Iowa Watershed Approach: Year 4 Evaluation Activities Report Executive Summary

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As submitted to:

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Executive Summary

The Iowa Watershed Approach (IWA) is "a collaborative project that brings together local, state, federal, and private organizations to work together to address factors that contribute to floods and nutrient flows."[1] With funding from Housing and Urban Development (HUD), IWA has the following six goals: 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; and 6) develop a program that is scalable and replicable throughout the Midwest and the United States.

This executive summary showcases the progress and selected successes of IWA in Year 4. This summary will begin with descriptions of the COVID-19 pandemic and IWA contract amendments. These will be followed by descriptions of progress made within the urban and rural watersheds, among the IWA partners, and with respect to the dissemination of IWA.

Impact of COVID-19 on IWA

Whereas Year 3 of the IWA was marked by devastating flood events that had widespread effects across the state of Iowa, Year 4 activities were impacted by COVID-19, a global pandemic. On March 17, 2020, Iowa Governor, Kim Reynolds, issued a State of Public Health Disaster Emergency, giving state agencies flexibility in responding to the unprecedented COVID-19 situation to protect public health. The ensuing social distancing recommendations and related policies, which were intended to reduce or slow the spread of the virus, affected IWA stakeholders' ability to hold in-person meetings or events until they could be conducted in-person safely. In place of in-person meetings, project coordinators and IWA partners described using email, video conferencing, or telephone to stay in contact with collaborators and keep the project moving.

Reallocation of Grant Funds and 3-month Extension Process

In Year 4, the Iowa Economic Development Authority (IEDA) facilitated a process to reallocate grant funds among partners and watersheds. Additionally, IEDA announced that partners and watersheds could request additional funds and a three-month no-cost extension, which would extend the end date for IWA to December 31, 2021. In mid-February, IWA partners received the reviews of their contract amendment requests. For example, IEDA accepted the University of Iowa's request for a contract extension through December 2021 but did not award any additional funding. On March 31, 2020, IEDA notified the IWA partners that all of the IWA watersheds would receive an extension through December 2021 and that some portion of the grant funds for Upper Iowa, Upper Wapsipinicon, and North Racoon River watersheds would be reallocated to the City of Dubuque Bee Branch Creek Restoration Project.

Progress in Rural and Urban Watersheds

IWA is implemented using both urban and rural strategies for building flood resilience. The rural strategies include constructing flood mitigation and water quality improvement processes on the landscape to improve conditions downstream. Urban practices are designed to address specific flooding issues within a community and include infrastructure projects as well as forgivable loans for individual home improvements and community resource consultations for families.

[1] http://iowawatershedapproach.iowa.gov/#

Program Implementation in the Rural Watersheds

The work of IWA is facilitated in the rural watersheds through the work of Watershed Management Authorities (WMAs). Throughout Year 4 of the IWA, most WMAs continued to make steady progress toward implementing projects, while also beginning critical discussions surrounding the long-term sustainability and financial viability of their organizations.

Their collective successes and accomplishments included:

- Five of the eight watersheds being actively engaged in the *construction of practices*, with two having already completed projects from their first bid packets.
- *Watershed plans* for all IWA watersheds have been adopted or are in their final stages of development (three were completed in Year 4).
- For the East and West Nishnabotna watersheds, their award-winning[2] watershed plan served as the catalyst for the *involvement of state and federal partners* in collaboratively supporting flood mitigation efforts delineated within the watershed plans and a successful application for funding from the US Department of Commerce's Economic Development Administration[3].

Beyond that, most WMAs have also continued to gain additional landowner interest in practices, although some of these efforts were slowed due to funding limits or the disruption of COVID-19.

Table 1. Watershed Milestones[4] for Watershed Plans, Bid Packets, and First Construction

Watershed	**Watershed Plan**	**First Bid Packet**	**First Construction**
Clear Creek	In progress	Out for bid March 2020	Started July 2020
East and West Nishnabotna Rivers	Completed September 2019	In progress	In progress
English River	Completed November 2018	Out for bid August 2019	Started Fall 2019
Middle Cedar River	Completed February 2020	Out for bid July 2018	Started April 2019
North Raccoon River	Completed July 2020	In progress	In progress
Upper Iowa River	Completed June 2019	Out for bid October 2019	Started Fall 20190
Upper Wapsipinicon River	Completed February 2020	Out for bid December 2019	Started March 2020

During Year 4, project coordinators (PCs) were focused on efforts of preparing for and monitoring the construction of practices. Summarizing the overall effort in this area during the past year, one IWA partner emphasized the tremendous effort and activity of the PCs, stating that Year 4 "has been

[2] https://jeo.com/2019-apa-environmental-award
[3] https://www.eda.gov/news/press-releases/2020/04/28/des-moines-ia.htm
[4] As reported at quarterly WMA meetings or by a representative of the Iowa Flood Center

a busy time for [PCs] in regard to project/construction management, bid package preparation, IWA redistribution, and thinking about funding formulas to sustain their WMA." Outcomes have begun to manifest themselves more readily and include physical conservation practices being installed across the landscape and increased community awareness about IWA and engagement with community members, government organizations, and private companies. Additionally, as PCs and board members discussed how to spend down all remaining practice implementation funds, some have also begun plans for outreach and education efforts, promoting the achievements of their watersheds.

Urban Infrastructure Projects

As described in the IWA proposal to HUD, "IWA includes projects to address significant unmet infrastructure needs in Coralville, Dubuque, and Storm Lake." Each urban infrastructure project was selected to reduce flooding impacts in low- or moderate-income (LMI) communities in Iowa.

The City of Coralville infrastructure project was funded to reconstruct two stormwater pump stations and was completed in February 2018. That year, IWA reported that this project helped protect 116 properties, which included homes, businesses, and critical infrastructure.

The City of Dubuque Bee Branch Creek Restoration Project was funded to improve sewer capacity and complete the restoration of the Bee Branch Creek. The City of Dubuque demonstrated progress for this collection of projects so that funds from three of the rural watersheds were reallocated to allow for additional work. In an interview, a team member from the City of Dubuque attributed the reduction in water intrusion in houses in the Bee Branch neighborhood to improvements made to the homes and the infrastructure projects completed along Bee Branch Creek. This project is still in progress.

The City of Storm Lake infrastructure projects were funded to improve community flood resilience through upgrades to the wastewater treatment plant, reconstruction of streets with pervious pavements, and construction of wetlands. In an interview, the City Manager for the City of Storm Lake said, "The biggest thing that we're able to show our public, our residents, and our city council, … we've seen a remarkable reduction in flooding in the community." She also described improvements to water quality and a desire to keep making community improvements. These projects are still in progress.

Bee Branch Healthy Homes Resiliency Program

The Bee Branch Healthy Homes (BBHH) resiliency program in Dubuque, IA helps LMI home and property owners increase the flood resilience and safety of their homes by providing forgivable loans and community resource consultations. BBHH is implemented by team members with the City of Dubuque, East Central Intergovernmental Association, and the Visiting Nurses Association (VNA), and primarily supports individuals through the two program components: structural improvements and home advocacy.

Structural improvements: Structural improvements were made to participants' homes to mitigate or prevent the damaging effects of water infiltration. As a result of the work done on Dubuque residents' homes, BBHH team members and participants alike observed a reduction in water inundating homes, as well as improvements in physical health and financial well-being.

Home advocacy: Complementary to the home improvements, social workers from the VNA serve as home advocates, providing support to community members and matching them with other community resources based on their family's needs. The VNA home advocates provide personalized support to participants, tailoring their resource recommendations to the individual needs of each individual or family. BBHH team members and participants agreed that the home advocates provided useful information about resources in their area.

Partner contributions

IWA is supported by many partners whose goals within the scope of the project are both discrete and collaborative. IWA partners have been integral in supporting the development and functioning of the WMAs and the overall implementation of IWA. IWA partners' support for WMAs varied by their unique role and expertise, as well as the different types of support needed in each WMA. WMA board members identified Iowa Department of Natural Resources, University of Iowa Iowa Flood Center (UI IFC), Iowa Department of Agriculture and Land Stewardship, and other local and regional entities to be the collaborators that have been critical to ensuring the success of their WMA. Complementary to this point, PCs cited the general feedback and expertise from the IWA partners as the source of support they found most useful.

Regarding internal processes, in Year 4, IWA partners reported a notable improvement in IWA collaboration efforts over the course of the grant. Partners emphasized the value of hearing status reports from other IWA partner organizations and leveraging points of intersection to make teams' work more effectively. Looking forward, partners expressed interest in meeting to discuss the legacy, sustainability, and replicability of IWA.

Flood Resilience Team[5]

The elements of the University of Iowa Flood Resilience Team (UI FRT) were redefined at the end of Year 3 to formalize existing efforts and engage partners engaged in making communities more flood resilient. During Year 4, UI FRT made progress in three of their defined areas.

- *Community-wide Flood Resilience Action Plans (FRAPs) and Social Resilience How-to-Guide*: FRAPs are developed by local organizations to target communities with their aim of understanding flooding, resilience, and community networks, particularly among LMI residents. The FRAPs for Freeport and Vinton were completed in summer 2019 and summer 2020 respectively; FRAPs for Coralville, Quasqueton, and Iowa County are in progress; and the remaining three are in preliminary discussions. In addition to the FRAPs, the UI FRT is collaborating with Astig Planning LLC to develop a Social Resilience how-to-

[5] 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.

guide which will showcase innovative practices and lessons learned in developing FRAPs for IWA.

Table 2. FRAP Status by Watershed

Watershed	**Month**
Clear Creek	In progress
East and West Nishnabotna River	Preliminary discussions
English River	In progress
Middle Cedar River	Completed May 2020
North Raccoon River	Preliminary discussions
Upper Iowa River	Completed June 2019
Upper Wapsipinicon River	In progress

- *Multijurisdictional Flood Mitigation Project Planning in Iowa:* The Iowa Department of Homeland Security and Emergency Management (HSEMD) is collaborating with UI FRT to develop a process for developing a multijurisdictional flood mitigation project application to the Federal Emergency Management Agency (FEMA) or other federal agencies. In Year 4, an HSEMD team member defined a 10-step process for documenting benefit-cost-analysis for flood reduction using a watershed approach. Additionally, HSEMD and UI FRT resolved to pursue multijurisdictional flood mitigation project applications for Dubuque County and Vinton, IA to submit to FEMA's Building Resilient Infrastructure and Communities program for the January 2021 and 2022 deadlines.

- *Outreach and Education*: During Year 4, UI FRT members shared information about social resilience and their program to local, state, national, and international audiences.

Dissemination and sustainability

One of the overarching goals of IWA is to "develop a program that is scalable and replicable throughout the Midwest and the United States." Starting at the beginning of Year 4, efforts to share the outcomes and lessons learned in IWA began in earnest.

The UI IFC played a central role in the dissemination efforts during Year 4, facilitating outreach about IWA to a range of audiences. These efforts included presenting about IWA at conferences and meetings, facilitating requests from stakeholders nationwide and internationally to learn more about IWA, and curating a list of all the ways that IWA has been shared with partners and featured in the news media over the course of the year. Two particularly momentous collaborations were initiated with stakeholders in North Carolina and Texas who sought to learn more about IWA.

The extent to which other IWA partners reported participating in dissemination and outreach was somewhat a function of their role in the project. Various IWA partners reported sharing the lessons learned with audiences within and beyond the state, developing Best Practice Guides, or indicated their interest in sharing the story as opportunities arise.