



# Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed

November 2014



THE UNIVERSITY  
*of* NORTH CAROLINA  
at CHAPEL HILL



# Acknowledgments

This report was prepared by the Environmental Law Institute (ELI), the University of North Carolina Institute for the Environment (UNC), and the Minnesota Land Trust with funding from the McKnight Foundation. Principal authors of this report were Rebecca L. Kihlsinger (ELI), Judith Amsalem (ELI), and David Salvesen (UNC). We would also like to extend our thanks to the Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed Advisory Committee (see Appendix A for a list) and to all of the Workshop participants (see Appendix C for a list) for their open and insightful participation in the project.

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Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed.

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# Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed

## Introduction

Located in Southeast Minnesota, the Root River Watershed includes some of the most diverse and unique habitats in the state. Ninety-seven percent of land in the Watershed is privately owned and agriculture remains the dominant land use. However, conversion to cropland, pasture, and rural development over the decades has led to increasing habitat fragmentation and reduced the Watershed's natural ability to mitigate floods. In fact, since 2000, several major floods have caused extensive damages to communities and rural lands in the Watershed. In response to these events, landowners, communities, and state and local agencies continue to seek ways to mitigate flood hazards while maintaining the natural and agricultural heritage of the Watershed. However, the agencies and organizations that address flood hazards rarely collaborate with those that address habitat conservation and watershed planning. Watershed planning and other collaborative efforts underway – the Root River Watershed was recently selected as one of the initial One Watershed One Plan<sup>1</sup> pilot projects – offer unique opportunities to bring together such non-traditional partners to address flood and water quality concerns and improve community resilience. However, the first step toward broadening these partnerships is to increase awareness among hazard and emergency managers, floodplain managers, land use planners, and wetland and wildlife managers about each other's work, and where their work overlaps.

In May 2014, the Environmental Law Institute (ELI), the Minnesota Land Trust, and the University of North Carolina Institute for the Environment (UNC) hosted the Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed workshop. The workshop was designed to build on the groundwork laid through existing collaborative efforts by identifying concrete opportunities for new partnerships and on-the-ground projects. Hazard and emergency managers, wetland and wildlife conservation managers, floodplain managers, community planners, and conservation organizations convened to explore how to work effectively together to meet multiple goals and identify the information needed and funding sources available for joint projects.

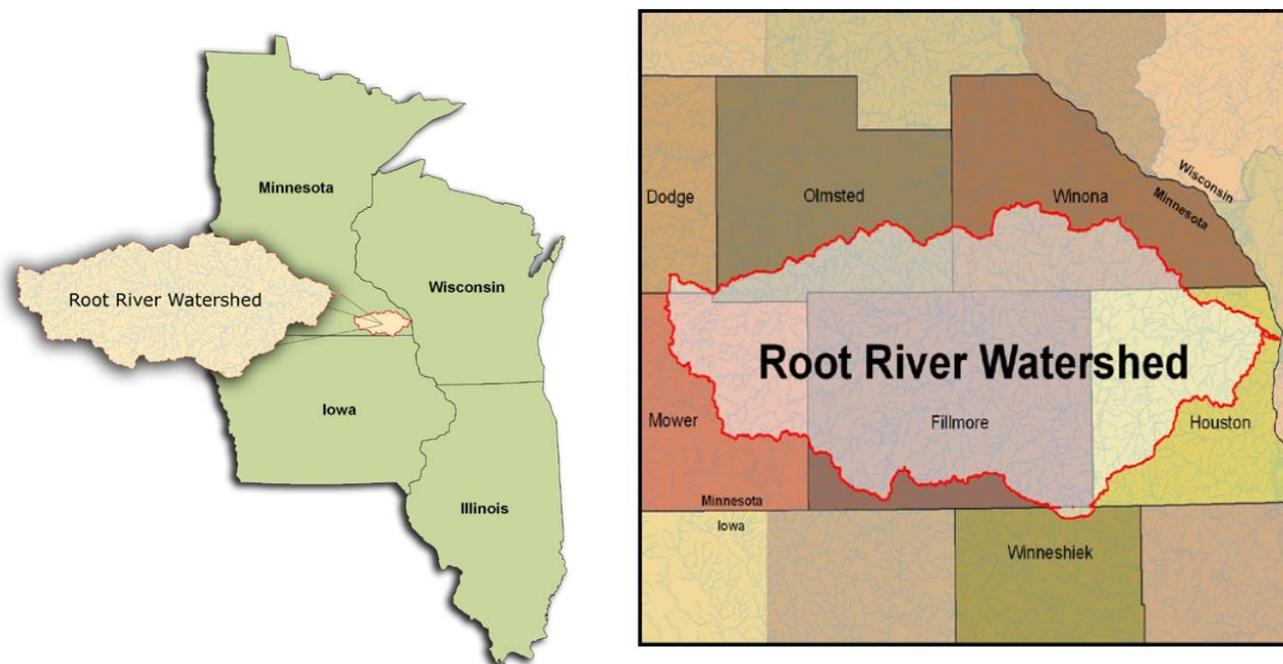
## Background

Compared with standard grey infrastructure, the restoration of wetlands, floodplains, and other natural habitats can provide more effective – and less expensive – protection against flood hazards, while also helping to conserve biodiversity. However, there is a general lack of coordination among the agencies and organizations charged with protecting people and property from flood hazards – the local hazard mitigation planners, emergency managers, and floodplain managers – and the agencies and organizations that manage and protect wetland and wildlife habitats. Thus, opportunities to leverage funding and capacity to achieve common goals are often missed. With support from the McKnight Foundation, since 2011, ELI and UNC have collaborated with local partners in three states to convene a series of workshops and webinars in the Upper Mississippi River Basin. Our workshops - first in the Rock River Basin Wisconsin in 2011, then in the Cedar River Basin Iowa in 2012, and now in the Root River Watershed Minnesota in 2014 – were designed to stimulate and improve ongoing productive collaboration among these agencies and

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<sup>1</sup> Minnesota Board of Water & Soil Resources, One Watershed One Plan, <http://www.bwsr.state.mn.us/planning/1W1P/index.html>

organizations. Collaborative efforts among these groups help to strengthen protection and restoration of vital wetland and wildlife habitats while improving flood protection in frequently flooded communities.



**Figure 1: The Root River Watershed**

(Source: [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_022264.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_022264.pdf))

There is often extensive overlap between wetland and wildlife habitat and flood-prone areas, but there is generally incomplete awareness among habitat, floodplain, and emergency managers about each other's work.<sup>2</sup> Hazard mitigation planners and emergency managers are responsible for identifying the risks to life and property from disasters and for developing strategies to address the risks posed by natural hazards. Protecting wetland or wildlife habitat is rarely considered in hazard mitigation plans and policies and hazard planners rarely coordinate with the natural resource agencies on federal floodplain acquisition programs. Floodplain managers are responsible for regulating development in floodplains through floodplain management regulations and ordinances. They also help to implement flood hazard mitigation strategies and the National Flood Insurance Program and are involved in flood preparedness, warning, and recovery strategies. Wildlife, wetland, and watershed managers and conservation organizations play a major role in the conservation of biodiversity through the preservation and restoration of wetlands and wildlife habitats and the ecosystem services they provide. Wildlife managers typically do not consult with hazard mitigation planners in identifying lands for preservation or restoration.

There is a tremendous untapped opportunity to improve wetland and habitat protection and flood hazard mitigation through greater interagency coordination. The Wetlands, Wildlife Habitat, and Flood Hazards workshops were designed to provide hazard planners and emergency managers the opportunity to identify new ways to more effectively and efficiently reduce flood losses by

<sup>2</sup> Kihlsinger, R.L., D. Salvesen, T. Lee. 2010. Combining Habitat Conservation and Natural Habitats – Issues and Opportunities. *National Wetlands Newsletter*, Vol. 32, No. 3.

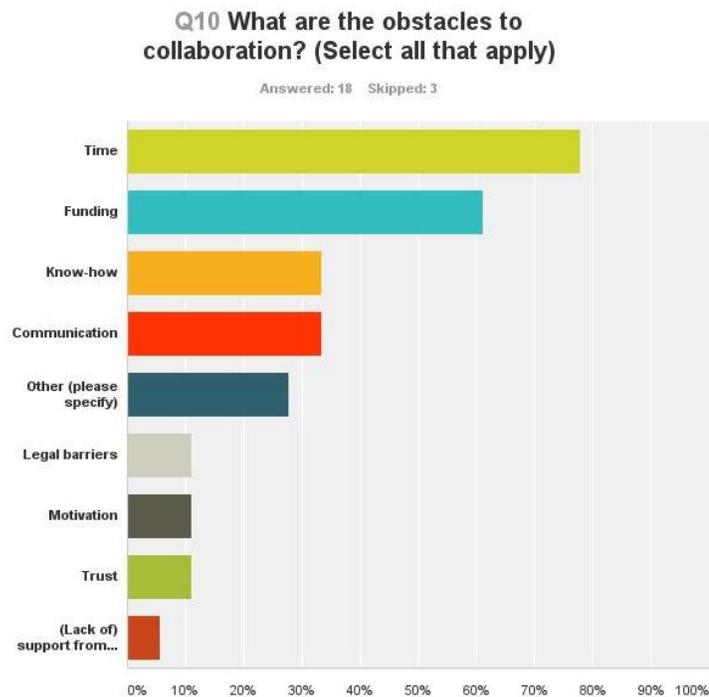
leveraging new resources and partnering on projects of mutual benefit. Habitat managers gain new ideas, untapped potential policy mechanisms and funding, and new allies to identify new ways to protect and restore habitats and support functional connectivity among fragmented habitats. Ultimately, the workshops offer all constituents -- including citizen groups and local governments -- strategic opportunities to engage in concrete projects that provide sustainable environmental and habitat benefits as well as protect people and property from future floods.

## Wetlands, Wildlife Habitat, and Flood Hazards: A Workshop in the Root River Watershed

### The Workshop

The “Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed” workshop was held on May 29, 2014 at Minnesota State College – Southeast Technical’s Tandeski Center, and was funded by the McKnight Foundation. The goals of the workshop were to do the following:

- Increase awareness among hazard and emergency managers, floodplain managers, land use planners, and wetland and wildlife managers about each other’s work, and where their work overlaps;
- Identify the obstacles to collaboration among hazard and emergency managers, floodplain managers, land use planners, and wetland and wildlife managers; and
- Identify opportunities for collaboration and the information needed and funding sources available for joint projects.



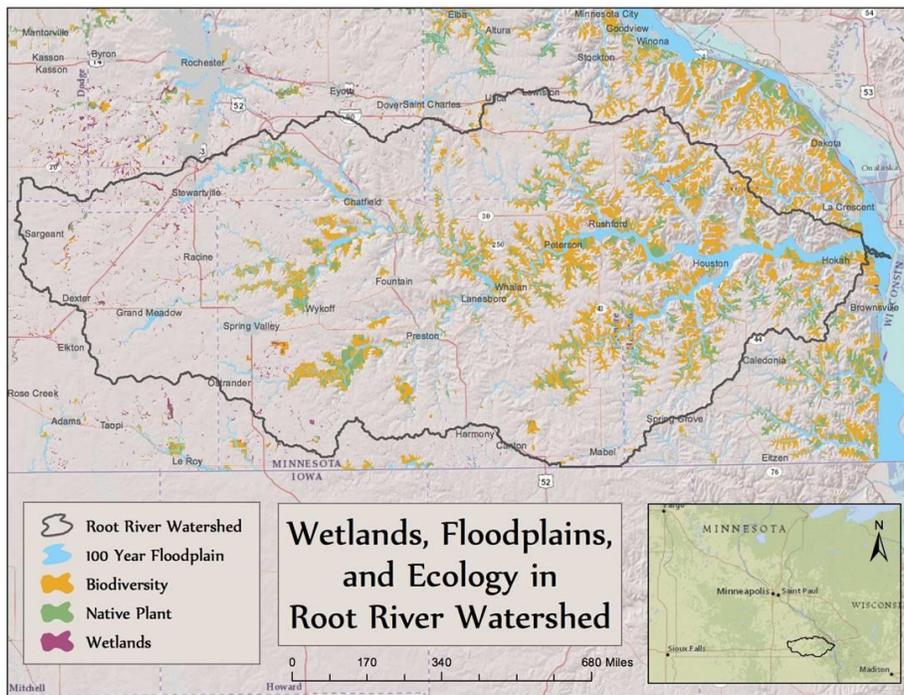
**Figure 2: Obstacles to Collaboration in the Root River Watershed as Identified by a Pre-Workshop Survey**

An advisory committee comprised of watershed and wildlife managers, hazard mitigation planners, land use planners, and conservation organizations guided the design of the workshop (see Appendix A), including helping to identify participants and develop the agenda.

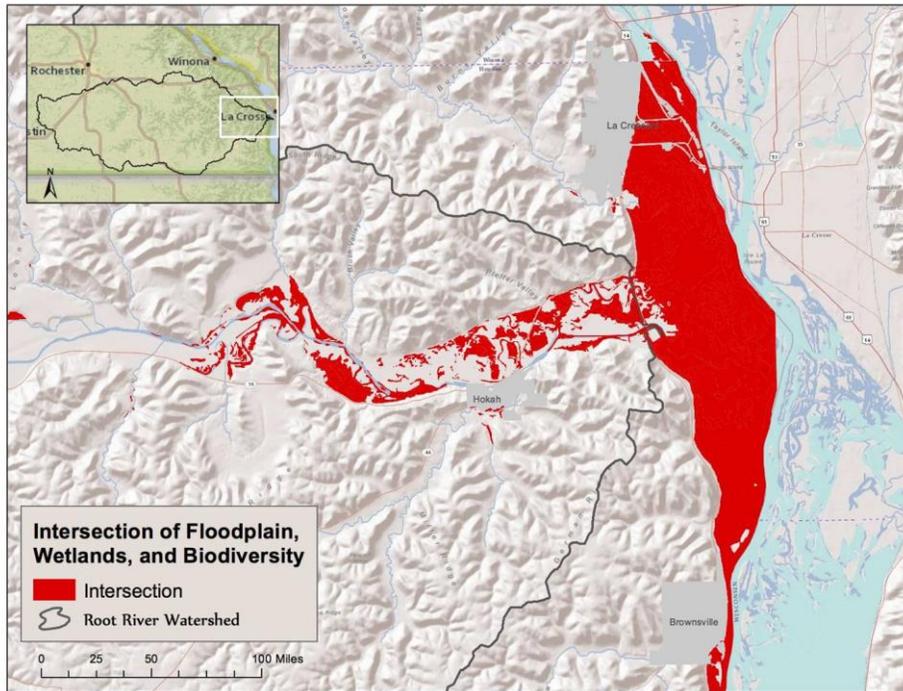
Prior to the workshop, we conducted a web survey of all registered participants: 21 workshop participants completed the survey. The purpose of the survey was to learn more about the mission and objectives of each participating organization, to understand what participants hoped to take

home from the workshop, to recognize where people had already collaborated across agencies or jurisdictions, to identify some of the benefits and obstacles to collaboration, and to inquire about priorities for the future. In the survey, most (60%) respondents indicated that they frequently collaborate with other organizations in Minnesota, particularly with local governments, state agencies, nonprofit organizations, and regional government. The main obstacles to collaboration identified in the survey were the following (in order of importance): time (78%), funding (61%), communication, and know-how (both 33%) (see Figure 2).

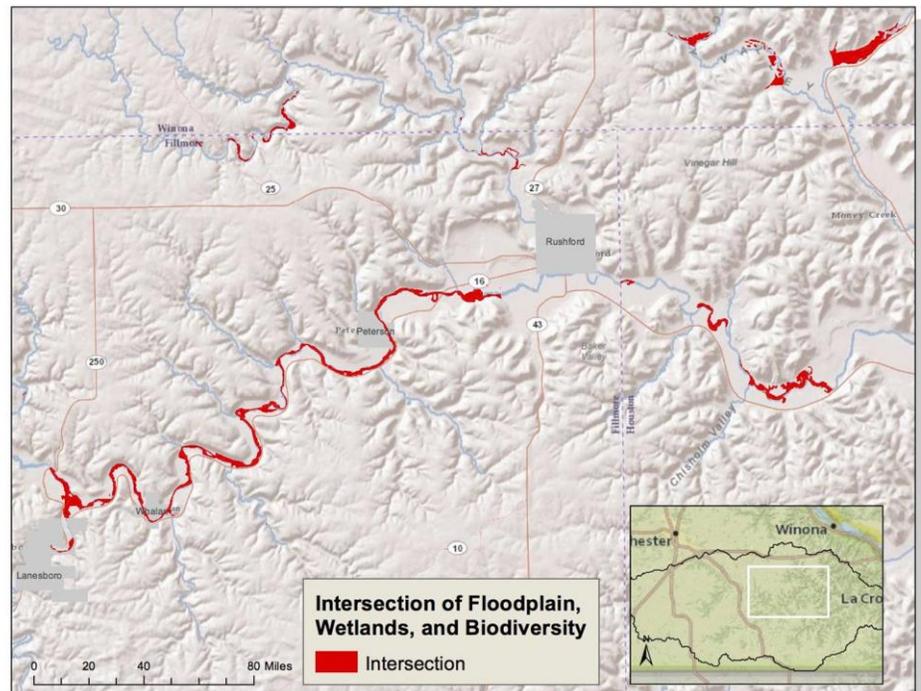
In preparation for the workshop, ELI and UNC prepared a set of maps to illustrate areas of overlap between FEMA’s Digital Flood Insurance Rate Maps (DFIRM) floodplain layers, National Wetlands Inventory polygons, and the Minnesota Biological Survey (MBS) native plant communities and sites of biodiversity significance (see Appendix B for methods). The purpose of the maps was to illustrate where state and local agencies could focus their scarce resources to achieve mutual objectives: flood mitigation, wetland restoration, and habitat protection. Through mapping, we found several areas of overlap between wetlands, floodplains, and biodiversity in the Watershed. Three maps of the Root River Watershed were created: Figure 3 shows the areas of overlap across the entire Root River Watershed. Figures 4 and 5 each zoom in on an area where there is considerable overlap among wetlands, floodplains, native plants, and biodiversity.



**Figure 3: Areas of overlap among FEMA’s Digital Flood Insurance Rate Maps (DFIRM) floodplain layers, National Wetlands Inventory polygons, and the Minnesota Biological Survey native plant communities and sites of biodiversity significance across the Root River Watershed.**



**Figure 4: Red area indicates significant overlap of floodplains, wetlands, and natural areas near the eastern-most portion of the watershed, near the town of Hokah.**



**Figure 5: Red area indicates significant overlap of floodplains, wetlands, and natural areas running along the river from Lanesboro nearly to Rushford.**

Two distinct sections of the Root River Watershed showed a high concentration of intersections among wetlands, floodplains, natural plants, and biodiversity (i.e., “priority areas”). Figure 4 details a stretch of the Root River Watershed from near the town of Hokah running to the eastern-most border of the Root River Watershed and into Wisconsin, where a significant portion of the Root River’s floodplain with a large area of overlap of wetlands, biodiversity, and floodplains. Figure 5 shows the other area of overlap, which runs the entire length of the Root River from Lanesboro nearly to Rushford.

The Root River Watershed has a distinctive geology that plays host to diverse habitats unique to the state. The MBS has mapped 40 different native plant community types covering 38,000 acres in the region. Areas of high biological significance include cliffs, forests, oak savannas, and prairies. One hundred and eleven state-listed rare species of plants and animals can be found in the Watershed, mostly within the 353 biodiversity significance sites the MBS has mapped in the Watershed.<sup>3</sup> The priority areas of the Root River identified in our maps (figures 4 and 5) contain some of the most biologically significant areas within the Watershed. Each of the target sections contain areas of “outstanding” and “high” biological diversity, as well as conservation opportunity areas.

Only 2.75 percent of the 1.06 million acre watershed is permanently protected by designation.<sup>4</sup> However, there are several ongoing preservation, restoration, and planning efforts in the Root River region. The Nature Conservancy continues to engage landowners through open houses, informational meetings, direct mailings, one-on-one visits, and phone call follow-ups, and is actively working to acquire more land through easements. The bulk of state-owned land is in the 9,835 acres managed by the DNR Division of Forestry. The DNR also manages the Ferndale Ridge Wildlife Management Area, the Rushford Sand Barrens Scientific and Natural Area, Forestville-Mystery Cave and Beaver Creek State Parks and 26 miles of public waters of the Root River designated as the Root River State Water Trail. In 2013, a collaboration between the Minnesota DNR, the Nature Conservancy, Fillmore County SWCD, and Minnesota Forest Resources Council produced the Root River Watershed Landscape Stewardship Plan, which outlines 2015 and 2020 targets for protection acquisitions, easements, riparian easements, wetland/floodplain restoration, and other land management activities.<sup>5</sup>

## The Participants

Twenty-one people attended the one-day workshop. Participants included wetland and wildlife managers from the Minnesota DNR; hazard mitigation planners and disaster specialists from Minnesota Homeland Security and Emergency Management; local planning and zoning managers; local floodplain managers; members of local conservation organizations; County Soil & Water Conservation Districts; and County Conservation Boards.

## The Agenda

Although many workshop participants indicated in the preliminary survey that their organization collaborates with other organizations frequently, discussions with Advisory Committee members

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<sup>3</sup> Root River Watershed Landscape Stewardship Plan, *Available at*

[http://www.fillmoreswcd.org/documents/RootRiverLandscapeStewardship\\_final\\_5-7-14.pdf](http://www.fillmoreswcd.org/documents/RootRiverLandscapeStewardship_final_5-7-14.pdf)

<sup>4</sup> Root River Floodplain, Workshop Presentation by Rich Biske, The Nature Conservancy, *Available at*

[http://www.eli.org/sites/default/files/docs/biske\\_presentation.pdf](http://www.eli.org/sites/default/files/docs/biske_presentation.pdf)

<sup>5</sup> Root River Watershed Landscape Stewardship Plan, *Available at*

[http://www.fillmoreswcd.org/documents/RootRiverLandscapeStewardship\\_final\\_5-7-14.pdf](http://www.fillmoreswcd.org/documents/RootRiverLandscapeStewardship_final_5-7-14.pdf)

and responses to other questions on the web survey indicated that many groups attending the workshop did not have much concrete overlap in activities or knowledge with the programs and priorities of the organizations outside of their field. Based on these results, the workshop was designed to provide opportunities for participants to interact with different organizations and agencies to identify opportunities for greater collaboration.



In order to raise awareness among the participants about each other's activities and priorities and the benefits that can be gained from collaboration, the morning session included introductions to the following topics: land protection in floodplains, floodplain restoration projects, planning and zoning, emergency management and grant funding sources, hazard mitigation, watershed management, wildlife habitat protection, and floodplain management (see Appendix D for the Workshop Agenda). The morning session also included an overview of physical overlap between habitat and hazard

zones in the Watershed. These early sessions were essential to set the stage for the afternoon dialogue on obstacles and opportunities for interagency collaboration. In the afternoon, participants broke into groups to identify examples of successful collaboration, obstacles to collaboration, and opportunities to overcome obstacles, including possible funding sources available for joint projects. The breakout sessions were designed to facilitate dialogue among the entire group of participants. The final group session focused on identifying next steps to ensure long-term interagency collaboration and cooperation.

## Preserving Wetlands and Mitigating Flood Hazards through Interagency Collaboration

The Workshop confirmed the potential benefits of interagency collaboration. Participants indicated building on existing productive partnerships, expanding partnerships with local governments, engaging landowners, improving communication and messaging, pursuing new funding opportunities, exploring new opportunities for hazard mitigation planning, and forming a Root River Foundation could all lead to projects that yield multiple benefits.

### Obstacles

Despite the potential benefits of interagency collaboration, the workshop participants identified a number of obstacles that could hinder progress toward achieving watershed goals, including barriers to effective communication, agency culture and differing priorities, funding, data limitations, lack of effective communication with landowners, political climate, and lack of successful implementation.

## 1) Interagency Communication

A lack of communication among the agencies and organizations working in the Watershed was cited as a significant obstacle to collaboration. Several participants stated that within some agencies broader communication is “just not on the radar,” and as a result there is no obvious – formal or informal – vehicle for such communication. Several participants indicated that a lack of awareness of who outside of one’s own field might have an interest or role to play and when and to what extent they should be engaged contributes to the lack of communication. Thus, not all potential partners are even identified and the roles that each partner should/could play are unclear. For example, one participant shared that for a given project it is not always clear “who from the county to contact, when to bring them in, and what to even ask of them.” Some participants suggested that this lack of communication might also lead to a perceived redundancy of efforts.

## 2) Agency Culture and Differing Priorities

Several participants indicated that agencies and organizations working in the Watershed do not always have overlapping goals and priorities and sometimes these goals or priorities can be in direct conflict. Different priorities – along with a lack of interagency communication – may contribute to the existing difficulty in coordinating project implementation. As an example, a participant pointed to efforts in the town of Hokah after major flooding in 2000, where USDA disaster relief funds for farmers to clear sand and debris off their fields conflicted with efforts by DNR to get landowners interested in alternative flood mitigation activities.

## 3) Funding

Participants identified a lack of stable funding as a significant obstacle to initiating and implementing collaborative projects. In addition to a lack of funding for staffing and implementation, participants suggested that funding can be superficially targeted or have strict restrictions on its use (e.g., limits on timing, geographic area, and/or acceptable activities); making it difficult or impossible to timely distribute funds to where they are needed.

## 4) Data

Participants cited outdated data, data errors, and a lack of data as obstacles to effective planning and project implementation. Further, several participants indicated that data sharing between agencies and organizations needed to be improved. For example, some participants suggested that there are many different existing hydrologic and other models that could inform the efforts of multiple agencies and organizations, if communication and data sharing were improved. Participants indicated that funding was needed for the staff, technology, and resources necessary to analyze and/or share data.

## 5) Engaging Landowners and the Public

Ninety-seven percent of land in the Root River Watershed is privately owned<sup>6</sup>, so voluntary land management efforts are critical to a successful watershed improvement strategy. Indeed,

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<sup>6</sup> Rapid Watershed Assessment Root River, Natural Resources Conservation Service, Available at [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_022264.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_022264.pdf).

participants agreed that success in the Watershed is impossible without the effective engagement of the Watershed's landowners and farmers. However, several participants suggested that rising commodity prices, which make keeping land in agricultural production more lucrative, are a major barrier to engaging the agricultural community in conservation and flood mitigation projects. Participants also observed that a growing number of landowners are "absentee;" renting out their land to other farmers or ranchers. So, the people inhabiting the land are not always the ones who own and control it. These absentee landowners often live out of state and can be difficult to find and engage.

Similarly, communication with the public is another major obstacle to collaborative projects. Participants suggested that agencies and organizations in the Watershed have not been effective at viewing watershed issues and concerns from the community's point of view and understanding the community's agenda for improving the Watershed. In fact, one participant stated "Its our job to get a shared understanding." However, other participants indicated that it can be hard to incorporate community priorities "as higher-ups and politicians often set the agenda for the agencies."

## **6) Political Climate and Local Government Support**

Several participants agreed that political polarization hampers establishment of effective collaborative projects. They agreed that the political climate sometimes results in a "we/they" mentality, especially on issues like climate change. Several participants suggested that while local governments do not stand in the way of the watershed planning and improvement projects, they often do not lend their support. This lack of support makes it more difficult to engage local landowners and get projects off the ground.

## **7) Implementation**

Participants suggested a lack of implementation is an obstacle to furthering watershed improvement goals. Participants suggested that agencies and organizations sometimes "default to convenience" and that funding is often for planning and process, rather than "for what it takes to implement the project." One participant said the "easy part is making plan. Getting it on the ground is the hard part." A lack of boots on the ground technical assistance, implementation funding, and private landowner willingness to modify a behavior or implement a conservation practice seem to be among the common bottlenecks. One participant suggested that one way to address this is to first get a "clear understanding of what we really think needs to happen in terms of results and where we can be successful."

## **Opportunities:**

There are multiple realistic opportunities to overcome these obstacles and leverage funding sources and capacity to engage in interagency collaborative projects that yield multiple benefits. Workshop participants identified a number of opportunities including the following:

### **1) Build on existing productive collaboration**

Participants agreed that there is a tremendous opportunity to build on existing collaborative efforts in the region. Several participants indicated that the agencies and organizations working in the Watershed need to clearly define a problem on which to work - within funding and staff

restrictions; map out the issues and obstacles that need to be overcome to address the identified problem; identify available models and tools that can be applied; and determine who has the expertise, interest, resources, or staffing to tackle each part of the project. Further, participants indicated that a place to share information, coordinate, and develop shared language is needed to support this effort. Such a pilot or demonstration project could help “kickstart” other efforts.

Participants suggested looking for ways to encourage those working in the Watershed to identify nontraditional partners and broaden their circle of collaborators. Participants agreed that ongoing Watershed Restoration and Protection Strategy (WRAP) planning efforts could be a productive venue for broadening partnership opportunities and incorporating multiple watershed goals (e.g. land use and flood mitigation, in addition to water quality). At least one participant suggested that planners should bring in new partners early in the process rather than solely relying on opportunities for comment at the end of the process. Another opportunity to build on existing efforts may be the Legacy Accountability Act, which may “ultimately force everyone to communicate better” regarding the Clean Water Legacy funds.

Finally, several participants suggested opportunities to improve data sharing. As one example, a participant suggested that there are many different modeling activities taking place in the basin that may serve the interests of groups outside of those executing them. There is potential to share these tools to various audiences.

## **2) Expand partnerships with local governments**

Establishing and leveraging local political support may be critical for expanding collaborative efforts in the Watershed. Several participants suggested that county governments could be more active in championing projects and that government staff could help other watershed groups encourage local landowners to sign up for easements. Indeed, county support may be “essential for getting landowners on board.” In fact, one participant suggested that approaching landowners hand in hand with local government could be more productive and could convince this critical audience to be more open to the efforts of conservationists and planners.

## **3) Engage Landowners**

Participants suggested there was enormous opportunity to increase the agricultural community’s presence at the table and better engage landowners across the Watershed. Participants discussed ways to increase outreach to farmers and landowners and promote best management practices (e.g., rotational grazing, no-till farming, and cover crops) that have benefits for flood mitigation while keeping the land productive. Participants suggested that it might be fruitful to look for ways to provide opportunities for landowners to “make money by doing things differently.” Several participants suggested that to improve engagement, groups working in the Watershed need a better understanding of the problems that are important to the landowner and more knowledge of the leverage points, “financial or otherwise,” that will trigger behavior change. As one participant said, too much of the work so far has sought to address issues “important to us but not them.” Participants agreed these messages could be most successfully communicated by using avenues that target farmers, such as farm extensions and agricultural journals.

#### **4) Improve communication and messaging**

There is opportunity to advance collaborative efforts through improved communication with the public. In terms of messaging, as discussed above, several participants suggested that groups working in the Watershed should seek to understand and frame watershed problems as community problems, rather than problems with which only agencies and bureaucracies are concerned. As one participant said, the challenge is to determine “how to make connection with people on the land.” Potential messages that may resonate with the public and landowners and make them more likely to act to improve the Watershed included, stressing the importance of legacy and the health and prosperity of future generations, demonstrating how all citizens are connected by the Root River and need to work together, stressing the tie between nitrates in groundwater and health risks, and demonstrating how flooding can affect places of extreme value like hospitals and schools as well as the downstream businesses people support. Participants also stressed the importance of drawing attention to the cause and not just the effect. Participants suggested that messages should demonstrate how a healthier, safer environment is an economic boon to the region – supporting tourism and outdoor recreation. Participants agreed that environmental benefits must be monetized to help make this case. Finally, participants agreed that effective messaging could stress the importance of ensuring landowners having a good steady revenue stream to support themselves, which might include not just agriculture but benefits from renewable energy and tourism.

Participants noted that messages can be received differently depending on who delivers them and it is important to be strategic about identifying the most appropriate messenger for a given target audience. Directing funding towards marketing and outreach in each project is critical. One participant suggested that it might be useful to “get a big group together to zero in on shared interests and how to effectively communicate going forward.”

#### **5) Pursue new funding opportunities**

Participants suggested various federal and state programs that could be tapped, including North American Wetlands Conservation Act grants and funding through the Lessard-Sams Outdoor Heritage Council. One participant added that FEMA likes to see people taking initiative in their communities, and doing so can help secure funding. Participants also noted various other funding sources that could be pursued. These included foundations such as the Doris Duke Charitable Foundation and the McKnight Foundation, corporate sponsors, and a local sales or room tax. Another suggestion was a trail user fee for bike trails and/or state trails, to support their maintenance.

#### **6) Explore Opportunities for Collaborative Mitigation Planning**

Participants discussed the possibility of developing flood mitigation projects/plans at the watershed or basin scale, especially for addressing flash floods. Such planning would require looking closely at the required benefit-cost analysis, and how to incorporate the costs of avoided damages at the watershed scale. The plan could demonstrate how various projects can serve multiple interests (the Dane County Wisconsin Flood Mitigation Plan may provide an example of this type of planning effort).<sup>7</sup>

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<sup>7</sup> See Local Hazard Mitigation Planning at [http://www.eli.org/sites/default/files/docs/Hazard\\_Mitigation\\_Planning\\_Resource\\_Brief.pdf](http://www.eli.org/sites/default/files/docs/Hazard_Mitigation_Planning_Resource_Brief.pdf)

Another opportunity to stimulate collaborative projects may be to find ways to better integrate hazard mitigation planning and local community/comprehensive planning. One participant suggested that GIS technology offers opportunities to merge these planning processes, but that there may be a need to evaluate what types of data layers would be needed for joint planning efforts. Similarly, as mentioned above, there are a variety of ongoing modeling activities in the Watershed that may serve multiple interests, including mitigation planning. For example, there may be overlap in the models needed to address hazard mitigation and those needed to restore altered hydrology. There is an opportunity to work together to use existing models modeling for a variety of projects.

### **7) Build on the One Watershed, One Plan Pilot Project**

Participants agreed that the Root River One Watershed, One Plan pilot project is a tremendous opportunity to bring together the various stakeholders within the Watershed. Participants suggested that, rather than let the planning effort become “another layer of bureaucracy,” there was an opportunity to use the plan as a vehicle to combine and leverage all of the existing plans targeting the Watershed. Participants suggested it might be most effective to have different task force teams address each different aspect of intended improvement in the Watershed, as opposed to all groups trying to work together on all aspects of the plan.

### **8) Form a Root River Foundation**

Finally, participants discussed the idea of forming a Root River Foundation. Such a foundation could link flood hazard and conservation programs, and could begin by carrying out a demonstration project. Participants cited examples in Wisconsin of similar foundations being tied to successful fish and wildlife protection activities.

## **Conclusion**

To build community resilience to flooding, organizations and agencies need to find opportunities to stretch increasingly scarce resources. By combining financial resources and staff capacity, organizations can sometimes achieve together what neither could accomplish alone. Collaborative projects that both help to conserve wetlands and wildlife habitats while also protecting communities from flood damage will help to ensure the protection of vital ecosystems and the natural systems they provide. Collaboration across organizations is often challenging; workshop participants identified many obstacles, but these obstacles are not insurmountable. In the near-term workshop participants agreed that it is critical to continue an open and active dialogue with opportunities for in-person interaction and an eye toward accomplishing a watershed project that will kickstart future efforts to mitigate flood hazards and conserve natural ecosystems in the Watershed.

# Appendices

## Appendix A – Advisory Committee

### **Rich Biske**

The Nature Conservancy  
Southeast Minnesota Conservation  
Coordinator

### **Jason Gilman**

Winona County  
Planning and Environmental Services  
Director

### **Katherine Logan**

Minnesota Pollution Control Agency  
Watershed Unit Supervisor

### **Mark Marcy**

Minnesota Dept. of Public Safety Homeland  
Security / Emergency Management  
Regional Coordinator, Southeast Region 1

### **Don Nelson**

Minnesota Department of Natural Resources  
Area Wildlife Manager

### **Jennifer E. Nelson**

Minnesota Homeland Security & Emergency  
Management  
State Hazard Mitigation Officer

### **Donna Rasmussen**

Fillmore Soil and Water Conservation District

### **Suzanne Rhees**

Minnesota DNR Division of Ecological and  
Water Resources  
Floodplain and Land Use Planner

## **Project Team**

### **Rebecca Kihslinger**

Environmental Law Institute

### **David Salvesen**

University of North Carolina, Institute for the  
Environment

### **George Howe**

Root River Project Manager  
Minnesota Land Trust and Winona County

## Appendix B – Preparing maps of wetlands, floodplains and wildlife habitat

The University of North Carolina Institute for the Environment (UNC) prepared maps showing the overlap among wetlands, floodplains, and wildlife habitat in the Cedar River Basin. To develop these maps, first, UNC gathered the necessary geospatial data layers, National Wetlands Inventory polygons, and the Minnesota Biological Survey (MBS) native plant communities and sites of biodiversity significance. The 100-year floodplain data was obtained from FEMA's website.

After gathering the data layers, UNC conducted a GIS analysis using ArcGIS. UNC added the data layers described above to the map of the two Basins, making sure the coordinate and projection systems were compatible and adjusting accordingly through the Projections and Transformations tab within the Data Management Utility in ArcToolbox. In order to overlay all the relevant layers and identify areas of overlap, UNC used the intersect tool within the overlay tab of the Analysis Tools Utility, which lies within ArcToolbox, adding the relevant data layers and conducting the analysis. The resulting maps showed the areas where the different layers overlap (all other areas were not identified in the output). The areas of overlap represent opportunities where the goals of emergency management and wildlife agencies can be furthered through conservation and restoration.

## Appendix C – List of Workshop Participants

### **Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed:**

A workshop to identify opportunities to protect vital wetland and wildlife habitat and promote resilience to flooding in the Root River Watershed region through greater interagency coordination

**Thursday, May 29, 2014**

Minnesota State College Southeast Technical - Tandeski Center

**Faith Balch**

Minnesota State Wildlife Action Plan  
Coordinator  
Minnesota Department of Natural Resources  
Faith.Balch@state.mn.us

**Rich Biske**

Southeast Minnesota Conservation Coordinator  
The Nature Conservancy  
rbiske@tnc.org

**Daryl Buck**

District Manager  
Winona County Soil and Water Conservation  
District  
Daryl.Buck@winonaswcd.com

**Matt Crawford**

Infrastructure Engineer  
Rochester Public Works Department  
Mccrawford@rochestermn.gov

**Jason Gilman**

Planning and Environmental Services Director  
Winona County  
JGilman@Co.Winona.MN.US

**Chris Graves**

Zoning Administrator  
Fillmore County  
cgraves@co.fillmore.mn.us

**Corey Hanson**

Area Hydrologist  
Minnesota Department of Natural Resources  
Division of Ecological and Water Resources  
corey.hanson@state.mn.us

**Sheila Harmes**

Winona County Water Planner  
Winona County  
sharmes@co.winona.mn.us

**George Howe**

Root River Project Manager  
Minnesota Land Trust and Winona County  
howe93@acegroup.cc

**Shaina Keseley**

Watershed Project Manager  
Minnesota Pollution Control Agency  
shaina.keseley@state.mn.us

**Mike Kraszewski**

Storm Water Compliance Specialist  
Rochester Public Works Department  
Mkraszewski@rochestermn.gov

**Terry Lee**

Water Resources Manager  
Olmsted County Environmental Resources  
lee.terry@co.olmsted.mn.us

**Katherine Logan**

Lower Mississippi River Basin Watershed Unit  
Supervisor  
Minnesota Pollution Control Agency  
Katherine.logan@state.mn.us

**Mark R. Marcy**

Regional Coordinator Southeast Region 1  
Minnesota Department of Public Safety  
mark.marcy@state.mn.us

**Jim McClosky**  
Hazard Mitigation Planner  
Minnesota Homeland Security &  
Emergency Management  
James.mcclosky@state.mn.us

**Don Nelson**  
Area Wildlife Manager  
Minnesota Department of Natural Resources  
Don.Nelson@state.mn.us

**Jim Nissen**  
La Crosse District Manager  
Upper Mississippi River National Wildlife  
and Fish Refuge  
James\_Nissen@fws.gov

**Donna Rasmussen**  
District Administrator  
Fillmore Soil and Water Conservation District  
donna.rasmussen@fillmoreswcd.org

**Suzanne Rhees**  
Floodplain & Land Use Planner  
Minnesota Department of Natural Resources  
Division of Ecological and Water Resources  
suzanne.rhees@state.mn.us

**Ceil Strauss**  
State Floodplain (NFIP) Manager  
Minnesota Department of Natural Resources  
Division of Ecological and Water Resources  
ceil.strauss@state.mn.us

**Marcia Ward**  
Commissioner  
Winona County  
MWard@Co.Winona.MN.US

## Appendix D – Agenda



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL



### Wetlands, Wildlife Habitat, and Flood Hazards in the Root River Watershed:

A workshop to identify opportunities to protect vital wetland and wildlife habitat and promote resilience to flooding in the Root River Watershed region through greater interagency coordination

Thursday, May 29, 2014

### Workshop Agenda

8:30 AM – 9:00 AM	<b>Registration &amp; Breakfast</b>
9:00 AM – 9:15 AM	<b>Welcome &amp; Introductions</b>
9:15 AM – 9:30 AM	<b>Project Goals &amp; Survey Results</b> <i>Rebecca Kihslinger – Environmental Law Institute</i>
9:30 AM – 10:00 AM	<b>Floodplain Protection and Restoration: What has been done and where are we going?</b> <i>Don Nelson – Area Wildlife Manager, Minnesota DNR</i> <i>Rich Biske – Southeast Minnesota Conservation Coordinator, The Nature Conservancy</i>
10:00 AM – 10:30 AM	<b>What We Do: Wetlands and watershed management, wildlife management, hazard mitigation, floodplain management, and community planning</b> <ul style="list-style-type: none"><li>• <u>Wetlands and Watershed Management</u> <i>Donna Rasmussen – District Administrator, Fillmore SWCD</i></li><li>• <u>Wildlife Habitat Protection, Restoration, and Management</u> <i>Faith Balch – State Wildlife Action Plan Coordinator, Minnesota DNR</i></li></ul>
10:30 AM – 10:45 AM	<b>Break</b>
10:45 AM – 12:00 PM	<b>What We Do: Continued and Q&amp;A</b> <ul style="list-style-type: none"><li>• <u>Hazard Mitigation</u> <i>Jennifer Nelson – State Hazard Mitigation Officer, Minnesota Homeland Security &amp; Emergency Management</i></li><li>• <u>Floodplain Management</u> <i>Ceil Strauss – State Floodplain (NFIP) Manager, Minnesota DNR Division of Ecological and Water Resources</i></li><li>• <u>Planning and Zoning</u> <i>Jason Gilman – Planning and Environmental Services Director, Winona County</i></li></ul>

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12:00 PM – 12:45 PM **Lunch**

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12:45 PM – 1:45 PM **Break-out Session 1 – Examples of Successful Collaboration and Obstacles to Collaboration**

- Break-Out Instructions and Desired Outcomes: *Rebecca Kihslinger – Environmental Law Institute*
  - Facilitators: *Rebecca Kihslinger, Katherine Logan, George Howe*
- Desired Outcomes:
- Identify previous examples of successful collaboration to yield multiple benefits in the Basin.
  - Identify the obstacles to collaboration.
- 

1:45 PM – 2:30 PM **Report Back**

- Facilitator: *Rebecca Kihslinger – Environmental Law Institute*
- Discussion Questions:
- What are the keys to success?
  - What are the major obstacles to collaboration?
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2:30 PM – 2:45 PM **Break**

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2:45 PM – 3:45 PM **Break-out Session 2 – Overcoming Obstacles**

- Break-Out Instructions and Desired Outcomes: *Rebecca Kihslinger – Environmental Law Institute*
  - Facilitators: *Rebecca Kihslinger, Rich Biske, George Howe*
- Desired Outcomes:
- Identify opportunities to overcome obstacles to collaboration.
  - Identify the information needed for joint projects.
  - Identify the funding sources available for joint projects.
- 

3:45 PM – 4:30 PM **Report Back**

- Facilitator: *Rebecca Kihslinger – Environmental Law Institute*
- Discussion Questions:
- How can obstacles to collaboration be overcome?
  - What are the opportunities for collaboration across disciplines?
  - What is the key information needed?
  - What are the most promising sources of funding?
- 

4:30 PM – 5:00 PM **Recommendations and Next-Steps**

- Facilitator: *Rebecca Kihslinger – Environmental Law Institute*
- Discussion Questions:
- Where do we go from here?
  - How do we continue the collaboration?
  - Should we continue the collaboration started at the Workshop?
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5:00 PM **Adjourn**

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