level of anonymity. A few questions were asked only of sub-groups, as indicated in the interview protocol (see [Attachment A](#)).

Interviewees were invited to review this summary and make corrections or additions before the summary was considered final and submitted to the United States Department of Housing and Urban Development.

Role with the BBHH

All six interviewees were previously interviewed by the CEA (see Annual Reports for Years 1 and 2). In the first year, the interviewer asked BBHH staff to describe their roles in the program, and in subsequent years, they were asked to describe any *changes* in their roles. All six indicated that, while their roles were very similar to last year, there were a few slight changes. The bulk of their descriptions are summarized here to provide reference for this report as a stand-alone document.

Home Advocates

The HAs said their role has largely been unchanged from the first two years of the project. One HA said that in the first year they did more outreach simply to let people know about the BBHH program and their role in it. The two HAs described their role in similar ways, saying they go to the applicants’ homes with the inspectors to meet the families and see the property. One HA said, “I always explain what my role is, what kind of things I can help them with, and then I go through the assessment.”

Both HAs said they believe the participants generally understand the role of the HA in the BBHH program, but often not until they visit the participants’ homes in-person. One HA said she tries to describe her role over the phone “to let them know who I am and what I’ll be doing when I come

with the inspector, so they're not caught off guard or surprised." One HA said, "There are a lot of people in the program; that might confuse them a little bit." Both HAs said that once they are in the homes, they think it's clear that they are there to be helpful and that, in addition to the folder of information they give the participants, "We encourage them to call us with any questions, concerns, and we want to be that person they feel comfortable calling."

The HAs described their main role as listening to the participants' needs. During a typical visit, they want the participants to talk about their needs in terms of property concerns, like "what's been happening as far as the water coming in" and other "healthy home type" things, but also to talk about other potential needs like "employment and education, if they're able to meet their basic needs, if they have financial concerns, transportation." Once they have talked through these areas, the HAs provide the families with a broad range of information about available resources to help them meet their needs including "community resources, information about fire safety, carbon monoxide, radon." They said some of what they do depends on the season of the year when they are meeting with the participants. In spring and summer, the focus may be on whether they have summer plans for their children. In the fall and winter, they might focus on making sure that participants have resources for weatherization and know how to apply for heating assistance.

Rehabilitation Specialist/Inspector

The rehabilitation specialist/inspector for BBHH said that the job has stayed pretty much the same in the last year. She said that she inspects the properties and develops a scope of work aimed at mitigating damage during heavy rain events. She also oversees construction, answers questions from participants, program personnel, and contractors. She described her role as, "I'm the person on the ground, on the job site, and usually the first person of contact between the property owner and the program."

She described a typical interaction with participants as going to their homes and talking with them about what their concerns are regarding water intrusion. For example, she would ask about "where they think [the water is] coming from, where they've had problems.... Is it every rain event even if it's just a small light rain, or is it only the heavy deluges that we get? What do they do or how do they clean it up?" She said she walks through the property with them and explains what the goals of the project are. She emphasized that she must make it clear that the goal may be to *reduce* the amount of water coming in rather than *completely eliminate* it, with the goal being that they will find ways to minimize property damage, as well as any structural and mechanical harms from water that may still find its way in. She said they sometimes have trouble distinguishing the BBHH program, which is related *only* to water/flood issues, from the general "Healthy Homes" projects where someone may be looking to get insulation to keep out the cold, or to install a handrail for their stairway.

Grant Administrator

The Grant Administrator also indicated that his responsibilities have been very similar to the prior year, but that he has also taken on some of the project coordinator's duties since she has assumed another role for the City of Dubuque and reportedly spends less time on BBHH. He said that in addition to his financial duties as grant administrator, he now goes out to the projects, helps with inspections, and follows the process through to the completion of the work.

He described a typical interaction with a participant as going out with the inspector to view the property to see what the project will entail. Next, they put the project up for bid, then do a bid tour

with contractors and property owners to clear up any questions that arise. Once the contracts are awarded, he sits down with the homeowner and/or tenant to make sure they understand the whole process. He said, “We talk to them about exactly what we’re going to do, when we’re going to start, and hopefully, when we’re going to finish. A lot depends on the weather. It gives the person the opportunity to ask questions. We make sure they understand... the five-year forgiveness loan.”

He said once construction has started, he tries to get to each property once or twice to make sure everything is going okay, and he makes sure the participants know how to contact him with any concerns. When the projects are complete, he goes out again, checks to see that everything has been done according to plan and that the participants don’t have any remaining issues or questions. Finally, he tells them, “Thanks for being a part of our program.”

Project Coordinator

As mentioned above, the person who formerly was the full-time Project Coordinator has taken on another role at the City of Dubuque, and she now works only 25% time with the BBHH. The City wanted her to still be involved with the BBHH to provide continuity since she has experience and history with the project. Because of her institutional knowledge of the project, she said she does a lot of different things depending on what is needed. She said she is very involved with the “data and advocacy side,” but said she still goes out to the project sites, adding, “If we have a tough project out in the field, I get the invite out to see if we can all put our heads together and figure out a solution.” When asked for typical participant interactions this year, she said, “It runs the gamut.” She went on to describe taking phone calls from people with general interest in the program to getting involved with “someone that might be a little bit unhappy and we’ve got to explain the process and go back to ground zero.” As mentioned by others, the project coordinator said that they need to manage expectation of the participants. She said they work to constantly do a better job of setting accurate expectations with the participants about how the work will go, what it will accomplish, and what they can and cannot do as part of the BBHH.

Intake Specialist

The intake specialist serves many varied roles for BBHH. She said her first responsibility continues to be working with new project applicants, doing income verification, and then “following them through the process from beginning to end, and being there if they have questions or complaints.” She said that although she is not the advocate, she sometimes takes on an advocate role because she is the first person that most of the people talk to and “they’re used to coming back to me.” She also gets all the paperwork together from both the participants and the contractors. She sets up meetings, takes notes, and works with Iowa Grants to do the drawdowns of funds and all the “inside paperwork” for the governmental side of the project. She also works with the grant administrator to prepare the paperwork for the forgivable loans.

Like several other BBHH staff, she talked about the need to make expectations clear on this project. She said one of her favorite parts of this project is when the work is done and “I get to talk to [the participants] and they’re so happy.” However, she added that sometimes, “Some of them aren’t happy just because things aren’t fixed and water is still getting in, because we just haven’t got to the part getting fixed all the way... We’ve discovered through this whole process that we may fix where we think the water’s getting in, and just as you fix that problem, guess what, the water decides to come in a different way.” She said since much of her work with participants is done by telephone, it can be fun to go out in person and meet the people when she goes to take pictures of the completed projects. She mentioned, however, that she was regretfully going to be leaving the program soon.

Difficult Interactions

Although BBHH staff in general reported that they had very few difficult interactions with participants, there was some agreement between multiple staff members about situations that arose that could make client interactions challenging. For most of the staff, these situations were ones in which participants felt their expectations had not been met by the work done on their homes as part of the project. The root problem identified by staff was that expectations were not properly managed. Misunderstandings or miscommunications most often centered around work not being finished within the 60 days specified by the contracts, work that could not be done as part of the BBHH project, and projects that did not make homes completely dry.

Several staff members mentioned the difficulty they experienced related to the 60-day length of the contract. Although this has been a standard part of their process since the inception of the project, the relatively wet spring in Year 3 caused several unexpected delays in the projects that extended beyond the specified contract end-date. To that effect, one staff member said, “Weather plays such a big role in what we’re doing, because that’s what we’re working against. We’re trying to keep the rain out, so everything that we do depends on the weather a lot.” This staff member continued by discussing the need for both the staff and contractors to manage client expectations. For example, she explained that they need two days to pour concrete, and if there is a 40% chance of rain on one day, they can’t start the process because if they pour it and it rains, the concrete will be ruined. The same staff member said they all need to understand that the 60-day completion is just not going to happen if they have weather delays. Other issues also have interfered with their ability to complete jobs within the 60-day time period, including needing to special order windows for the 100-year old homes that are common in this project.

Another staff member said that occasionally people have been unhappy with the perceived quality of a project, even when the project meets the standards of practice or the materials used were appropriate for the job. Another staff member said that people want things done that are not eligible for BBHH funding. The staff member described having to say, “I have rules that I have to go by. There’s eligible activities and ineligible activities. This is not an eligible activity.” In this situation, the staff member reported explaining to the participants that they can have additional work done on their homes, but that they need to arrange a separate contract and pay for that work on their own.

One staff member described a difficult situation that began with a family member of the participant engaging with the contractor in a negative way. To resolve the issue, the project lead had to step in to clarify who could be on the job site during work and who had the authority to work with both the project and the contractor.

The staff members made it clear, however, that these situations were among the minority, with one describing it as “one in six or maybe ten... that puts us in the challenging or unhappy category.”

The two HAs also said they had very few difficult situations, but one of them also mentioned dealing with participants who were unhappy with the work in progress. The other HA said that she had one challenging situation where the participant did not follow through with the initial interview and assessment. She said that for the most part that was okay, except that it was a “lost opportunity” to provide the client with important resources for improving their home and life situation.

Improvements Due to BBHH

Structural Improvements

The four interviewees who worked with property improvements were asked to describe the most common resources that were going into the project homes this year. The following items were mentioned, presented here in order of frequency.

- Sump pumps (4): All four mentioned sump pumps with one specifying that they include battery backups for the pumps.
- Dehumidifying fans (3): Three of the four mentioned basement dehumidifying fans.
- Drain tiles, gutters, and down spouts (3): Three staff members mentioned work being done to make sure water drains away from the home, including both interior and exterior drainage and tiling. Two people also mentioned doing landscaping and soil modification as part of this effort to keep water away from the home.
- Tuckpointing (2): Two people described projects that involved tuckpointing the limestone foundations of the older homes.
- Replacing or raising furnaces and water heaters (1): One person said they commonly replace or raise water heaters or furnaces to prevent them from future water intrusions.
- Replacing roofs (1): One person mentioned replacing leaky roofs that were causing water damage inside the home.

Other Benefits

The home advocates were asked to describe the extent to which participants have followed up on or utilized the various resources they discussed. At least one of the HAs mentioned the following list of resources (with 2 in parentheses if mentioned by both HAs):

- Weatherization (2)
- Medical and dental insurance and referrals (2)
- Food assistance (2) Food pantry referrals, especially for tenants in rental properties.
- Budgeting booklets (through Iowa State Extension office)
- Employment assistance (Iowa Works and Career Pathways)
- Legal assistance (Legal Aid)
- Mental health services (Hillcrest)
- Energy assistance

The HAs said that they generally provide participants (homeowners and tenants) with information “they didn’t know was out there or they forget the dates they can apply.” One of the HAs said that when they have done one-year follow-ups with participants, they hear that participants are “getting less water in their basement and... people seem to be really pleased with the program and they’re not having the difficulties that they were having before with the water coming into their basements. We’ve had a lot of rain this year, and so I had a couple people that I talked to that said it was just amazing how different it was. And that they didn’t have to worry about it.”

Additional Resources

When asked what additional resources they believed could be offered in Dubuque, most BBHH staff members indicated that Dubuque does a great job and already has much of what is needed to serve their residents. One BBHH staff member said, “Dubuque’s in a good position,” and went on to name

some of the “really good resources that are available,” including a new lead grant, the rehab program (“still very strong”), Operation New View for weatherization, the Visiting Nurses Association (VNA), and United Resources for help on an emergency basis.

Another staff member said Dubuque is “doing a pretty good job” of providing resources for its residents, although she named a need for increased access to mental health counseling. The staff member went on to say that mental health seems to be at the root of a lot of other problems like depression, anxiety, and an “inability to hold down a job that allows them to earn enough to maintain their property, so they need a lot of other assistance, too.” She went on to describe how this instability may lead people to overreact in situations where they only have small amounts of water in their house.

Two staff members said that there are ongoing and unmet needs related to pest control. One staff member said that bedbugs can be a huge problem for residents. She elaborated by saying that pest control is “very expensive and a lot of people can’t afford it.” Another staff member said, “There’s no one that helps with that funding.”

Two staff members described ongoing needs related to transportation. One BBHH staff member said that there have been improvements in the availability of public transportation, including “service to Peosta,” where a lot of people work in factories, but that there are still shortages. The other staff member described that people who have broken-down cars often lack the resources to get them fixed.

In addition to the resource needs mentioned above, individual staff members cited the following needs:

- Dental care – especially for orthodontia and dentures
- Rental assistance
- Weatherization – programs exist, but there are waiting lists where priority depends on energy costs, “so it’s very difficult to get into that.”

Finally, one BBHH staffer wished for a program that could help residents with “curb appeal.” The staff member said various programs go inside homes and make repairs, “But no one can really see those.” She went on to describe that homeowners don’t have the money to do exterior things like siding, painting, or landscaping to make their homes look as good as they can. Even though “it’s just aesthetics, sometimes that makes your life a little happier, more joyful. Everyone wants their place to look nice.”

Impact on Participants’ Lives

Effectiveness of Structural Improvements

All six BBHH staff members said the BBHH improvements have had a great impact on participants’ lives. While they highlighted the actual physical improvements in keeping water from entering the homes, especially during the past year when there have been numerous heavy rainfall events, they also emphasized the power of the improvements to decrease stress among the families, lighten the burden of financial difficulties, and improve the health of the residents. Their strongly affirmative responses included the following:

- One staff member said, “I think we’ve really changed positively the lives of the people that live in these properties because they’re not necessarily stressing about every rain event as

to how much work they're going to have and what's going to get ruined, and they're not taking days off work trying to clean out, dry basements. They're to a manageable state, and so it has lifted the burden off many people's shoulders."

- After saying that some of the residents' sentiments have been captured in interviews and videos, including people saying that they're not up in the night pumping water out of their basement, one BBHH staff member said that participants say they, "...wish they could have had that sooner ...[because] 'Now I can do other improvements at my house' ... Do folks sit there and say, 'This totally changed my life?' I doubt it, ...[but] they are like, 'Sweet, I don't have to worry about this anymore.'" This staff member went on to say that in homes where furnaces and/or water heaters were replaced, the new ones have been Energy Star rated and therefore participants are also saving money on their energy bills.
- Another staff member said, "Oh, think about it, just taking away the worry of wondering if your basement's going to flood every time it rains. We put in new roofs, we've put in new windows for people. This is just stuff they can't do, they can't afford to do. So, it takes the weight and the burden off their shoulders and I think it does give them some kind of relief."
- The two HAs pointed out that the program has helped with a host of problems including stress relief, having mold and mildew removed (and the accompanying asthma and allergy issues), and solving some safety issues through replacing broken windows that were a security risk. One of the HAs also highlighted the critical nature of roof repairs, because they not only provide mitigation for water getting into the homes, but they prevent rodents from entering the home and posing additional safety and health risks.
- One staff member declared that property improvements have improved participants' lives "100%." He followed this up by saying, "We certainly are not 100% able to keep all the water out of every home, but what we've been able to do is... keep most of the water out, if not all of it. But then, improve their home by putting in new windows or that tuckpointing or the roof, and which was probably not going to happen without us coming in and helping there. And so, each and every one of these homes that we've worked on, it's certainly been just a positive for the individuals that live there." The same staff member lauded the BBHH's forgivable loans in relieving participants of the worry of how to pay for improvements. He suggested that the program has changed attitudes throughout the community. He said participants are now able to say, "Maybe I can do this and help my property or help the neighbor, because I can get some of the water running a different way from my house.' So, yeah, I think it's been a huge positive effect throughout town."

Effectiveness of Home Advocacy

All six interviewees also mentioned the positive influence that the home advocacy aspect of the BBHH project has been having on participants' lives. The two HAs each described that a lot of the impact of home advocacy has been related to providing participants with information about programs that they did not know existed. One of the HAs said participants often "live day by day and never really asked or didn't even know how to go about trying to find resources for different issues." The other staff members affirmed the role and impact of the HAs in various ways. Speaking about the HAs, one said, "they're not only helping the resiliency program, they're giving out contact and the help that's needed. Whether it's education, maybe it's financial, maybe it's even health. They can direct them to the right resource or the right place for that help." Another indicated that a while back they thought they might need to "rebrand" the BBHH project to emphasize the community resources that they are offering to the participants. The staff member continued, "We want them to see it as a relationship and not as a handout," adding that they are "really dialing in on measuring

outcomes on that advocacy side.” This staff member said that they perceive participants’ needs as falling into “five buckets: health, education, economic, environment, and social.” She said the property improvement portion covers the environmental needs and it is up to the advocacy side to address the other needs.

Both HAs said that at one-year follow-up visits with participants, some participants have successfully accessed the resources offered and others have not. Meanwhile, some (especially tenants) have moved on and were not able to be located for follow-up. However, one HA said, “Some of them definitely follow through, and it’s so nice being able to see that they’ve met their goals, because we ask them what they wanted to have completed within a year and what changes they would like to have made. It’s so neat seeing what they’ve accomplished in that time.”

One BBHH staff member said that the advocates were effective, but expressed concern that the participants do not fully access the resources available to them, sometimes thinking that they don’t need additional help.

Another BBHH staff member said the impact of the home advocacy component of the project “runs the gamut” and described some of the unexpected ways that home advocates have sought out new ways to be resources for people, particularly new sub-groups of the participant population. She said that Dubuque has a large Pacific Islander Marshallese population, and often these families did not have health care providers. She said the BBHH HAs’ presence in their homes has allowed the program to provide information to these families despite the language barrier. She also described HAs’ work within the Bee Branch in properties that cater to men who are “transitioning from incarceration.” She said while they do have some rental assistance during their transition, the HAs have been able to help direct participants to other necessary services, including helping a man who required a wheelchair, but had bad tires on his chair and was not able to get himself to the grocery store.

One BBHH staff member said that, although a few participants have not been too interested in talking with the HAs, most have been very appreciative of their assistance. When the HAs come in and sit down with the participants, and they listen to what they have to say and what they can do for them, “I think it has been incredible.” He went on to say that, it’s not just about the physical work on the property, “it can be health, it can be education, it can be financial... [there’s just] a wealth of information there and resources.” He also said the follow-up that HAs do is also important to let participants know, “it doesn’t end when the job ends.”

Finally, one BBHH staff member described changes in people’s lives as a result of the BBHH in this way:

The home advocates add to [the physical improvements] – they can help them with anything that they need. Even just the simple things, such as helping them to get some extra food or to get some medical supplies or something. I just think it makes people feel better, it makes the community feel better. Every little trickle makes the creek larger. We help one person, and it just kind of pays it forward. I think it makes a huge difference. You know, if we can fix their little things like leakage, and the advocates can fix some of their other things I think it goes a long way. Yeah, it gives them a better life. No matter what, it gives them a better life. And that’s something we have to keep in our head all the time.

Overall Effectiveness

The overwhelming consensus from among staff members was that the BBHH program was having a significantly positive impact on the lives of participants. However, they also identified and described certain areas in which they could aspire to improve. Each of the sections below point toward specific opportunities for improvement or areas for growth.

Internal Communication

There was a range of opinions about how well the BBHH team communicates. In general, the staff who work for the City of Dubuque and the East Central Intergovernmental Association (ECIA) were pleased with team communication; meanwhile, the VNA staff were less satisfied. At the positive end, two people described communication as “really good” or “very good,” and a third said, “I think that is what has made this program so successful.” Somewhere in the middle, one staffer said that communication among the team “ebbs and flows, where we have good communication on some portions and probably poor on others.” At the other end of the spectrum, the two VNA team members expressed disappointment in the communication among the team, with one team member saying, “If the communication was better, I think that would be wonderful. I feel like that’s the only issue that we’ve ever had is the communication part of it.” Another staffer said, “Sometimes there is kind of a disconnect between us and the staff at ECIA.”

These differing views were echoed in some of their descriptions of how often they met and how often they communicated about project status. Two staff members said they had regular meetings, variously described as “monthly” or “at least monthly” (although one staff member indicated that meetings were frequently cancelled). One staff member also said that they would be lost without email because it is difficult to get together, adding that with three major organizations (the City, ECIA, and VNA), “just not having everybody under one roof is a challenge. We knew that from the beginning, but it was how things were set up and it is what it is – we just do the best we can.” The two HAs (VNA) said they would like to be in better communication with the rest of the team, through both in-person and electronic communications. One HA said, “They’re dealing with the construction part, and so I think they have a different outlook on things than what we do.” The other HA said, “We don’t have regular meetings to discuss the different houses or the different projects that are in progress that we’re included in. We’ve asked about that in the past, but nothing ever really came out of it.”

In addition to wanting more in-person meetings, the HAs expressed wanting to be kept up to date on the progress being made on the various projects. In the past, they had reportedly received lists of projects with specific updates, which they found to be quite helpful. They shared that they would like to be kept informed about the communications with the participants to be more aware of what is going on with construction. The HAs indicated that it puts them at a disadvantage when they contact participants and don’t know whether or not the construction is finished or if the participant may have experienced problems with the construction process. One HA said, “It would be nice to have a heads-up, like ‘Yeah, they’re not happy with it.’ Even if they would call us and say, ‘Would you call and talk to them?’ I would love to do that to be the middleman to maybe help them out and maybe calm them down a little bit.” Both HAs also said they often write emails to the BBHH staff about things they learned during their conversations with participants and, while they are often acknowledged with an “okay, thanks” by the staff, there is seldom follow-up to let the VNA know that the concerns were addressed.

In sum, the HAs indicated that more frequent communication from the rest of the staff would improve their ability to more effectively work with the BBHH participants.

Challenges

Lack of contractors

The four City of Dubuque and ECIA staff members all shared that the small number of contractors who have been available or interested in doing BBHH construction has been one of the biggest challenges they have faced in the last year. One staff member said, “We do not have enough contractors to do the amount of work we have in a timely fashion.” Another stated, “I think our biggest challenge has been not enough contractors. Work could be done faster, we could help more people quicker; however, it’s been taking us a long time because we only have four contractors working.” A third staff member echoed the same type of sentiment, offering that, “if we did have more contractors we could be working on more houses on any given day.” This staff member, however, went on to say that the contractors they do have are very excited about the program and their familiarity with the BBHH parameters make some parts of the process much simpler. For example, he said, “Even their teams – we see them a lot. We’re at bid tours, we’re at the homes while they’re worked on, we’re at the contract signings... So, I think in a way, maybe that’s been a really good thing rather than having 40 contractors. They know ahead of time, before we even put the bid specs together, that they know what the houses are going to need, so that has really worked out to be a beneficial part of it – where nothing is really surprising these guys now.”

One of the staff members speculated that there are several reasons why the number of contractors has been limited, including the amount of insurance they’re required to carry, as well as a shortage of skilled labor willing to do the “physical work. Not everybody wants to be in a basement and dig up the flood and put in a sump jar.” The same participant described that the contractors typically need to hire licensed subcontractors to do plumbing and HVAC work, and they don’t all have ready access to good subcontractors.

One staff member also mentioned that the small number of contractors has been even more challenging due to the wet weather that backed up everyone’s schedules during the past year. She continued by describing how difficult it has been for many of the contractors that are running smaller operations to manage their time and projects appropriately. She said, “We’re finding ourselves having to actually sit down with the contractors and help them learn how to project manage.” Thus, while the program as a whole is perceived as being good for the community because it provides an opportunity to grow their businesses, “with that comes growing pains” in the form of an additional burden on the BBHH staff.

Communication and Scheduling

As a byproduct of the internal communication challenges described above, one of the HAs described that scheduling had also been a challenge during the last year. She said that the HAs had asked the other staff members to try to schedule appointments two weeks in advance to make sure that one of them would be available, however, this was not always the case. With short notice for these appointments, it was difficult for the HAs to always make it work.

Resources for participants

One of the HAs also said that finding the right resources to meet participant’s needs has also been a challenge. She said that they continue to learn about new resources, which has improved their capacity to help clients.

Staffing issues

Several participants (from all organizations) cited staffing changes and illness as playing roles in the workings of the team over the last year. The additional workload required of their colleagues appeared to pose some challenges. When others were filling in to cover for those that left or were away from work, this resulted in a lack of consistency. One of the HAs acknowledged that this was understandable and that sometimes it was just the fact that, “someone would do [things] differently than the next person.”

Understanding and responding to residents’ needs

One staff member said that one of her biggest challenges is to find “the time to really dedicate to the data.” She said that they collect data to help understand the needs of the people of Dubuque, which they have categorized into five main areas: health, educational, economic, environmental, and social. She said they typically see the most needs in the “built environment” area and they can help with some of those needs through this program. Health care is reportedly the second greatest need, and although the BBHH also addresses some aspects of that, there are still gaps and they must decide “which ones are important to us and what we are going to do about it.” She said they really want to establish a baseline and then be able to talk about goals and the changes the program makes over time. She said, “I always want it to be better. I always want to have the answer. I think time has just been my biggest challenge. You know, you’re trying to stay in compliance and regulatory, keep the production going, tell the story, do the outreach, do all the things, make all the meetings... and sometimes start feeling, ‘Wow, I’m not doing any of these great.’ But we’re going to spend the money, which is the important part, and I know we’re making a difference.”

Recommendations for Program Improvement

As with the challenges described by the BBHH staff, their recommendations appeared to be closely linked to the interviewees’ roles or perspectives in the program. While the two HAs obviously recommended improving communication, two of the other staff said they need more contractors. Finally, the other two staff had more overarching thoughts when asked about how they could improve the program.

Engage more contractors (2): Two BBHH staff said they need to find ways to alleviate the contractor shortage they are experiencing. One expressed this as a problem without proposing a solution, but said that even getting one or two more contractors involved would help. The other staff member described how the current requirement to take the lowest bid is a problem, because small numbers of contractors tend to get all the bids and the others “fall off” and don’t bid. This also results in those contractors being overworked, thereby reducing their capacity to get the work done. This staff member suggested that they revise the bid process so that they could get a pool of contractors who will do the type of work needed, and then rotate the contracts among the contractor groups based on when it is feasible for them to complete the work.

Improve internal communications (2): The two HAs both focused on improving communication within the project team. One HA said communication should be “a little bit more open,” perhaps involving more phone calls, emails, or meetings. She said there is a need to ensure that their input to the other staff regarding participants’ needs is heard, and then followed up on. She provided an example in which the HAs reported a participant’s problems with pests in the walls. She said that if they could learn, “Yes we took care of this,” or “No, that’s not covered” for a particular reason, they would better know how to help participants and meet their needs. The other HA gave another example of what the source of some miscommunication or misunderstanding may be. She described

that is not always clear to participants how to decide what problems are indeed “flood-related”, and therefore eligible for program funding under Healthy Homes.

The final two responses regarding program recommendations were more all-encompassing and philosophical. One said that they hope that Dubuque and other communities have the chance to do more work like this. He said, “I certainly hope that other communities get the opportunity to do some of what we’ve done because it is all 100% positive.” He pointed out the value of having their own communications people, local media, and the IWA program evaluation to tell the story of the project so that others can learn about it and how it “helps people and the whole city benefits.”

Finally, one BBHH staff member said:

I think we’ve all got to give ourselves a little bit of a break. We all feel like some days there’s more work than what we can handle. Realizing that we have come a long way and we’re doing a program and a number of units that I think a lot of people thought that we couldn’t do. So, I guess I don’t really have any big takeaways at this point other than, we have made a difference. We’ve got five or ten percent of the participants that might not be happy, but I think all in all that’s a pretty normal percentage. There’s certainly far more that are happy. And even if they’re unhappy, I guarantee that structure is better off than it was when we showed up. We’ve never run across a unit that we couldn’t find something that we couldn’t improve or make healthier or safer for that occupant... I know that we have made a difference and we’ve done a program that HUD’s been interested in that we know is good... I think that’s about my roll up to this point. We’ve made a difference and we’ve just got to remember that.

Attachment A – Bee Brach Healthy Homes Team Member Interview Protocol

As part of the evaluation of the Iowa Watershed Approach Project, the Center for Evaluation and Assessment is conducting interviews with key personnel from Bee Branch and Healthy Homes Resilience Program. The purpose of the interviews is to document the processes of the Healthy Homes Program and inform program improvements.

Your responses will not be reported by name. However, because there are only a small number of team members your anonymity cannot be guaranteed.

Your participation in this interview is voluntary. You may decline to be interviewed, you may decline to answer particular questions, and you may ask that the interview not be used even after we have completed the interview.

The interview will take approximately 30 minutes. You may end the interview at any time. Please let me know if you need to leave or if you'd like to take a break and finish the interview later.

Findings from all interviews will be combined into one summary, and you will be given the opportunity to review the summary and make comments, corrections, or additions before the summary is considered final. When it is finalized, it will be given to the Healthy Homes Program staff for their use in planning and to the project funding institution, HUD, at which point it becomes part of the public record for the project.

In order to make this process smoother and make sure we capture your feedback accurately, we would like to tape record the interview. Is that okay with you?

Role

1. [All] How would you describe your role with the Healthy Homes Resiliency Program? [If this person has been interviewed in the past, ask "Since we last spoke, how would you say your role is different now than it was a year ago?"]
2. [All] Do you have direct contact with the Healthy Homes participants? [If no, skip to item #7]
3. [If yes to #2] Describe for me what a typical interaction with participants might be like for you.
4. [If yes to #2] Generally, do you think BBHH participants understand your role in the program? (Follow-up prompt if needed) Describe to me why you feel this way.
5. [If yes to #2] Tell me about a participant contact that you would consider particularly difficult.
 - a. How did you handle this situation?
 - b. Is there anything you would have done differently if you could do it over?
6. [Home Advocate] Would you say that home visits are different now than they were a year ago? [if yes] Describe for me the process of a typical home visit.

Recommended Resources

7. [All] What are the most common things that the program is doing right now for participants?
8. [Home Advocate] During the home visits, as the home advocate, you make referrals for participants to address their needs. Can you tell me which resources participants have been most interested in?
9. [All] What resources or home improvements (if any) are there that participants need or could benefit from, that are not currently available in Dubuque?

Improvement of Life for Participants

10. [All] How effective do you think the property improvements aspect of the BBHH is in improving the lives of participants?
11. [All] How effective do you think the home advocacy aspect of the BBHH is in improving the lives of participants?

BBHH Logistical Considerations

Now we are going to switch gears and talk more about your experiences working with the program team, challenges, and any recommendations you might have to improve the program.

12. [All] First, how effective would you consider the communication between yourself and other team members? Your team and contractors?
13. [All] Thinking about the whole BBHH in general. What would you say are the biggest challenges, if any, you have encountered in your role in the project?
14. [All] My final question is about improving the program. What recommendations, if any, do you have that would help improve the Bee Branch Healthy Homes Resiliency Program?
15. [All] Do you have other comments about the program, the process – anything else at all?

Appendix Z- BBHH Project Contractor Survey Findings

The Center for Evaluation and Assessment (CEA) collaborated with a Bee Branch Healthy Homes Project (BBHH) staff member to create a survey for contractors doing the construction work for the BBHH. The CEA is conducting the program evaluation of the *Iowa Watershed Approach*, a project funded by the US Department of Housing and Urban Development, of which the BBHH is a component. The purpose of the survey was to learn about the contractors' experiences in working with the BBHH and what project staff could do to improve that experience and attract additional contractors' interest in bidding on BBHH projects.

On September 11, 2018, the CEA sent an email with an anonymous link to the survey to the 14 contractors or sub-contractors who had bid on and carried out construction for the BBHH as of September 1, 2018. Reminders to complete the survey were sent to everyone on the list on September 20 and September 28, 2018. Of the 14 representatives for construction companies who received the survey link, seven completed the survey for a response rate of 50%. Six respondents indicated that they were sub-contractors for the BBHH and one said they were a general contractor.

Respondents were asked how many projects they had worked on already or had a contract for with the BBHH. Figure 1 reports the results.

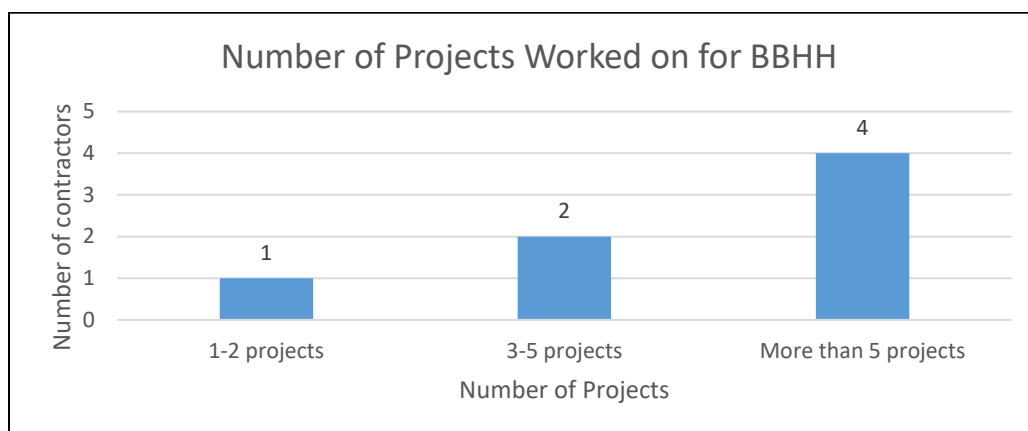


Figure 1. Number of projects worked on for BBHH

More than half of the respondents had worked on five or more BBHH projects.

Contractors were asked a series of questions related to the BBHH bid process. Table 1 reports the results.

Table 1. *Contractors' satisfaction with and preferences related to BBHH bidding process (N=7, except where indicated)*

Item	Yes	No
I am satisfied with the current bidding process.	4	3
I would prefer that multiple projects be bid together.	5	2
I would prefer that trade work bid on its own.	4	3
Currently, there are requirements of the contractor bid specifications that deter me from working on some of the BBHH projects.	0	7
I plan to bid on future BBHH projects. (N=6)	5	1

Contractors' opinions about the current bidding process were mixed with about half of the respondents indicating that they were satisfied with the current bidding process and half were not, and also about half preferring that trade work bid separately and half not. Contractors were also split as to whether they preferred multiple projects be package together for bidding with most (5) preferring they be bid together. All respondents said that current requirements are not a deterrent for bidding on future projects. Five of the seven said they plan to bid on future BBHH projects.

Respondents were also asked four open-ended items about their experiences working on BBHH projects.

What challenges have you experienced working on BBHH projects?

Five contractors or sub-contractors responded to this item. Two respondents said they had not experienced any unforeseen challenges. Two respondents (who were sub-contractors) said they had not received or had received late payments from the general contractors. Individual respondents said they had issues with "unorganized structure – mostly from the contracting side" and with "price sharing," and one person said there was a "lack of good general contractors."

What could the BBHH staff do to make your work with the project easier?

There were five respondents to this item. Two respondents indicated that things did not need to change with one saying that it had been "All good so far" and the other saying, "Nothing. It is very easy." The other three respondents all said that either the BBHH should act as the general contractor (2) or that there should be no general contractor (1). One respondent commented, "Be the general. You would save tons of time by bidding this out with subs and having BBHH act as general. Seems easy and it would be without the 10 thousand miles of typical ... government red tape."

What could BBHH do to make it more attractive for contractors to bid on the BBHH projects?

Two of the three people who responded to this item repeated their perspective that BBHH should act as the general contractor for the construction, or in one case, find better general contractors. One of these respondents said, "Most things that are being bid on are very separate from other trades. Again, have better generals or bid the work out to the sub with no general. A true general contractor is not needed." One respondent said that they should allow more time to schedule bid tours.

What other comments do you have about working with the Bee Branch Health Homes Project, the HUD funding, this survey, or anything else you may want to comment on?

Four people responded to item. However, one person said they had no additional comments and another said they had, "Too many comments to type." One person commented that they did not think that BBHH should be soliciting bids from out-of-state companies adding, "They should try to keep the work local." The other person reiterated the idea that the BBHH projects do not require general contractors, commenting:

You need to get this project restructured. There should be an in-house or third-party GC for all projects. You are already putting the project together, then you have to babysit the GC's, who hire the subs, who usually are left in the blind until the last minute. We would also like to get paid in the future. Wouldn't have that problem if payment came directly from you. Hire me... I'll do it.