Protecting Wetlands and Wildlife Habitat While Reducing Flood Losses:

A Guidebook on Interagency Collaboration in the Mississippi River Basin

ENVIRONMENTAL LAW • INSTITUTE®

THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

February 2012

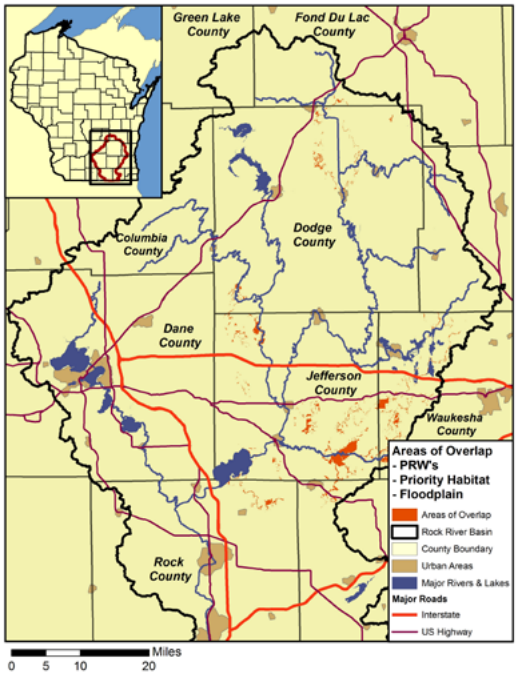
Protecting Wetlands and Wildlife Habitat While Reducing Flood Losses

In May 2011, the Environmental Law Institute (ELI) and the University of North Carolina Institute for the Environment (UNC-IE), together with the Wisconsin Wetlands Association (WWA), held a workshop, funded by the McKnight Foundation, that brought together wetland and wildlife managers with emergency managers, hazard mitigation planners, and others from the Rock River Basin, Wisconsin – a frequently flooded basin in Southeastern Wisconsin. The purpose of the workshop was to bring these agencies and organizations together to identify where their interests, missions, and projects overlap and to explore how they might work more closely together to more effectively achieve their objectives.

At the state and local level, hazard mitigation planners and emergency managers are responsible for identifying the risks to life and property from disasters, such as floods, and for developing strategies to address these risks. Hazard mitigation planners are primarily responsible for the prevention of loss of life and property from disasters. Protecting wetland or wildlife habitat or improving water quality are rarely considered in hazard mitigation plans and policies, although wetland protection and restoration have long been recognized as effective non-structural flood hazard mitigation strategies (see for example the work of Godschalk, 1994; and Mileti 1999).

Wildlife and wetland managers and conservation organizations play a major role in the preservation and restoration of wetland and floodplain habitats and the ecosystem services they provide. In Wisconsin, wildlife conservationists manage properties (e.g., acquire land, manage and restore habitat, control invasive species, and maintain trails and roads), monitor wildlife populations, rescue injured wildlife, and educate the public about wildlife. Wetland managers regulate development in wetlands under federal, state, and local law; monitor wetland habitats; and coordinate with other agencies to restore wetlands. Their focus is on protecting wetlands and wildlife, not mitigating natural hazards.

Wildlife managers typically do not consult with hazard mitigation planners in identifying lands for preservation or restoration. Thus, hazard mitigation planners, emergency managers, and wildlife and wetland managers share many of the same goals—preventing development in flood hazard areas—yet they often work independently, with little coordination. As a result, they may miss opportunities to work jointly with others seeking to preserve the same areas.



Extent of June 2008 floods in the Rock River Basin, Wisconsin

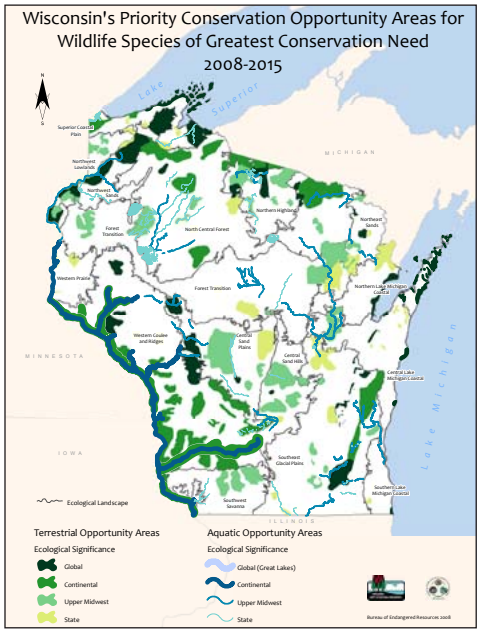
The purpose of this Guidebook is to illustrate the opportunities for wetland managers, hazard mitigation planners and other conservation and hazard mitigation professionals to work together to protect wetlands, water quality, and wildlife habitat and strengthen resilience to flooding in the Rock River Basin as well as the entire Upper Mississippi River Basin. The Guidebook provides a summary of the 2011 workshop, highlights key findings and illustrates how to create maps that show where flood hazard areas and wetland and wildlife habitat areas overlap (Pages 6-7). It also identifies opportunities for facilitating interagency collaboration (Pages 8-11) and includes brief case studies of successful interagency collaboration.

Background

Spring 2011 brought yet another year of significant flooding to the Mississippi River Basin. Heavy rain plus melt from the winter's considerable snowpack sent the Mississippi River to record flood stage levels from Cairo, Illinois to Memphis, Tennessee to Vicksburg, Mississippi. Such major flooding events have become all too familiar to the residents of the Basin – major floods caused an estimated $30 billion in damages in 1993 and $15 billion in 2008. In Wisconsin, the 2008 floods were the most costly natural disaster in the Sate's recorded history. Such flooding threatens human health and safety, as well as local economies.

Extent of June 2008 floods
in the Rock River Basin, Wisconsin

Traditionally, levees and other structures have been used to control flooding along rivers. These structures, however, can create a false sense of security against flooding and even encourage development in high-risk areas, putting people and properties at greater risk if the levees fail or overtop. More recently, some communities have turned to non-structural measures to reduce the risks of flooding. Wetlands and floodplains can provide effective protection against flood damage by acting as natural sponges that store floodwaters. An oft-cited example is the Charles River Natural Valley Storage Area in Eastern Massachusetts. In the late 1970s, the U.S. Army Corps of Engineers concluded that it would be much less expensive to purchase and preserve wetlands in the middle and upper reaches of the watershed than to design and construct structural flood controls (dams and levees). As part of the project, the Corps purchased, in both fee simple and easements, over 8,000 acres of wetlands to provide flood storage.



Map of priority conservation areas from
Wisconsin's Wildlife Action Plan

In the coming decades, climate change threatens to increase the risk of significant flooding in the Mississippi River Basin. Over the next 90 years, the nation's flood-prone areas are likely to increase by 40-45 percent, according to an upcoming Federal Emergency Management Association (FEMA) study on climate change impacts (see http://www.eenews.net/public/climatewire/2011/07/22/1). By increasing flood storage in a watershed, the restoration of wetlands and natural floodplains can help communities adapt to climate change and reduce its adverse impacts, while also providing wildlife habitat and water quality benefits.

Wetlands, Wildlife Habitat, and Flood Hazards:

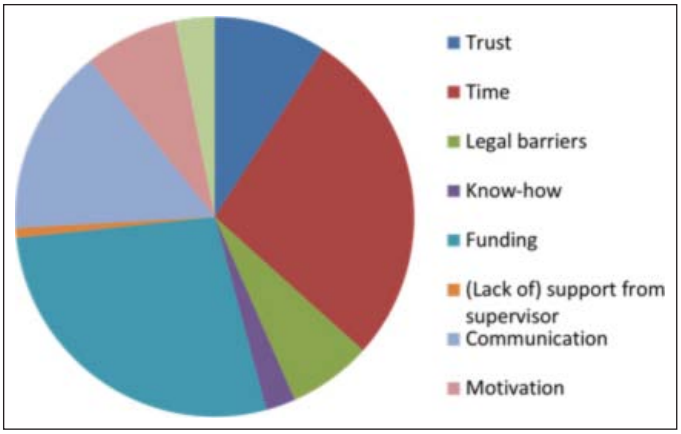
A Workshop in the Rock River Basin, Wisconsin

In 2009, ELI and the UNC-IE completed a study in the Rock River Basin in Wisconsin to identify opportunities for habitat and wetland conservation and restoration in areas prone to flood hazards. We found extensive overlap between wetland and wildlife habitats and the flood-prone areas in the basin, but also that there is a general lack of coordination among local hazard mitigation planners and wildlife and wetland agencies. These findings indicated a real need for interagency collaboration in these areas and provided the necessary background for a workshop in the Basin.

The workshop on Wetlands, Wildlife Habitat, and Flood Hazards in the Rock River Basin developed and hosted by ELI, UNC-IE, and WWA was held in Lake Mills, Wisconsin in May 2011. The goals of the workshop were to:

1. *Raise awareness among hazard and emergency managers, floodplain managers, land use planners, and wetland and wildlife managers about each other's work;*
2. *Identify opportunities for interagency collaboration as well as benefits; and*
3. *Promote long-term interagency relationships to yield continuing coordination, lasting environmental benefits, and reduced risk from natural hazards.*

The design of the workshop was guided by an advisory committee representing our target audiences–including wetland and wildlife managers, floodplain managers, emergency managers, hazard mitigation planners, land use planners, and conservation organizations. The advisory committee helped identify participants and guided the development of the agenda.



Obstacles to collaboration: In a web survey, participants in the Wisconsin workshop identified lack of time and inadequate resources as the biggest obstacles to interagency collaboration.

In addition, in preparation for the workshop, we conducted a web survey of all those who were invited to participate; 47 people responded. While most respondents (70%) indicated that they frequently collaborate with some other disciplines or fields, most respondents said that their main reason for attending the workshop was to find out what other agencies and organizations are doing. They also identified several obstacles to collaboration, including time, funding, communication, and trust.

The Participants

More than 50 participants attended the one-day workshop – including natural resource managers, wetland managers, hazard planners, emergency managers, floodplain managers, land use planners and zoning officials, elected officials, and conservationists. The participants represented a unique mix of federal, state and local agencies and organizations including: US Department of Agriculture Natural Resource Conservation Service (NRCS); U.S. Fish and Wildlife Service (FWS); Wisconsin Department of Natural Resources (DNR); Wisconsin Emergency Management (WEM); Wisconsin Department of Transportation; and County Land Conservation Departments, County Code Administrators, County Boards of Supervisors, and County Planning Departments from Dane, Dodge, Jefferson, Rock, and

Waukesha counties. Participants also included the Association of Floodplain Managers (ASFM), local land trusts and conservation organizations (Rock River Coalition (RRC), Wisconsin Waterfowl Association (WWA), and regional planning associations.

The Agenda

Discussions with Advisory Committee members and the results of the web survey indicated that various groups attending the workshop did not have much overlap in activities or knowledge of each other's programs and priorities.

Based on these results, we designed the workshop to provide opportunities for participants to interact with people from different organizations and agencies to identify opportunities for greater collaboration.

The morning workshop sessions included introductions to hazard mitigation, wetlands protection and wildlife management, floodplain management, and community planning to raise awareness among the agencies and organizations about each other's activities and priorities and the benefits that can be gained from collaboration. The morning sessions also included an overview of the physical overlap of habitat and hazard zones in the watershed (see, *Mapping Areas of Overlap in the Rock River Basin,* pages 6-7). These early sessions were essential to set the stage for the afternoon's dialogue on obstacles and opportunities for interagency collaboration. In the afternoon, participants broke into groups to identify examples of successful collaboration and obstacles to collaboration; opportunities to overcome obstacles – including possible funding sources available for joint projects; and next steps to ensure long-term interagency collaboration and cooperation. The break-out sessions were designed to facilitate dialogue among the entire group of participants.

Federal, state, and local officials, as well as conservation groups and local associations from around the Rock River Basin attended the workshop

The Rock River Coalition

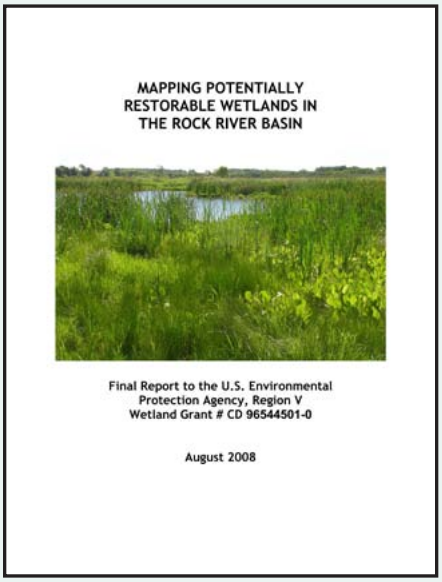
The Rock River Coalition is a non-profit organization whose mission is to foster environmental collaboration and education of diverse groups – business, civic, agricultural and professional – in the Rock River Basin. Having a small budget and relying heavily on a working board, RRC must collaborate with other organizations to accomplish its mission.

Since its inception, RRC's flagship program has been its volunteer citizen stream and wetland monitoring program. The program coordinates over 70 volunteers who measure basic water quality parameters on over a dozen streams and a restored wetland. Between 2005 and 2008, RRC enlisted numerous local governments to support development of a groundwater flow model – the G-Flow Model – by the U.S. Geological Survey so cities and villages could evaluate impacts of high capacity wells on ground-water fed streams and wetlands. Currently, RRC is working with the U.S. Fish & Wildlife Service, the DNR, and the Village of Horicon to measure phosphorus and sediment concentrations of stream-flow entering and leaving the Horicon Marsh, so that agencies can gauge the effects of recent agricultural runoff controls.

The 2008 floods crystallized the need for sustainable land use in our flood zones. RRC is exploring ways to encourage restoration of wetlands, conversion from row crops to perennial biomass crops or retirement of cropland to wildlife habitat on flood-prone lands. RRC will no doubt rely on its chief strategy - collaboration with a long-established pool of partners - to pursue these objectives.

Mapping Areas of Overlap in the Rock River Basin:

Identifying Opportunities for Collaborative Projects and Setting the Stage for Workshop Discussions



The DNR developed methods to identify PRW areas that may serve as opportunities for projects that yield habitat and flood hazard reduction benefits.

The Rock River Basin in Southeastern Wisconsin contains a mix of developed areas, floodplains, wetlands, forests, and cropland, including former wetlands that were drained and converted to agricultural use. In 2008, the DNR conducted a pilot study in the Basin to develop methods to identify and map these former wetlands, referred to as potentially restorable wetlands (PRWs). These maps are available on the DNR's website (http://dnr.wi.gov/wetlands/documents/rockriverprw.pdf).

Lands within the Basin's floodplains have suffered repeated flooding, most recently in 2008. Extensive flooding spurred state and local governments to take steps to mitigate future flooding, for example through the acquisition—either in fee simple or easement—and restoration of floodplains and wetlands. Many of these flood-prone lands also serve as prime wildlife habitat (see maps on page 6).

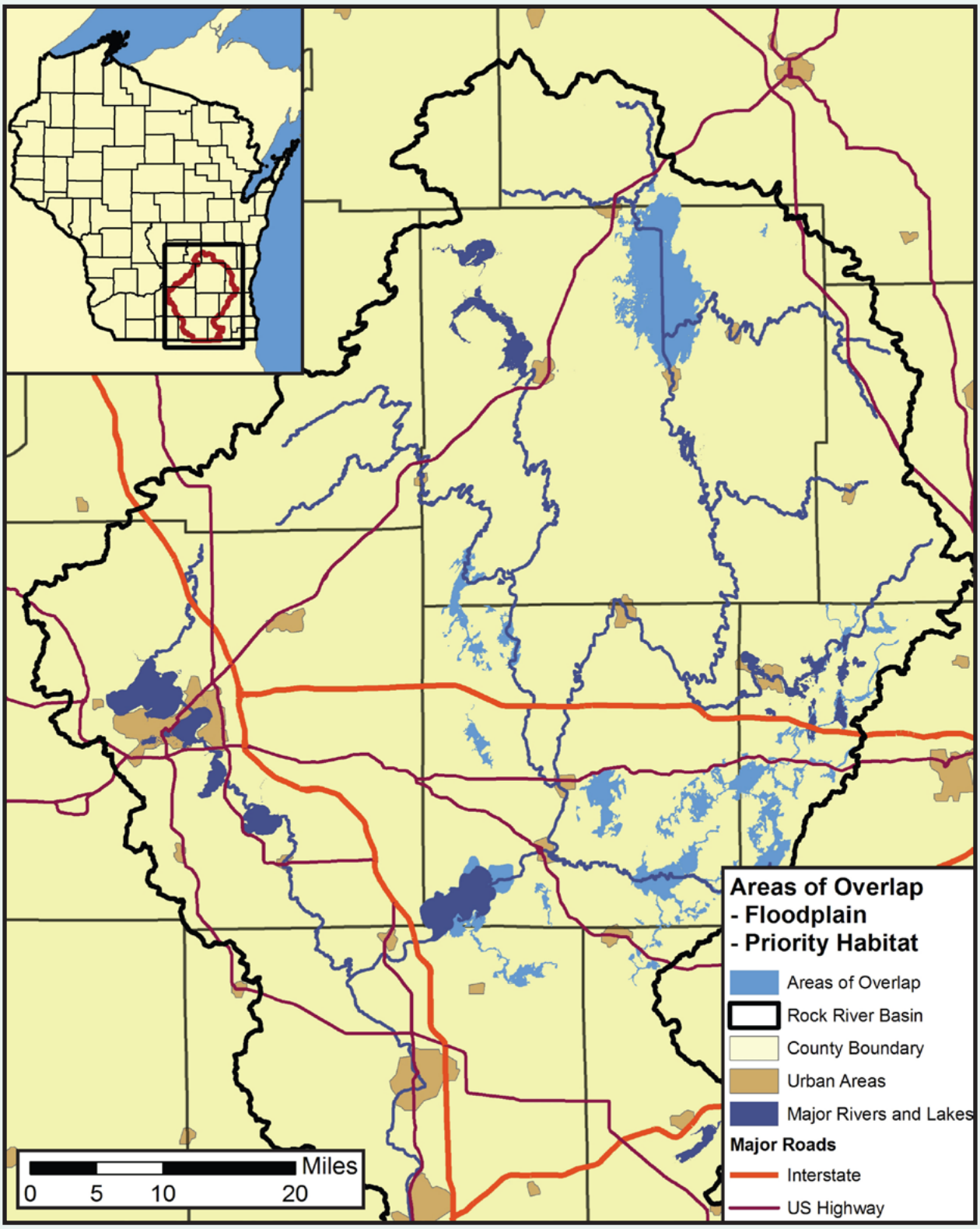
In collaboration with DNR, UNC-IE prepared a set of maps to illustrate where floodplains and wetlands—including potentially restorable wetlands—overlap with priority habitat areas, as identified in the State Wildlife Action Plan. The purpose of the maps was to illustrate where agencies in Wisconsin could focus their scarce resources to achieve mutual objectives: flood mitigation, wetland restoration, and habitat protection. The maps helped to set the stage for discussions on opportunities for interagency collaboration at the workshop.

Map-Making Methods

We prepared maps of areas of overlap among wetlands, floodplains, and wildlife habitat in the Rock River Basin. The first step in preparing the maps involved gathering the necessary geospatial data layers, including flood hazard areas (floodplain) and priority habitat areas. For our study, we also included PRWs as a layer. The PRW layer was obtained from the DNR. Floodplain data can be obtained from FEMA (www.msc.fema.gov) or through local planning departments or local emergency management offices. Geospatial data for other hazards can be obtained through local emergency management offices. Priority habitat geospatial data can be obtained through the association of Fish and Wildlife Agencies (www. fishwildlife.org) or through a state wildlife agency. For this study, our floodplain and habitat data were obtained from the DNR.

The second step involved conducting a GIS analysis using ArcGIS. We added the data layers described above to the map of the Rock River Basin; 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, we 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 map 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.

Map of the Rock River Basin Showing Overlap of Wetlands, Floodplains, and Wildlife Habitat



Preserving Wetlands and Mitigating Flood Hazards through Interagency Collaboration

The spatial overlap of wetland habitat and flood hazard areas can mean that projects undertaken in these areas by wildlife conservationists and emergency managers could meet the joint goals of conservation and increasing community resilience to flooding. For example, wetland and wildlife managers and hazard mitigation and land use planners could work together to identify areas for acquisition, restoration and preservation. Unfortunately, collaboration among these agencies is uncommon, as there is often no institutional mechanism for ongoing communication about mutual interests and priorities.

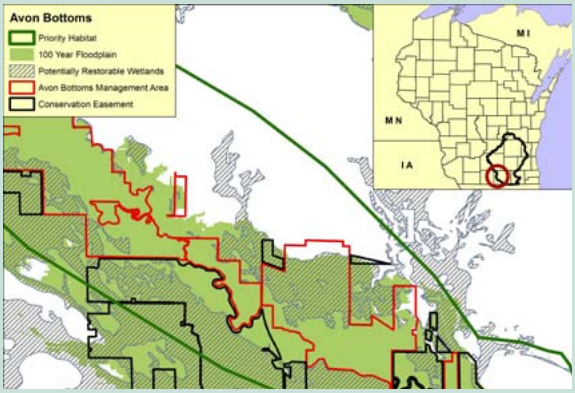
Despite the potential benefits of interagency collaboration, the workshop participants identified a number of obstacles that can hinder progress. Agency and organizational priorities and interests do not always overlap and can sometimes conflict. For example, FEMA's hazard mitigation grants focus on projects that remove or protect flood-damaged structures, while land eligible for the conservation programs implemented by NRCS include land only, not structures. Other obstacles include a lack of clear authority or dispersed authority for undertaking projects in collaboration with other agencies or with goals not directly in line with the agency's goals; limited staff capacity and workload; a lack of communication across agencies, organizations, and local units of government; and a lack of data sharing among agencies and organizations at all levels (local, state, federal). A lack of information on key issues–such as the benefits of wetlands and floodplains–can inhibit agencies and organizations from building public interest and political will necessary to protect such areas.

There are, however, many 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 (1) strengthening networks and opening lines of communication, (2) sharing information, (3) defining roles, (4) leveraging existing funds and capacity, (5) educating partners and the public, and (6) evaluating federal guidance, laws and policies. Each of these is discussed briefly in the following pages.

Restoring and Protecting Wetlands in Avon Bottoms

Within the Lower Sugar River Watershed in Wisconsin lies the Avon Bottoms Wildlife Area, which is characterized by broad floodplains, lowland forests, potentially restorable wetlands and priority wildlife habitat, as identified in the State Wildlife Action Plan. Many of the floodplains and former wetlands of Avon Bottoms have undergone extensive restoration to enhance both their natural stormwater retention properties for flood control and natural wildlife habitat.

In the aftermath of the 2008 floods NRCS received funds for the federal Emergency Watershed Protection Program to purchase conservation easements from farmers whose land was flooded in 2008. Through the purchase of easements, the agency has been able to restore and protect over 3,500 acres of wetlands, floodplains and wildlife habitat in Avon Bottoms and on adjacent lands. Outreach efforts to landowners involved WDNR, USFWS field staff and county conservation and land information staff pulling together the necessary information in a short period of time. Over the past 10 years, through efforts at the local, state, and federal levels, some 4,400 acres of ecologically sensitive lands have been protected in Avon Bottoms.



1. Strengthening networks and opening lines of communication: At the workshop, several participants noted that cross-agency collaboration does occur on some projects, but it usually happens serendipitously. Communities and organizations can create the conditions to increase the opportunities for such chance occurrences to take place more readily and intentionally, for

example by establishing a more structured means of communication among agencies. Regular meetings – either through existing efforts or new institutions – may help to facilitate dialogue between groups with limited resources.

Information Needed to Improve Collaboration

Wisconsin workshop participants identified several different types of information that could be shared to facilitate collaboration. Of course, the data or information needs may differ by watershed.

Information needs include:

1. Local maps depicting PRWs or sensitive natural habitats and maps that depict approved priority acquisition areas to help identify opportunities for new projects.
2. Maps showing local protected areas and land under conservation easements that help link new projects with existing conservation areas to yield landscape-scale benefits.
3. Improved access to maps depicting flood loss from recent flooding events.
4. Maps depicting the overlap of habitats, wetlands, and flood hazard risk to highlight areas of mutual benefit for multiple agencies.
5. Improved access to federal data (including maps on wetland restoration, hydric soils, and agricultural loss maps created by NRCS) to improve the effectiveness of local projects.
6. More information on landowner willingness to conserve land can help identify sites for collaborative projects.
7. Updated list of contacts at a range of agencies–organized by watershed and topic–to facilitate collaboration.

St. Louis River Marsh, by Eric Epstein

2. Sharing information: Sharing up-to-date data, for example, on priority project sites or restoration opportunities (see box below), could help identify opportunities for collaboration across agencies and organizations that do not normally work together, but which may have overlapping interests and missions. This can open up new avenues for identifying and prioritizing sites and developing projects that yield mutual benefits. Agencies could develop a shared understanding of the sources of funds, eligibility requirements, program priorities and application procedures so that people have a broader, shared understanding of the resources available to support joint projects or programs. A Memorandum of Agreement among state and federal agencies (including federal agencies such as FEMA and NRCS) on data sharing could help provide state and local agencies and organizations with the information necessary to pursue projects with multiple benefits.

3. Defining roles: Clearly defining all of the possible roles organizations and agencies can play in local and regional plans and projects could help facilitate collaborative projects. For example, a local conservation organization may help identify priority habitat sites that could be considered for interagency projects, manage project sites after structures have been removed under Hazard Mitigation Grants, or identify funding sources for collaborative projects.

4. Leveraging existing funds and capacity: Given tight budgets, organizations must look for ways to stretch scarce resources. By combining resources, organizations can sometimes achieve together what neither could accomplish alone. For example, conservation organizations or natural resource agencies could provide the local match for FEMA property acquisition and removal hazard mitigation grants. The land could be deeded back to the organization/agency after structures have been removed for restoration of habitat and floodplain functions.

Interagency Coordination to Restore Wetlands in Jefferson County, WI

In Jefferson County, Wisconsin, a highly successful wetland restoration project serves as an example of an effective interagency collaborative effort. Over the course of 16 years, Jefferson County has acquired approximately 80 flood-prone properties, with the majority located on Blackhawk Island Road along the Rock River, and returned the land to natural floodplain habitat. The project–which leveraged a variety of federal, state, and local funding sources–has helped to address recurring flooding in the Rock, Crawfish, and Bark Rivers.

FEMA's Hazard Mitigation Grant Program (HMGP) was a primary source of funding for the project. The HMGP is administered by the State, while local communities are responsible for identifying and implementing projects and applying to the State for funding. The HMGP requires a 75%/25% cost share between FEMA and local communities. In Wisconsin, the State provides 12.5% of the local match. In Jefferson County, the local 12.5% match has been funded by the County or occasionally through grants including a Lake Protection Grant from the Wisconsin DNR and a Community Development Block Grant from the Wisconsin Department of Commerce. Although each agency requires certain criteria be met upon award of their grant, the combination of funding sources has allowed Jefferson County to successfully carry out projects and meet their goals. In fact, the County has been able to acquire and return more land to its natural state due to funding from a collaboration of agencies than they could have with only the support of one agency.

5. Educating partners and the public: Communication with landowners, developers, farmers, and agencies is critical for gaining public support for restoration projects. Information on the benefits of wetlands and floodplain habitats and the economic advantages of non-structural flood control solutions can help to garner support for interagency projects. Case studies of local efforts that have successfully reduced flood hazards while protecting wetlands and wildlife habitat can illustrate the importance of these projects.

Use of the Municipal Flood Control Grants Program to Acquire Flood-Damaged Homes in Roxbury

The Wisconsin DNR administers the Municipal Flood Control Grants Program (MFCGP) for cities, villages, towns, tribal governments, and metropolitan sewerage districts. Since the program's introduction in April 2002, the DNR has awarded grants to eligible municipalities every other year. Wisconsin Administrative Code lists eligible projects in priority order. Although the highest priority projects include acquisition of properties and removal of structures that cannot be repaired due to frequent flooding; acquisition of properties in the 100-year floodplain; flood-proofing and elevation of structures in the floodplain; the creation of open-space flood storage areas through the construction of flood control detention centers; riparian restoration (including fish and native plant restoration, erosion control, and streambank restoration) and acquisition projects are also eligible, but of lower priority (Ch NR 199.05, Wis. Adm. Code). The budget of the MFCGP for the 2012-2013 fiscal year was $3,000,000. The maximum grant award is $600,000 per city, town, village, or metropolitan sewerage district. The grant award covers 70% of the total eligible costs in the grant agreement, with the remainder of the cost covered by the municipality.

In 2010, the town of Roxbury, Wisconsin received a property acquisition grant for the restoration of the Fish Lake natural area – identified as a Natural Resource Area in the Dane County Parks and Open Space Plan. Over the past several years, there have been joint efforts by DNR, Dane County, and the Natural Heritage Trust to protect lands along this lake. The goal of the project was to acquire and demolish eight homes within the 100-year floodplain, which had been repeatedly damaged due to flooding caused by fluctuating lake levels. The land will be restored to shoreline buffer areas using plants chosen specifically to protect the shoreline and create a vegetative buffer. The project not only removed these frequently damaged homes and restored habitat, but also increased public access to the restored lake environment. The acquired land was added to the Fish Lake County Park so that the public can now enjoy the property for hiking, fishing, cross-country skiing, and other activities.

6. Evaluating federal guidance, laws, policies: Federal disaster mitigation, national flood insurance, farm bill, and other regulatory and non-regulatory programs can significantly influence the locations where development occurs, thus influencing the risk of flood damage to people and property. American Rivers, a non-profit organization in Washington, DC, has identified ten policy reforms that save money and make communities safer from the threats of natural hazards. The ten reforms

identify opportunities to modify federal water management policies and address climate change (see Box below).

American Rivers Top 10 Policy Reforms

1. National Flood Insurance Program: Change flood insurance rates and maps to ensure they reflect risk and discourage construction and reconstruction in vulnerable areas
2. Farm Policy: Reward farmers for being responsible stewards of land and water resources and encourage better flood management practices on agricultural lands
3. Bureau of Reclamation: Develop comprehensive water management plans for Reclamation projects to create greater flexibility and improve the health of rivers
4. Energy Policy: Integrate water management and energy planning and ensure that energy and water are being used as efficiently as possible
5. Clean Water Act: Restore protection to wetlands and streams and improve implementation and enforcement of protections for all waters
6. Water Resources Development Policy: Reform the principles that guide construction of federal water infrastructure projects to minimize damages to rivers, wetlands, and floodplains and prioritize more cost-effective, flexible projects
7. Clean Water and Drinking Water Infrastructure Funding: Reform funding criteria to ensure that funded projects embrace green infrastructure and can adapt to changing conditions
8. National Forest Management: Diversify Forest Service management practices to prioritize effective water management
9. Transportation Policy: Ensure that funded projects minimize impacts on surrounding water resources and wildlife populations
10. Wildlife Management: Better coordinate federal actions and invest in climate change planning to help maintain healthy fish and wildlife populations

Hewes, Will and Andrew Fahlund. (undated). Weathering Change: Policy Reforms that Save Money and Make Communities Safer. American Rivers http://www.americanrivers.org/our-work/global-warming-and-rivers/weathering-change.html

Wisconsin floodplain forest in April (left) and August (right) - illustrating the water storage capacity and services provided at different times of year. Photo by Steve Eggers

For More Information

Information on Funding Sources for Interagency Projects

- **Municipal Flood Control Grant Program (DNR):** Allows for acquisition of property in the 100-year floodplain, as well as fish and native plant restoration, erosion control, and streambank restoration (www.dnr.state.wi.us/org/caer/cfa/ef/flood/grants.html).
- **North American Wetlands Conservation Act Standard Grant (FWS):** Provides matching grants for wetlands conservation projects that involve the long-term protection, restoration, and/or enhancement of wetlands habitats (www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm).
- **Floodplain Easement Grant Program (Farm Bill-USDA):** Restores native vegetation and protects the natural state of the floodplain, in addition to preserving habitat, water quality, flood water retention, groundwater recharge, and open space (www.wa.nrcs.usda.gov/programs/flood_easement.html).
- **Wetland Reserve Program (Farm Bill-USDA):** Provides financial and technical assistance to participants in order to help with wetland restoration and preservation efforts. Over 11,000 of America's farmers and private landowners have voluntarily enrolled over 2.3 million acres in WRP (www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/wetlands).
- **Hazard Mitigation Grant Program (FEMA):** Covers 75% of floodplain land acquisition and demolition costs, with local communities and the State of Wisconsin splitting the remaining 25% of costs (www.fema.gov/government/grant/hmgp/).
- **Great Lakes Watershed Restoration Project (National Oceanic and Atmospheric Administration, National Fish and Wildlife Foundation, U.S. Environmental Protection Agency, USDA Forest Service, U.S. Fish and Wildlife Service, Natural Resources Conservation Service):** Awards grants ranging from $35,000- $100,000 to improve water quality and ecological health in the Great Lakes Basin. (www.nfwf.org/programs/greatlakes/index.cfm).

The Environmental Law Institute and University of North Carolina Institute for the Environment created this Guidebook with assistance from the Wisconsin Wetlands Association and a local Advisory Committee. The opportunities for interagency collaboration in the Guidebook are based on the results of the Wetlands, Wildlife Habitat, and Flood Hazards Workshop held in the Rock River Basin, Wisconsin in May 2011. The McKnight Foundation provided funding for the Workshop and development of the Guidebook.

Advisory Committee members:
- Tom Bernthal, Wetland Ecologist, Wisconsin DNR
- Catherine Bleser, Wisconsin DNR – South Central Region
- Doug Fendry, Area Wildlife Supervisor, Bureau of Wildlife Management
- Jason Fruth, Planning & Zoning Manager, Waukesha Co., Department of Parks and Land Use
- Diane J. Kleiboer/ Roxanne Gray/ Lynsey Kawski, Wisconsin Emergency Management
- Gary Heinrichs, Floodplain Planning Program Manager, Bureau of Watershed Mgmt., DNR
- Alan R. Lulloff, Science Services Program Manager, Association of State Floodplain Managers
- Scott Taylor, President, Rock River Coalition