



HEALTHY FISH, HEALTHY STREAMS, HEALTHY
FARMS

VISION AND STRATEGIC PLAN

FISHERS & FARMERS PARTNERSHIP
FOR THE UPPER MISSISSIPPI RIVER BASIN

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Fishers & Farmers Partnership for the Upper Mississippi River Basin

Steering Committee members and their organizations: * Co-Chairs

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Associate Organizations:

- American Rivers
- Audubon Society
- Center for Watershed Science, Illinois Water Survey
- Minnesota Pollution Control Agency
- Missouri Agri-Business
- National Great Rivers Research and Education Center
- Northeast-Midwest Institute
- Sand County Foundation
- South Dakota Fish, Game and Parks
- Upper Mississippi River Conservation Committee
- University of Iowa, IIHR-Hydroscience and Engineering
- U. S. Army Corps of Engineers
- U.S. Department of Agriculture, National Laboratory of Agriculture and the Environment
- U. S. Environmental Protection Agency, Region 3

Cover Photo: A view of the Minnesota River downstream of Judson, Minnesota. The Minnesota River is one of many moderate and large rivers in the Upper Mississippi River Basin that exhibit high

Executive Summary

Fishers and Farmers Partnership for the Upper Mississippi River Basin is a self-directed group of non-governmental agricultural and conservation organizations, tribal organizations and state and federal agencies united to add value to farms while protecting, restoring, and enhancing the 30,700 miles of streams and rivers of the Upper Mississippi River Basin. The streams and rivers of the basin provide a full range of cold-, cool-, and warm water habitats and support 200 species of freshwater fish, about 20 percent of North American total.

The Upper Mississippi River Basin is a landscape of 189,000 square miles, two-thirds of which supports agriculture. Agriculture has achieved unmatched success over the last 150 years in the basin in increasing production and spurring regional economic development, but with unintended, negative local and cumulative consequences to the basin's streams and fishes. Many programs, projects and organizations have attempted to offset these consequences, but the results of these efforts have not been observed at the scales of the basin or its major watersheds.

The Fishers and Farmers Partnership is taking a new approach, supported by representatives from both groups, to address the relationship between agriculture and streams in the basin. Activities of the Partnership are based on three fundamental principles: finding common ground for sustaining agriculture and fishes together; promoting local leadership and providing flexible assistance of conservation projects; and collaborating and learning to achieve measurable results at the basin scale. These principles will allow us to pursue a vision of farmers and conservationists working together, in an environment of mutual respect that cultures and takes advantage of expertise and knowledge of both groups.

The four long-term goals of the Partnership, therefore, address the need to engage farmers and ranchers in stream conservation activities, the need to support fish habitat conservation projects, the need to continue to improve strategies for long-term effectiveness, and the need to continually strengthen the Partnership. Specific, short-term, priority objectives, are identified as initial steps necessary to pursue the long-term goals. This Strategic Plan serves as a living document and will be updated every 3 years with addendums that contain new assessment information, strategies, and important information that drives the Partnership towards accomplishing their goals.

The Partnership operates as a non-governmental organization with a Steering Committee as the decision making body. Staff functions of the Partnership will be carried out by a Coordinator, Science Assessment and Evaluation Team Lead, Outreach and Marketing Team Lead, as well as ad-hoc work teams. The Partnership will coordinate extensively with the National Fish Habitat Partnership, and other Fish Habitat Partnerships and organizations that share its vision to pool resources and accelerate achievement of mutual goals.

"Water links us to our neighbor in a way more profound than any other."

National Program

Chief Judge, Water

- John E. Thorson, California Asst.

The National Fish Habitat Action Plan was born in 2001 when an ad hoc group supported by the Sport Fishing and Boating Partnership Council explored the notion of developing a partnership effort for fish on a scale of what was done for waterfowl in the 1980s through the North American Waterfowl Management Plan. Recognizing the decline of fish populations across the United States, and the inadequacies of previous programs to arrest or reverse those declines, the Association of Fish and Wildlife Agencies in 2003 endorsed their mission to protect, restore and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people. In 2006, the National Fish Habitat Action Plan evolved into a science-based, voluntary and non-regulatory strategy, supported by state fish and wildlife agency leaders, federal agencies, non-governmental organizations and private industries. In 2011, the organization changed its name to the [National Fish Habitat Partnership](#). The 20 Fish Habitat Partnerships are the foundational work units for implementing the Action Plan.

The Fishers and Farmers Partnership for the Upper Mississippi River Basin is a partnership under the National Fish Habitat Partnership. This "Vision and Strategic Plan" (revised Spring 2014, 2018, 2021) was the key support document for the Partnership's December, 2009 application for full Partnership status. Updates of the plan are created every three years.

National Fish Habitat Partnership Goals (2001):

- Protect and maintain intact and healthy aquatic systems
- Prevent further degradation of fish habitats that have been adversely affected
- Reverse declines in the quality and quantity of aquatic habitats to improve the overall health of fish and other aquatic organisms
- Increase the quality and quantity of fish habitats that support a broad natural diversity of fish and other aquatic species

National Fish Habitat Partnership National Conservation Priorities (2022):

- Conserve waters and habitats where all processes and functions are operating within their expected range or natural variation.
- Conserve hydrologic conditions of fish.
- Conserve physical and living habitats and features that support viable and sustainable species and/or populations in impacted or at-risk systems.
- Reconnect fragmented fish habitats.
- Conserve water quality for fish.
- Support the structure and function of fish habitat partnerships.
- Enhance recreational, commercial, subsistence, and traditional fishing opportunities when conducting projects that conserve fish habitat

The vision, mission, goals and strategies laid out in our planning documents support each of the goals of the National Fish Habitat Partnership. But we, the organizations that propose to build and maintain the Fishers and Farmers Partnership, also believe that to effect real and enduring change across the Upper Mississippi River Basin, actions to improve stream fish habitats must engage farmers and ranchers as active participants. This plan, therefore, includes goals, objectives and strategies that not only target the well-being of fish, but the well-being and prosperity of the people that should be primary land stewards within the Basin.

We understand that sustained effort over several generations will be necessary to witness desired changes at the scale of the entire basin. A vision and mission statement, and long term goals included in the Strategic Plan are expected to endure over that period of time. Objectives and strategies are revised and added to as the partnership evolves and are emphasized therefore in the partnership updates. Some objectives and strategies may be completed within shorter time frames, and therefore these will be emphasized in the 3-year Updates.

THE UPPER MISSISSIPPI RIVER BASIN

A landscape of many values

The Upper Mississippi River (UMR) Basin (Fig. 1) drains approximately 189,000 square miles, including large parts of the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin. More than 30 million people live in the basin. The basin is blessed with a favorable climate and rich soils, which combine to yield its abundant resources, both agricultural and

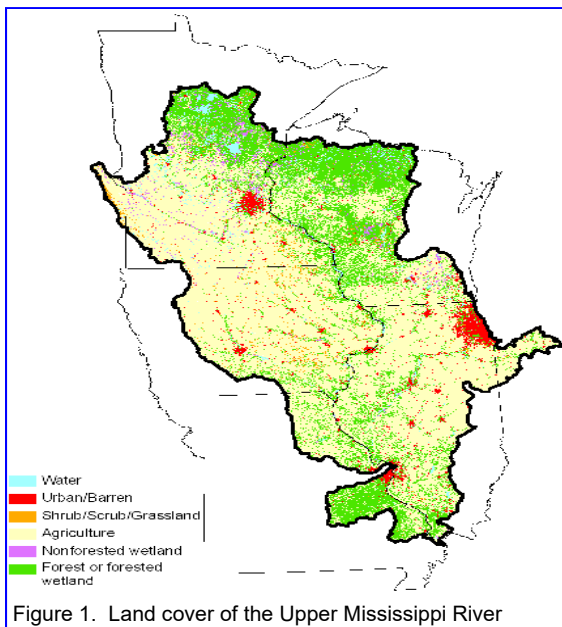


Figure 1. Land cover of the Upper Mississippi River

natural.

The Upper Mississippi River System (UMR) (Fig. 2) includes the Upper Mississippi and Illinois rivers. The quality of the system is intimately tied to the health of its tributary streams. It is the only river system in the U. S. that has been designated as both a nationally significant navigation system and a nationally significant ecosystem. In 2000, barges transported 122 million tons of commodities on the river, over half of which was grain for world export. Approximately 52 percent of the nation's corn and 41 percent of the nation's soybean exports are carried on the UMR System. Twenty-two cities use water from the Upper Mississippi River. Recreational visits to the UMR region exceeded 11 million trips in 2000, more than most national parks, including Yellowstone.

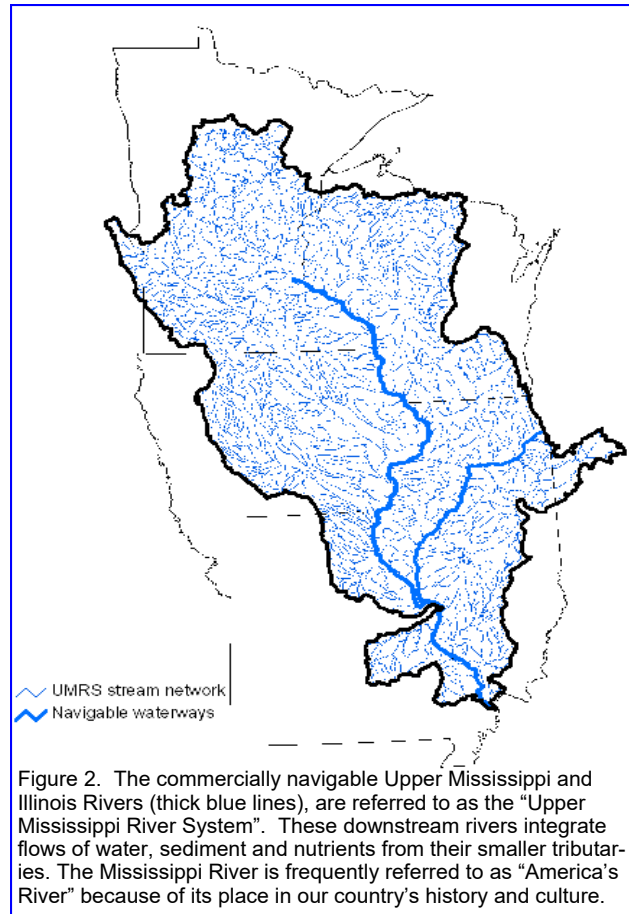


Figure 2. The commercially navigable Upper Mississippi and Illinois Rivers (thick blue lines), are referred to as the "Upper Mississippi River System". These downstream rivers integrate flows of water, sediment and nutrients from their smaller tributaries. The Mississippi River is frequently referred to as "America's River" because of its place in our country's history and culture.

Streams and Fishes

The basin has 30,700 miles of streams (Fig. 2). They provide a full range of cold-, cool-, and warm-water fish habitats, including springs, headwater streams, riffles, rapids, pools, backwaters, side channels, and oxbow lakes. The streams have supported 200 species of native freshwater fishes (about 20% of the North American total).

The main-stem of the Upper Mississippi River alone supports more than 163 species of fish and 41 species of freshwater mussels. The whole Mississippi River has the greatest fish diversity among all of the world's great temperate rivers, and even ranks high compared to the world's tropical rivers (Fig. 3).

In general, and relative to other large river basins, the historic stream fish assemblages of the Upper Mississippi River Basin could be characterized as being abundant (in terms of biomass), diverse (in terms of species richness), but lacking many

endemic species. The lack of endemic species is attributed to the north-south orientation of the basin, which has allowed movement of species during climate changes, and a relative absence of natural physical barriers to fish movements.

Human activities in the basin however, have greatly altered its stream fish assemblages. The initial fish assessment conducted under the National Fish Habitat Assessment Plan (Fig. 4) indicates that most of the basin's Ecological Drainage Units have been impacted to a greater degree than others nationwide. Typical changes observed in the basin's fish assemblages in response to human activities include reductions in the proportions of game species and overall species richness, increases in pollution-tolerant species, and shortened life-spans of sensitive species.

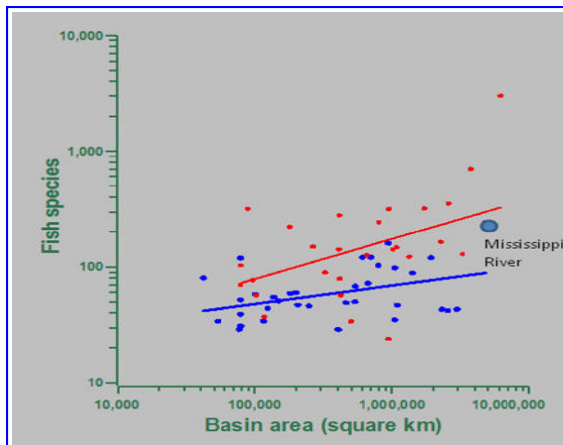


Figure 3. The Mississippi River supports more fish species than any temperate river (blue dots) in the world, and more species than most tropical rivers (red dots).

Agriculture – the dominant land use

Almost two-thirds of the landscape in the basin is in agricultural production (Fig. 1). The nation's corn and soybean "belt" covers a broad portion of

the basin, including much of southern Minnesota and Wisconsin, central and eastern Iowa, northern and central Illinois, and northeast Missouri. Farmland cattle density in the basin runs high and is greatest in Wisconsin where more than 1.2-million dairy cattle help this state lead the nation in cheese production. No other landscape in the country produced more

hogs in 2008 than the basin where national rankings placed Iowa first, Minnesota second, and Illinois fourth. According to the U. S. Department of Agriculture, the annual market value of agricultural products in the basin is \$54 billion. At least half of the basin landscape in Illinois, Indiana, Iowa, and Minnesota, is cultivated, with only about 10% of the landscape maintained in perennial vegetation, supporting

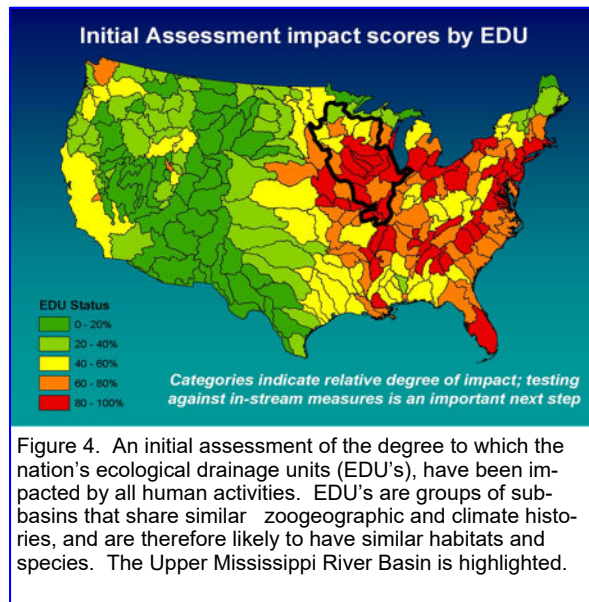
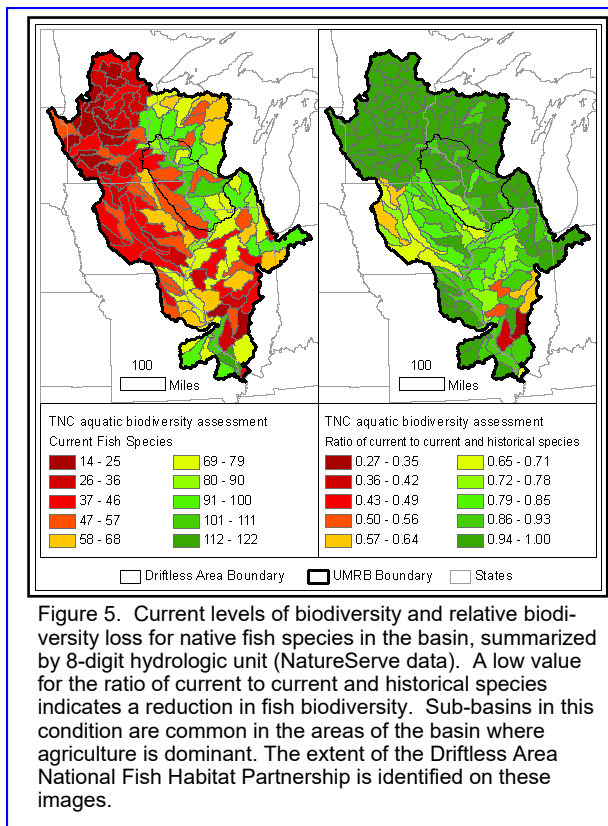


Figure 4. An initial assessment of the degree to which the nation's ecological drainage units (EDU's), have been impacted by all human activities. EDU's are groups of sub-basins that share similar zoogeographic and climate histories, and are therefore likely to have similar habitats and species. The Upper Mississippi River Basin is highlighted.

hay production or livestock grazing.

Agriculture has achieved unmatched success in increasing agricultural production and spurring regional economic development over the past 150 years, but with unintended consequences for the basin's stream biodiversity (Fig. 5).

Converting prairie, grassland and forest to cropland or impervious surfaces, and draining wetlands has claimed much of the world's richest soil for food and feed production. Thousands of miles of streams and ditches have been channelized, straightened, impounded by dams, or altered by culverts or dikes for irrigation, flood control, electricity, water supply, and transportation, (App. I, Fig. 1). These changes have affected the timing and quantity of stream flows in the basin, increased nutrient and sediment loads, altered and degraded habitats and thermal regimes, destabilized stream channels, and blocked or impeded access of fish to habitats they need for successful growth and reproduction.



A recent study in the basin showed that the majority of small streams and major rivers that drain agricultural landscapes have nitrogen and phosphorus concentrations equal to or greater than national drinking water standards or recommended levels needed to protect aquatic life and prevent excess algal growth (App. I, Figure 13). Many rivers and streams in the basin are listed as impaired on state 303 (d) lists (App. I, Figure 10). Due to a history of intensive commercial fertilizer usage in the corn-soybean rotation, nutrient-rich manure issuing from growing concentrations of livestock (e.g., 1 billion kg of nitrogen and 377 million kg of phosphorus in 1992), agriculture in the basin is widely cited as a major contributor to nutrient enrichment of local surface waters and hypoxia in the Gulf of Mexico. Thus, while basin farmers have attempted to solve rather than create problems, negative impacts have accompanied the positive effects of agriculture.

Past and on-going restoration efforts in the basin

In 1931 the fledgling Soil Erosion Service initiated the nation's first ever watershed projects

on Coon Creek in southwestern Wisconsin. For most of the next 70 years the focus of USDA watershed efforts was on flood control and maintenance of agricultural productivity through soil conservation practices. Today there are over 420 Soil and Water Conservation offices in the basin addressing watershed conservation throughout the basin.

In 2003 The Nature Conservancy completed the first ever aquatic biodiversity conservation plan for the basin with support from the McKnight Foundation, EPA, and the assistance of FWS and State DNR staff. The Conservancy and its partners assembled all available aquatic species databases and consulted with experts from across the basin to identify 43 watersheds of Aquatic Biodiversity Significance (ABS). The Conservancy and partners such as the Iowa Soybean Association, Wisconsin Buffer Initiative, and the Minnesota Dept. of Agriculture, have successfully initiated four aquatic conservation platform watersheds in the basin, focused on ABS sites. To date the Conservancy and its partners have invested over \$3 million in these aquatic platform projects. The Conservancy estimates that success in 43 priority watersheds would conserve 100% of stream types and 70% of aquatic biodiversity.

There have been many other efforts to restore or enhance stream and riparian habitats in the basin. A recent survey sponsored by the National Science Foundation revealed that over 62,000 projects of all kinds, at a cost of \$1.6 billion, were funded in the basin by multiple agencies between 1972 and 2006. Water quality management was the most cited project goal for these projects. Other goals included in-stream habitat improvement and flow modification. Most projects on non-navigable streams originated from the U.S. Department of Agriculture. The authors of the survey suggested that limited monitoring of river enhancement projects is deterring efficient and broad-scale integration of the experiences gained through their implementation.

In 2011, Midwest FHP's Science Advisory Network (SAN) secured an Association of Fish and Wildlife Agencies grant, to perform a Midwest FHP/FFP Fish Habitat Assessment (Ap. VII) with Downstream Strategies (DS). Independent fish habitat assessments were com-

Fishers & Farmers Partnership, Great Lakes Basin Fish Habitat Partnership (FHP), Midwest Glacial Lakes, and Ohio River Basin FHP. In addition, the Great Plains FHP and Southeast Aquatic Resources Partnership contributed and received information from the Midwest assessment completed in 2012. Regional products of the fish habitat assessment include map books (Fig 6 and 7), geodatabases, and reports. Geospatial assessments are scalable from local (lake/stream reach), to watershed (catchment), to regional (FHP study area/ Midwest FHPs boundary extent), to national, and are designed to flow into the National Fish Habitat Partnership's Science & Data Committee's *Initial Assessment for the Status of Fish Habitat for NFHP*. More than 75 partnering organizations contributed to the National Fish Habitat Partnership and the continuation of their national assessment, (ecosystems.usgs.gov/fishhabitat/). FFP Science Team created [state mapbooks](#) (App XI) so conservationists can see results at even a smaller scale. Other maps created include: [Farmer-Led Groups](#), [Leased Farm Land](#), [Stream Habitat Conditions](#), [Land Cover](#), [Erodibility](#).0

The Fishers & Farmers Partnership assessment found that the most influential anthropogenic stressors for smallmouth bass habitat include: percent wetland cover, percent of the stream corridor that has agriculture present, percent of rowcrop cover, cattle density, and percent pasture cover.

Figure 6. Expected smallmouth bass distribution in the Fishers & Farmers Partnership Boundary (below).

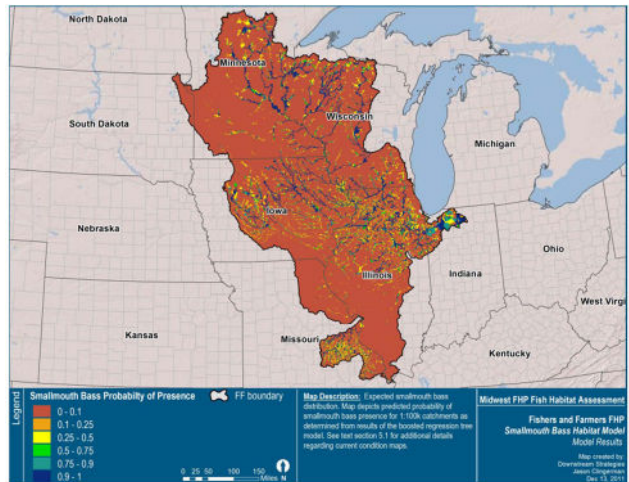
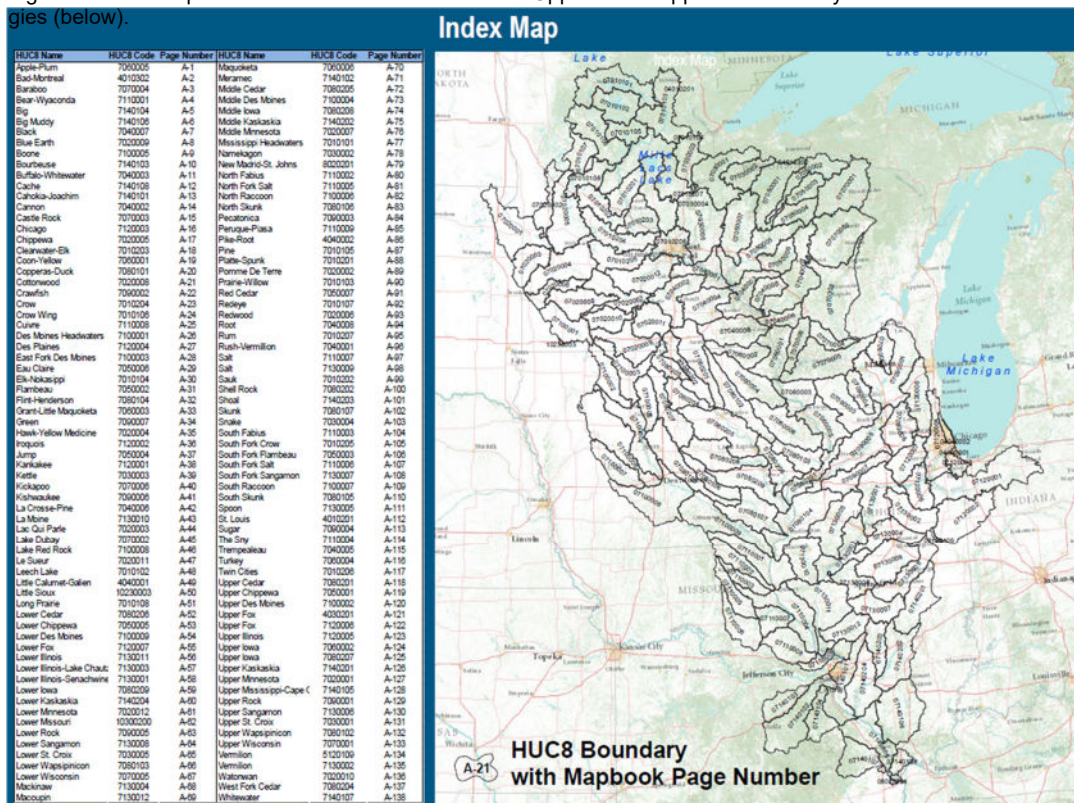


Figure 7. Index map of the watersheds assessed in the Upper Mississippi River Basin by Downstream Strategies (below).



RE-THINKING HOW TO ADDRESS AGRICULTURE, STREAMS AND FISHES

We believe a new approach to restoring streams in the basin is necessary, one that considers the needs of farmers, the requirements of stream ecosystems, and the expertise agriculture can apply toward managing private land to influence local and downstream habitat improvement, as equally important elements. Throughout its history, the agriculture industry has been very successful in meeting its goals to provide ample food for a growing world population and generate viable livelihoods in the region. Now, including the protection and restoration of rivers

Farmers have a history of applying individual creativity and initiative, firsthand familiarity with the natural resources they steward, new information from scientists and technical experts, and new tools of technology to solve problems. Agricultural producers in the Midwest have succeeded in developing productive, economically efficient farming systems operating on narrow margins. Therefore, we believe that a workable and sustainable approach to restoring aquatic habitat and species richness in the basin must engage farmers in both leadership and implementation, applying their land-management and problem-solving expertise to achieving aquatic resource goals.

Since operational changes involving new conservation practices can be complex to implement and often pose substantial financial risk to owners or operators, government agencies, policies, and funding initiatives have been created to help farmers achieve conservation management goals. The dramatic reduction in soil erosion in the last century was an example of what can be achieved with public resources and private commitment.

Restoration of streams and rivers in the basin requires a landscape approach, that recognizes the uniqueness and complexity of each sub-watershed, and that identifies a suite of complementary solutions targeted to local conditions. Scattershot efforts by individual farmers employing even the most effective nutrient management, tillage, or drainage water treatment practices cannot be expected to achieve long-term, measurable results in local or downstream waters. Yet, most public investment is put toward such individual efforts.

Adding aquatic habitat to the management goals of individual farmers will bring farmers' ingenuity, creativity, and expertise in resource management to bear on achieving farm- and

watershed-scale aquatic habitat restoration. Applying public and private funding resources to work with organized groups of farmers and other stakeholders, will help target solutions to optimize their effectiveness and prompt the spread of innovative solutions through coordinated communication channels.

Bringing basin farmers together with private and public stream experts and advocates will help foster solutions that are agronomically, economically, and environmentally sustainable.

Partnership Principles

The following basic principles employed to implement our Partnership approach:

Common Ground: Actions That Sustain Agriculture and Fishes

Our strategies are designed to achieve goals and objectives that recognize and support the economic and social benefits farmers bring to the basin, and to engage them in managing private lands to benefit fishes and their habitats. One important benefit to taking this approach is that it attracts additional landowners to the Partnership and its vision, a vital step to finding the resources needed for long-term success.

Local Leadership and Flexible Assistance

The Partnership primarily implements its strategies through projects at the local scale. At this scale farmers and ranchers need to lead conservation projects. They are closest to the land, know the land best, and know what kinds of solutions are likely to work well or not at all. This is critical to maximizing the likelihood for project success. The Partnership's role relative to individual projects is to coordinate a delivery system that:

- provides technical assistance, helping landowners identify practices that are most likely to improve local fish communities,
- provides guidance and assistance related to monitoring project results,
- helps steer landowners to sources of restoration funds, and
- minimizes bureaucratic hurdles that keep landowners from implementing projects.

Collaboration and Learning at New Scales

Although local projects are emphasized by the Partnership, we are committed to being able to measure success at watershed and basin scales, thus contributing to solutions along the large rivers of the basin and outside of the Partnership area (such as the lower Mississippi River and the Gulf of Mexico). Downstream benefits will accumulate as projects are implemented using long-term spatial strategies designed to target critical streams. However, the Partnership cannot be able to achieve basin-level goals by itself. An un-paralleled level of collaboration with existing state agencies (fisheries and agriculture), non-governmental organizations, and watershed groups is required. This includes working with scientific institutions that have the expertise to show how local stream flow and water quality improvements can be designed to yield downstream benefits. Institutions with expertise in communication and marketing will be invited to help the Partnership share its lessons and successes with others. Last, the Partnership actively participates with other Fish Habitat Partnerships to share knowledge and adapt strategies to more rapidly achieve the goals of the national program.

THE FISHERS AND FARMERS PARTNERSHIP: A NEW APPROACH

Like other National Fish Habitat Partnerships, the Fishers and Farmers Partnership is intended to help the National Fish Habitat Action Plan achieve its goals of protecting, restoring, and enhancing the nation's fisheries resources. However, the Fishers and Farmers Partnership is unique in the fact that we have committed to placing these goals within a broader context, one that requires more than a conservation perspective. We believe that humans and nature must exist together in harmony, both benefitting from the relationships that exist between them. In the case of the Upper Mississippi River Basin, we intend to pursue goals and objectives that benefit fish (which reflect stream health) and rural land-owners.

Vision, Mission, Goals, Priorities

Vision

The Partnership's vision of the future is one in which landowners work together with conservationists and scientists to address the needs of their own farms, local streams, and the fishes of the basin.

Lessons learned are shared with neighbors, participating organizations, and others outside of the basin. Fish populations and habitats are monitored at project sites and downstream. The Partnership helps landowners showcase successful practices to neighbors and others. With a focus on mutual respect, dialog is cultivated between agricultural and environmental organizations throughout the Upper Mississippi River Basin. This leads to better use of resources, less duplication of effort, and measurable progress toward common goals.

Mission

The mission of the Fishers & Farmers Partnership is to support locally-led conservation projects that add value to farms while restoring aquatic habitat and native fish populations.

Priorities for FFP

- Increase native fish/mussel populations
- Improve instream habitat
- Work with farmers/landowners to protect and maintain healthy aquatic systems or prevent further degradation
- Increase landowner engagement/farmer-led committees that drive conservation
- Reduce sedimentation, phosphorus and nitrogen runoff to stream habitats
- Improve floodplain habitat, naturalize flow regimes
- Promote best management practices across the landscape
- Monitor effectiveness of conservation projects, then share our stories through outreach

A Model Approach: Local Leadership and Collaboration in the Meramec River Basin

Since 1993, rural landowners in Missouri have reached personal farm and stream quality goals through locally-led projects. Work uniquely reflects landowner objectives and the drainage patterns, soils, geology, hydrology and land use unique to each place.

Local Decision-making Improves Speed and Quality of Work

On the Little Bourbeuse Creek, five landowners, with the help of technical staff from the Department of Conservation and the Department of Natural Resources, formed a committee to put control and decision-making in the hands of landowners. Funding was provided through partners and a flexible cost-share program. In 2008, this landowner committee became the first group to receive National Fish Habitat Action Plan funds under the sponsorship of the Fishers and Farmers Partnership.

Cooperative Planning and Buying Reduces Cost, Increases Participation

Landowner pride and willingness to demonstrate successful practices have made a huge impact. Farm tours attracted neighbors to see and hear what was accomplished. People talked about how to improve their farms. Word spread about how to install erosion control fabric around livestock tanks. Farmers helped each other choose materials and equipment, and cooperated to order livestock tanks and pipe at acceptable costs.

Both local contractors and landowners benefited from completing multiple projects in a small area. Equipment did not have to be moved as far or as often, saving time and money. Contractors helped to spread the word about available funds and project results.

Results showed that landowner-driven projects sell themselves. “I’ve seen what happens on one creek over fifty years,” said one participant. “Conservation professionals have seen what happens on fifty or one hundred creeks in one year. Why should farmers get involved? Because you can find out what’s working without trying it yourself. And that’s important, because all of these things cost a lot of money.”

“This project was successful, in my mind, because it was more flexible than other conservation programs. The focus was on looking for ways that conservation goals and farming programs and productivity could be advanced together.” — Dave Dunn



Figure 8. Dave Dunn, Little Bourbeuse Creek rancher, explains to Fishers and Farmers partners how off-stream watering practices help improve turbidity and soil erosion conditions.

Long-term Partnership Goals and Initial Priority Objectives

Meeting the following long-term goals of the Partnership will require sustained effort over several generations. That time frame is mandated by the size and complexity of the agricultural lands within the basin and the current level of available resources. Some of our initial objectives relate more to short-term needs and priorities within a 10 year time frame or less.

GOAL 1: Engage Farmers & Ranchers

Fishers & Farmers Partnership strives to actively engage farmers or ranchers on every project and work to establish a clear identity and awareness of the Partnership with farmers, ranchers, agricultural organizations, government conservation organizations, conservation related foundations, and corporations with an interest in supporting conservation within the Upper Mississippi River Basin..

OBJECTIVE 1.1: Establish new farmer-led projects (new watersheds) in the Upper Mississippi River Basin.

Strategy:

- Use State Comprehensive Conservations Plans, The Nature Conservancy's Aquatic Biodiversity Strategy, the U. S. Forest Service's Forest Partnership Strategy for the basin, the National Resources Conservation Service's Healthy Watersheds Initiative, and other partner plans and assessments to identify initial project opportunities.
- Seek groups that have proactively started local work. Encourage them to submit proposals. Help them design their projects, and provide guidance on measuring results.
- Use, test and revise the Partnership's evaluation process (App. IV), to evaluate potential projects.

OBJECTIVE 1.2: Identify priority farmer/landowner needs (i.e. profitability, fertility) at the local scale, and provide technical and organizational assistance to meet those needs.

Strategy:

- Interview farmers (App. III) pre and post—project using e-mail surveys or in-person interviews.
- Utilize lessons learned on each NFHP FFP project, capturing landowner input and sharing with future project landowners and leaders.
- Establish methods for delivery of organizational and technical assistance.
- *Support more "conservation consultants" or technicians that work with farmers whether through actually funding technicians in organizations, matching funding of current projects or programs, providing technical assistance to organizations that have NFHP funded projects, or writing letters of support to partners and seeking grants for more technicians. (New 2018)*
- *Introduce the Agricultural Conservation Planning Framework (ACPF) tool to participants in the Watershed Leaders Network (WLN). (New 2018)*

OBJECTIVE 1.3: *Utilize the Watershed Leaders Network, a formal project of Fishers & Farmers, to connect farmers and landowners. (New 2018)*

Strategy:

- *Seek funding and coordination for annual workshops to connect farmers and watershed leaders through conversations. Funding will be from NFHP and outside grants.*
- *Activate local leaders, build skills, and coach consistent watershed coordination.*
- *Help deliver organizational and technical assistance to watershed and farmer-led groups at training workshops, field day events, websites, and webinars.*

Definition: *Priority Watershed*

Means a watershed for which

1. The Fishers and Farmers Partnership, in partnership with federal, state, and local agencies, agricultural organizations, agriculture communities, and nonprofit organizations, create and implement plans, programs or projects to sustain and enhance watershed and stream functions; with
2. The principal objectives to restore, create, or enhance fisheries habitats which add value to farms.

GOAL 2: Support Fish Habitat Conservation Projects

Fishers & Farmers targets aquatic species of greatest conservation need in high priority watersheds in the Upper Mississippi River Basin.

OBJECTIVE 2.1: Work with Partners on instream, riparian or floodplain, and upland habitat, focusing on Fishers & Farmers Partnership Priority Fish/Mussel Species (Table 1).

Strategy:

- Work on improving instream habitat and apply FFP Monitoring Plan (App. IX) to projects to demonstrate positive biotic responses.
- Look to partners to select priority fish, freshwater mussels based on greatest conservation need.
- Use State Wildlife Action Plans, The Nature Conservancy's Aquatic Biodiversity Strategy, U. S. Forest Service's Forest Partnership Strategy for the basin, National Resources Conservation Service's Healthy Watersheds Initiative, U.S. Fish and Wildlife Regional Priority or Trust Resources Species Lists, and other partner plans/assessments to identify project opportunities.
- Seek groups that have proactively started local work, encourage them to submit proposals. Help design their projects, and provide guidance on measuring results.
- Use, test and revise the Partnership's evaluation process (App. IV), to evaluate potential projects.
- Will look to prioritize climate change projects to buffer fish/mussel populations from impacts.
- Promote small-scale fish passage projects that work directly with the landowner to improve both the farm and fish habitat.
- Promote recreation on enhanced streams to improve local economy and community partici-

Table 1. Fishers & Farmers Partnership Priority Fish/Mussel

Freshwater fish	Freshwater Mussels
American brook lamprey	Higgins' eye
Blacknose dace	Pink mucket
Black redhorse	Scaleshell
Blackside darter	Spectacle case
Brook trout	
Brown trout	
Channel catfish	
Hornyhead chub	
Smallmouth bass	
Southern redbelly dace	
Topeka shiner	

* Will be updated every 2-3 years

OBJECTIVE 2.2: Work with Partners to select priority watersheds to drive strategic placement of National Fish Habitat Partnership funds.

Strategy:

- Use the Midwest FHP Fish Habitat Condition Assessment (App. VII), Climate Change Assessment (App. X) , State Comprehensive Conservation Plans, National Resources Conservation Service’s Healthy Watersheds Initiative, The Nature Conservancy’s Aquatic Biodiversity Strategy, U. S. Forest Service’s Forest Partnership Strategy for the basin, and other partner plans/assessments to identify priority watersheds, project opportunities.
- Seek groups that have proactively started local work. Encourage them to submit proposals. Help them design their projects, and provide guidance on measuring results.
- Locate farmers willing to work on conservation practices, match them with technical advisors.
- Work on projects according to Table 2. Fishers & Farmers Partnership Priority Habitats & Focal Watersheds.

Table 2. Fishers & Farmers Partnership Priority Habitats & Focal Watersheds

Priority Habitats	Focal Watersheds*
Cool water streams	Bourbeuse-Meramec, MO
Warm water streams	Boone River, IA
Cold water streams	Seven Mile-Middle Minnesota, MN
In-stream/Riparian/Floodplain/Upland	Rush/Pine Creek –Root River, MN
Wetlands	Rice Creek-Cannon River, MN
Private Ag-dominated lands	Kickapoo River, WI
	Rock Creek, IA
	Peno Creek– Salt River, MO
	Indian Creek—Vermillion, IL

* Will be updated every 2-3 years

GOAL 3: Continue Development of Long-term, Basin Scale Strategies

The basin assessment completed by the Partnership in 2009 (App. I) and fish habitat assessment (App. VII) completed by Downstream Strategies and the Partnership in 2012 provides information necessary for informed decision making and improving the Strategic Plan. However, several additional steps must be taken to determine what is likely to be the most effective long-term approach to addressing differences among streams, watersheds, and patterns of agricultural impacts across the Upper Mississippi River Basin.

OBJECTIVE 3.1: Acquire specific additional knowledge of the basin's streams, fish habitats, and agricultural dynamics to support spatial strategies designed effect basin improvements most rapidly.

Strategy:

- Reclassify all basin streams and rivers to be consistent with the current national assessment.
- Use a consensus-building process to review State wildlife action plans, TNC's aquatic biodiversity strategy, Forestry Partnership Strategic Plan, & focal areas of NRCS's Healthy Watershed Initiative.
- Assess roles of relevant environmental and agricultural organizations basin-wide, and use this information to refine the Partnership's niche.
- Coordinate and compile scientific assessment information on fish habitats and social data and make it readily accessible to partners.
- Utilize adaptive management principles to incorporate assessment results into conservation strategies and projects.
- Share data and science with all partners and coordinate information with the NFHP Board's Science and Data Committee by adhering to the Board-approved Data Standard Operating Procedures.
- Utilize the regional climate change vulnerability assessment (App. X), created by Downstream Strategies (2013), to select priority projects that will decrease the impacts of climate change on species of greatest conservation need.

OBJECTIVE 3.2: Implement Monitoring Plan (App. IX) with each Fishers & Farmers Partnership project across the basin.

Strategy:

- Work with Science Team and Steering Committee state representatives to implement FFP Monitoring Plan.
- *Pilot a localized social monitoring project to better understand barriers and facilitation factors for landowner adoption of conservation practices or participation in Fishers & Farmers. (New 2018)*

OBJECTIVE 3.3: Use information gained to revise Partnership's Strategic Plan.

Strategy:

- Assess Partnership's success at meeting each objective listed in Strategic Plan.
- Refine objectives, review alternative strategies, and prioritize actions.

GOAL 4: Strengthen the Organization for Long-Term Action

The Partnership will continually need additional resources from both the natural resources and agricultural sectors to achieve its short-term objectives and long-term goals. In addition, the Partnership needs to continue to develop effective business practices to operate successfully and build confidence among its Partners and other organizations that can provide future funding.

OBJECTIVE 4.1: Engage farmers and agricultural institutions in the business of the Partnership.

Strategy:

- Seek out individual farmers and agriculture institutions that can help the Partnership meet its objectives and spread information about its value.
- Include a discussion of progress on this objective at every Steering Committee meeting.
- Increase agriculture representation and involvement on the steering committee from each of the five states and provide assistance with travel expenses as funding allows.

OBJECTIVE 4.2: Strengthen ad hoc work teams: Outreach & Marketing, Projects & Priorities, Science & Assessment.

Strategy:

- Identify optimal roles for partners on the Partnership's three permanent work teams.
- Review responsibilities of each team and protocol for meeting, communicating and acting.

OBJECTIVE 4.3: Prepare two major proposals for funding outside of the National Fish Habitat Partnership each year.

Strategy:

- Identify potential private funders and review their priorities and application processes.
- Engage key agricultural contacts in outreach to agricultural sponsors and contributors.

OBJECTIVE 4.4: Build awareness of the Partnership's beliefs, intentions, and capabilities with a broad range of communications strategies and tactics.

Strategy:

- Continual review of the Partnership's communications strategy (App. II), development of annual work plan, and maintain communication tools including: website, e-news, quarterly newsletters, presentations, image library, sortable contact database, and necessary print materials.
- Identify organizations and key contacts throughout the Basin that can be served by the Partnership or further its mission. Develop an action plan for contacting this list so contacts know how to reach Partnership staff and key leaders and how to participate on relevant work groups or committees.
- Establish relationships with media/communications specialists, carry out public relations activities.
- Implement a consistent project reporting protocol and tools.
- Support for local organizing and recruitment and E-updates for landowners and leaders.
- *Support funding for effective state farmer-led initiatives in the five states. Encourage program design that includes peer learning experiences and networks for participants, in addition to on-the-ground project funding. (New 2018)*

IMPLEMENTATION

The Fishers and Farmers Partnership operates much like a non-profit, non-governmental organization (NGO). This is possible because the National Mississippi River Museum and Aquarium has offered to act as the Partnership's fiscal agent. The NFHP Beyond the Pond, a 501c3 will also act as our fiscal agent with some of our grants. Having these two fiscal agents helps bring in more flexible funding. Our partners can directly fund Fishers & Farmers by visiting: [Beyond the Pond Fishers & Farmers Donation Page](#). Fishers & Farmers will pursue funding from a diverse set of agencies, organizations and foundations, both governmental and private to support the achievement of its objectives. Since some objectives involve coordination, communication, outreach, education and marketing efforts, FFP will seek funding from many more sources than regularly support stream restoration activities.

A great deal of the Partnership's energy will be devoted to providing extensive technical and funding assistance to the local farmer groups selected to sponsor conservation projects. Technical assistance will include making a variety of different types of information, including stream assessments, agricultural practice evaluations, and project monitoring guidance available to farmers. Funding assistance will include identifying sources of funding, and coordinating funding requests.

The Partnership will provide guidance, consistent with the requirements of the National Science and Data Team, regarding two categories of monitoring effort. Stream assessment monitoring is needed to provide the context within which conservation projects will be prioritized at large scales. Conservation project monitoring will be intended to document the benefits of projects to local stream habitats and fishes.

MONITORING, EVALUATION, AND REPORTING

One of the most pressing needs for every Fish Habitat Partnership is to determine how to demonstrate success. Monitoring and evaluation of project results will be critical for maintaining the interest and participation of farmers and ranchers, to demonstrate our credibility and value to Partner institutions, and to successfully compete for resources. Fishers & Farmers worked with Iowa Soybean Association to develop a monitoring plan to be used with FFP projects in the Upper Mississippi River Basin (App. IX). This project was funded by the Plains and Prairie Potholes Landscape Conservation Cooperative. FFP project leads will work with the FFP Science Team Lead and FFP Coordinator to show progress.

We will evaluate the performance of the Partnership as a whole using a performance evaluation assembled by the National Fish Habitat Partnership (NFHP). Changes necessitated as a result of the performance evaluation and prioritized streams and sub-basins within the basin, will be described in revisions of the Partnership Strategic Plan. In addition to answering all reporting requests of the NFHP and FWS, we will report to Partners and others on the progress of the Partnership through newsletters and our email list serve.

REVISIONS

Separate updates of the plan created in 2009 are created every three years, and the Strategic Plan itself is revised to incorporate the updates every nine years. Annual work plans will be prepared to effectively allocate available funds to our objectives.

HOW WE'RE ORGANIZED

Who Participates? How We Make Decisions?

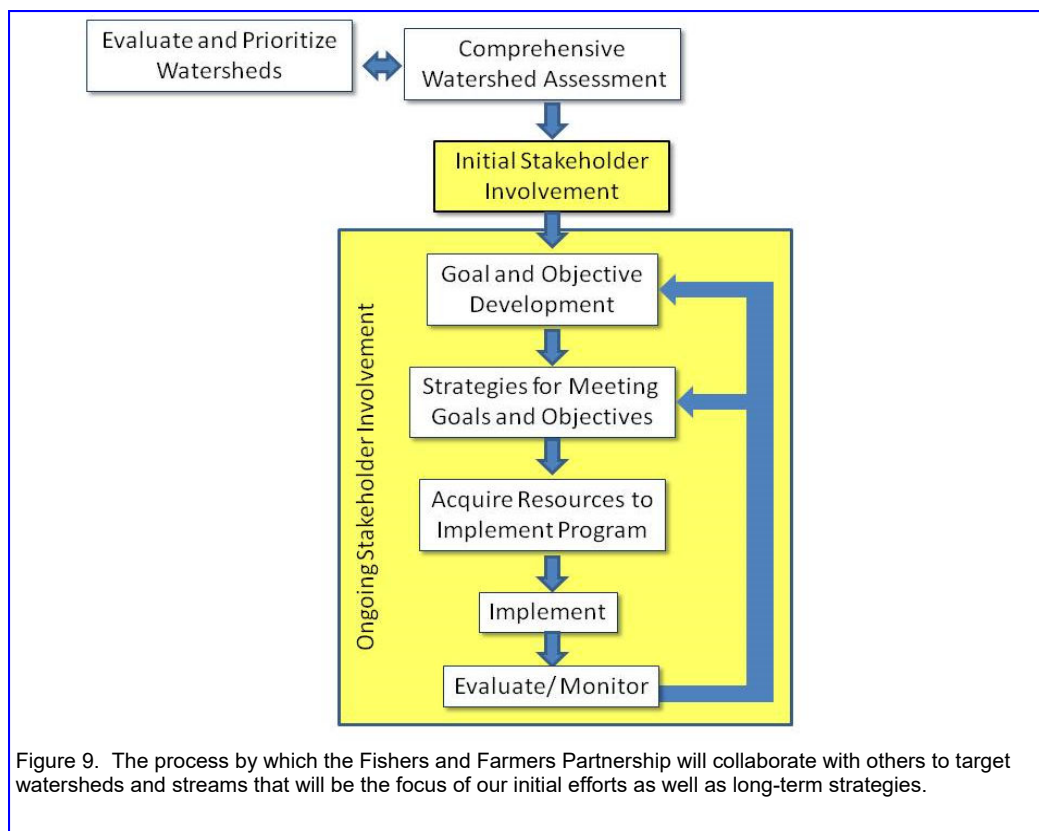
The Fishers & Farmers Partnership for the Upper Mississippi River Basin is directed by individuals representing a diverse set organizations and agencies working to achieve the Partnership's vision. A Charter for the Partnership has been drafted (App. VI). Current active Steering Committee members represent State and Federal agencies and non-governmental organizations from both the natural resource and agriculture sectors. The Steering Committee will be the decision-making body for the Partnership and will have oversight responsibility for all activities. A Partnership coordinator and permanent and ad hoc work teams will carry out the essential functions of the Partnership at the staff level.

Three permanent work teams will complete tasks in specific areas. These teams will focus on:

- A. Projects, Planning and Prioritization Team,
- B. Outreach and Marketing Team, and
- C. Science, Assessment and Evaluation Team.

Additional teams may be created to perform ad hoc functions. A Partnership Leadership Team, made up of the chairs of each of the work teams and two members selected by the Steering Committee, will propose most of the activities of the Partnership, based on the Strategic Plan, and put any controversial issues to a vote by the Steering Committee. A quorum consisting of at least one-half of the seated Steering Committee members will be required for voting. All Steering Committee members have the right to vote on motions with one vote per member, and Steering Committee members may designate proxies to vote in their absence. A simple majority of voting members shall carry a motion. The National Mississippi River Museum and Aquarium and NFHP Beyond the Pond will be the Partnership’s fiscal agents, allowing the Partnership to function as a neutral, non-governmental organization.

Among the most important decisions the Partnership will make will be those related to targeting streams and rivers for early implementation of conservation projects and later implementation of long-term strategies to achieve basin-wide goals. Many factors will enter into these decisions, including the condition of the streams, the degree to which they are impacted by agriculture, and the interests of farmers or agricultural institutions in becoming involved with conservation projects. The Partnership’s process for targeting streams and watersheds is described in Fig. 9.



COLLABORATIONS

Working with Other Fish Habitat Partnerships

The location of the Partnership puts it into close contact with seven other Fish Habitat Partnerships: Reservoir, Midwest Glacial Lakes, Great Lakes Basin, Ohio River Basin, Great Plains, Driftless Area Partnership and Southeast Aquatic Resources Partnership.

The boundaries of the Driftless Area Fish Habitat Partnership are within the Upper Mississippi River Basin. The position of this Partnership and its emphasis on streams provide many reasons for the two Partnerships to collaborate frequently. Currently Fishers & Farmers Partnership is collaborating on projects Illinois, Iowa, Minnesota, and Wisconsin.

Proposal-writing collaborations with the other Midwestern Fish Habitat Partnerships began in 2009 through the coordination efforts of Region 3, U. S. Fish and Wildlife Service. Two proposals emphasizing communications and geospatial support work were funded. Additional collaboration included evaluating threats to fishes and fish habitats at finer scales of resolution than were possible during the initial basin assessment. Downstream Strategies was contracted by the Midwest Association of Fish and Wildlife Agencies through the Sportfish Restoration Program to create a spatially explicit data analysis and modeling system for assessing fish habitat condition across the Midwest based on a range of metrics. Generally, the models, analyses, and data produced as a result of this project are intended to enable a unique, broad, and spatially explicit understanding of the links between natural habitat conditions, human influences on aquatic habitats, and aquatic health. Fishers & Farmers uses these assessments to help them select priority streams or watersheds (App. VII).

Working with Associate and Other Organizations

The Partnership takes great advantage of the capacities, experience, and knowledge of the extensive stream restoration infrastructure that already exists within the basin. In addition to Partners that function on the Steering Committee or its Work Teams, that infrastructure includes the network of over 420 Soil and Water Conservation Offices, agricultural extension units of land-grant universities, and numerous science institutions.

Science expertise in the fields of stream ecology, landscape ecology, hydrology, water quality, and Geographic Information Systems (GIS) is of the highest quality in basin. The U. S. Geological Survey's, Upper Midwest Environmental Sciences Center) in La Crosse, Wisconsin, includes larger river ecology and a state-of-the-art GIS facility among its areas of expertise. Four Associate Organizations of the Partnership; the Center for Watershed Science (Illinois Water Survey); National Great Rivers Research and Education Center; University of Iowa, IHR-Hydroscience and Engineering facility; USDA National Laboratory for Agriculture and the Environment (previously known as the Soil Tilth Laboratory), have all expressed interest in helping the Partnership understand how agricultural practices affect the basin's streams and fishes, and how benefits of conservation projects can be measured. Each of these science organizations may also help the Partnership reach out to other interested and experienced scientists within and outside the basin.



More frequent smiles like these will be one indication that successful steps are being taken by the Fishers and Farmers Partnership. But our desire extends beyond catching more fish. Healthy fish, healthy streams, and healthy farms are within reach across the Upper Mississippi River basin if fishers and farmers can work together to achieve common goals.

APPENDIX I: [FFP BASIN ASSESSMENT](#)

[\(Contact FFP Coordinator\)](#)

APPENDIX II: COMMUNICATION ACTION PLAN [\(Contact FFP Coordinator for current plan\)](#)

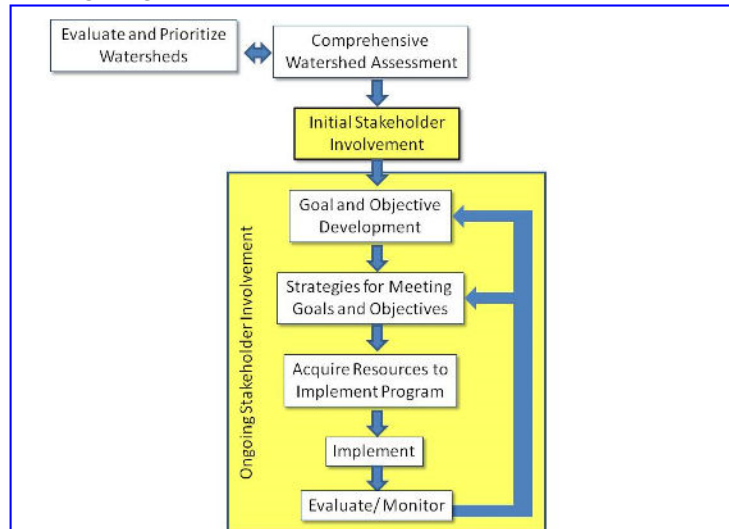
1. Clarify the Partnerships identity and niche
 - Building on vision, mission, messages and visual identity established to date, establish a clear identity for the Partnership.
 - Highlight major service aspects that differentiate Fishers & Farmers Partnership.
 - Identify organizations throughout the Basin that can be served by the Partnership or that can further its mission. Identify key contacts. Maintain a working database.
 - Develop priorities and a schedule for contacting this list so that others know:
 - 1) the Partnership exists;
 - 2) what it seeks to accomplish;
 - 3) what makes it different from other organizations;
 - 4) how to reach staff and leaders;
 - 4) how to apply for conservation project support.
2. Communications tools and marketing strategy includes:
 - Website
 - Brochure and Fact Sheet
 - iContact E-newsletters: distributed monthly
 - Quarterly newsletter
 - PowerPoint presentations
 - Image library
 - Contact database sortable by constituencies: partner organizations, Steering Committee and other committee members, local project participants, agricultural organizations, agriculture education programs, conservation organizations, media and communications specialists.
 - Network of links from Partnership site to other relevant websites
3. Develop effective communications and reporting strategies for active conservation projects. These may include:
 - Website for ongoing communication and sharing of documents
 - Consistent project reporting protocols and tools
 - Support for local organizing and recruitment
 - E-updates for landowners and leaders
4. Develop strategies for organizing and sharing scientific data with program leaders and others.
 - Coordinate with related activities of the National Fish Habitat Partnership (FHP).
 - Coordinate with Science Advisory Network, to support data/web organization for Midwest FHPs.
 - Develop awareness of what others are doing in the basin to further compatible goals.
5. Establish and carry out public relations activities including:
 - News releases about organizational development, programs, partnerships and accomplishments.
 - Build relationships with media and communications specialists.
 - Build relationships to further the work and reduce duplication of effort.

APPENDIX III: [INTERVIEWS TO INFORM STRATEGY](#), NEWGROUND INC.
([Contact FFP Coordinator](#))

APPENDIX IV: EVALUATION PROCESS

Following are criteria for guiding the process of selecting priority streams and watersheds for the Fishers and Farmers Partnership (Partnership):

1. The first criterion is the stream should be within a watershed which fits well into the overall approach designed by the Partnership. By developing our selection criteria based on our approach to conducting and evaluating projects we will front load our efforts with a high probability for success. The following diagram illustrates our desired approach.



2. Just as important as selecting streams which conform to our basic approach is to have broad representation of agriculture and fish habitat interests which share the common objectives of protecting, enhancing and restoring both fish habitats and sustainable prosperous farms.
3. Another important criterion is that there exists a high probability for the application and success of using a landscape approach, as opposed to a site specific approach, to meeting farmer and fish habitat goals.
4. Selected streams should be compatible to fish habitat strategies which mirror, to the extent possible, National Fish Habitat Partnership strategies; mobilizing and focusing local support, measuring and communicating the status and needs of aquatic habitats, restoring natural variability in river and stream flows and controlling sediment and nutrient runoff to a level within 25% of the expected natural variance or to a level of quality better than state water quality criteria.
5. Selected stream watersheds should have a high probability for success of an educational component and should include a recognition program for participating farmers.
6. Fishers & Farmers will use their Fish Habitat Assessment (App. VII) to refine their selection by examining protection vs. restoration outputs, or potential habitat for smallmouth bass or other priority fish and mussel species .

APPENDIX V: ACCESS INFORMATION FOR STATE COMPREHENSIVE CONSERVATION PLANS AND SPECIES OF GREATEST CONSERVATION NEED

Index -- National Listing of State Wildlife Action Plans: <http://teaming.com/state-wildlife-action-plans-swaps>

Midwest State Plans and Plan Summaries—Wildlife and Sportfish Restoration Programs: http://www.fws.gov/midwest/FederalAid/state_plans.html

Fishers and Farmers Steering Committee Member States:

Iowa – Securing a Future for Fish & Wildlife: a Conservation Legacy for Iowans:

<http://www.iowadnr.gov/Environment/WildlifeStewardship/IowaWildlifeActionPlan.aspx>

Iowa Conservation Opportunity Areas:

SGCN list: <http://swap-analysis.appspot.com/download?state=iowa>

Minnesota - Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife Comprehensive Wildlife Conservation Strategy. 2007. <http://www.dnr.state.mn.us/cwcs/index.html>

SGCN list: <http://swap-analysis.appspot.com/download?state=Minnesota>

Wisconsin - Wisconsin's Wildlife Action Plan (2005-2015):

http://dnr.wi.gov/topic/wildlifehabitat/documents/wap_implementation.pdf

Wisconsin's Strategy for Wildlife Species of Greatest Conservation Need:

<http://dnr.wi.gov/topic/wildlifehabitat/documents/wwap.pdf>

Priority Conservation Actions and Conservation Opportunity Areas:

http://dnr.wi.gov/topic/WildlifeHabitat/documents/WAP_Implementation.pdf

Missouri - Missouri Comprehensive Wildlife Strategy.

http://mdc.mo.gov/sites/default/files/resources/2010/05/4859_2802.pdf

Strategies for Watershed Management—Missouri Department of Conservation

http://mdc.mo.gov/sites/default/files/resources/2010/10/watershedmanagementstrategy_2010-10-07.pdf

SGCN list: <http://swap-analysis.appspot.com/download?state=Missouri>

Illinois – Illinois Wildlife Action Plan:

<http://www.dnr.illinois.gov/conservation/IWAP/Documents/WildlifeActionPlanFinal.pdf>

Conservation Opportunity Areas:

<http://www.dnr.illinois.gov/conservation/iwap/pages/conservationopportunityareas.aspx>

SGCN list: <http://swap-analysis.appspot.com/download?state=Illinois>

APPENDIX VI: FISHERS & FARMERS PARTNERSHIP STEERING COMMITTEE CHARTER

The Fishers & Farmers Partnership (Partnership) for the Upper Mississippi River Basin is a self-directed group of individuals representing organizations and agencies working to achieve the partnership's mission "... to support locally-led projects that add value to farms while restoring aquatic habitat and native fish populations." The Partnership has no authority beyond those of its individual members' organizations. Participation on the Partnership's Steering Committee is voluntary.

The Steering Committee is the decision-making body for the Partnership and has oversight responsibility for all activities. The activities of the Steering Committee directly support the Partnership Strategic Plan, which identifies the planning, implementation, and evaluation processes for the Partnership. This adaptive plan was developed to foster collaborative conservation projects between farming landowners and natural resource managers to use innovative strategies for best land use and waterways practices in the basin that benefits farmers, fish, and restores aquatic habitat. A united effort of diverse professionals and volunteers are committed to the Partnership that is guided under the direction of the National Fish Habitat Board and U.S. Fish and Wildlife Service staff.

Steering Committee By-Laws

Membership and Organization

1. The Partnership Steering Committee membership shall not exceed 25 members, with up to 21 voting seated positions and up to 4 at-large non-voting positions. The make-up will include no more than one person from each of the following qualified categories:
 - A. State fish and wildlife and agricultural agencies up to a total of 7 seats
 - B. Non-governmental conservation organizations up to a total of 7 seats
 - C. Non-governmental agricultural organizations up to a total of 7 seats
 - D. Federal agencies, and tribal organizations up to a total of 4 at large seats
2. The Steering Committee seats will have a term limit of three years, upon which time a new organization may request the seat. If no new partners/organizations request the seat, the sitting at-large organization may keep the seat if they so choose.
3. Partnership Steering Committee members should represent the highest level of their organization as feasible. This representation should be at the administrative level, so that Steering Committee members have some authority to commit financial resources, staff resources, or other types of organizational support.
4. Partners with active seats on the Steering Committee may name an alternate/replacement at any time. Current Steering Committee members remain seated on the Steering Committee until replaced. Steering Committee members may send an alternate or replacement to the Steering Committee. A Steering Committee member's (or their alternate) failure to attend three consecutive Steering Committee meetings or teleconferences may result in the member being replaced.

5. New partners wishing to participate on the Steering Committee may petition the Steering Committee at any time to do so, provided there is a vacant seat on the Steering Committee. Petitions will be acted upon by the Steering Committee at their next scheduled meeting or teleconference.

6. The Partnership Steering Committee's officer positions will be filled from qualified categories A, B or C (see #1 above) and will consist of two Co-chair's; two Vice-chair positions and one Secretary Treasure. The position's of Co-chair shall have a two-year term limit and shall be automatically filled by the current Vice-chair's upon completion of the term limit. Steering Committee members shall nominate and elect all officers to serve a two-year term. In the event that the Vice-chair's are unable or unwilling to take the position of Co-chair, the Steering Committee shall elect a new Co-chair. The initial Co-chair's shall be elected by the Steering Committee in a similar manner. The Sectary Treasure position shall have a two year term limit and be nominated from the Steering Committee.

Steering Committee Meeting Management

1. The Steering Committee shall schedule two "In-Person" meetings and at least one teleconference meeting as needed each year. The Co-chair's may call additional Steering Committee meetings at his or her discretion. Steering Committee members are expected to attend these meetings at their own or organization's expense. In the event a Steering Committee member is unable to attend a meeting or conference call, he or she should designate an individual from his or her agency/organization to represent him or her in their absence.

2. Steering Committee business conducted via e-mail, fax, or teleconference will carry the same authority as business conducted in person.

3. There is no quorum necessary for conducting Steering Committee business, but no Steering Committee meeting will be held without at least one-month notice to all persons on the Partnership mailing list. Steering committee meetings are open to any individuals wishing to attend.

4. Each Steering Committee meeting will have an agenda developed jointly by the Co-Chairs, the Coordinator, and the Leadership Team.

5. The Steering Committee normally makes decisions by consensus, defined as “when no party objects to the proposed action or decision.” However, in situations where consensus cannot be reached on questions of unusual urgency, importance or contentiousness, voting on such questions may be conducted upon the agreement of both Co-chair’s.

6. In the interest of expedited decision-making, the Chair and Vice-Chair can approve proposed actions by the Project Coordinator, Team or Work Group Chairs if they believe consensus by the Steering Committee is highly likely. If either the Chair or Vice-Chair questions the likelihood of consensus, the proposed action needs approval of the Steering Committee membership via an email “consensus check”.

7. For Steering Committee actions that require a vote, a quorum consisting of at least one-half of the seated Committee members will be required for voting. All Steering Committee members have the right to vote on motions with one vote per member, and Steering Committee members may designate proxies to vote in their absence. A simple majority of voting members shall carry a motion.

8. The Steering Committee business will include, but not be limited to:

- A. Adopting and using an organizational structure for administration of Partnership; guiding the development, implementation, monitoring, and evaluation of conservation strategies at regional and local scales
- B. Promoting cooperation and coordination among partners, stakeholders and local project partnerships that lead to restoration and/or enhanced protection of fish habitats
- C. Prioritizing projects for funding
- D. Providing direction and input to the project partnerships and working groups
- E. Participating on one or more of following work teams:
 - i. Projects, Planning and Prioritization Team
 - ii. Outreach and Marketing Team
 - iii. Science, Assessment and Evaluation Team
- F. Creating additional work groups and ad-hoc task groups as needed supporting the initiatives of the Partnership with financial and/or staff resources
- G. Participating in advocacy efforts/information campaigns to garner additional resources to meet Partnership objectives (within respective agency/organization guidelines)
- H. Reporting to National Fish Habitat Board, project partners and stakeholders on the status and accomplishments of the Partnership Strategic Plan

Partnership-At-Large

The Partnership acknowledges the Steering Committee may not include representation from every agency and organization that may want to be part of the partnership efforts, therefore;

1. Each partnering agency, project and/or organization shall designate a person of contact to expedite communications.
2. Decisions of funding and project approval shall be conducted by the Steering Committee.
3. The Steering Committee shall develop a process to receive and consider input from the Partnership-At-Large.

Leadership Team

A Leadership Team will coordinate activities with a designated Partnership Coordinator. The team is comprised of State, Federal, NGO, and Tribal agency partners and includes lead representatives from the three working teams. Their role is to assist with implementation of the strategic plan and provide direction to the Steering Committee and Teams as listed under this group in the Organizational Chart (Figure 1). Leadership Team members may serve on multiple teams.

Project Coordinator

The Project Coordinator shall carry out the essential functions of the Partnership at the staff level. The Project Coordinator may be an employee of one of the partner organizations or may be an independent contractor. The Project Coordinator works at the pleasure of the Steering Committee. The Steering Committee Co-chairs will seek services of a Project Coordinator and with the coordinator will develop an annual work plan and agreement to be reviewed and approved by the Steering Committee.

Duties of the Project Coordinator include:

1. Development of an annual plan of work for Steering Committee review and approval.
2. Facilitating communication among members, including disseminating information and guidance; and coordinating overall implementation of actions and projects.
3. Providing primary staff support to the Steering Committee, advisory groups, and program activities and attending to administrative matters including preparing news releases and other correspondence.
4. Coordinating partnership activities between participating project partners and the National Fish Habitat Board to ensure partnership activities are aligned with the National Fish Habitat Action Plan.

5. Coordinating all Partnership-associated meetings and providing administrative support, including preparing and distributing FFP meeting summaries.
6. Coordination of Work Teams.
7. Actively pursuing funding and grant initiatives.
8. Reminding Partnership member representatives of pending action items, deadlines and generally keeping the members focused on Partnership objectives.
9. Monitoring progress in achieving Partnership goals and objectives and preparing the annual report on accomplishments to the Steering Committee.

Work Teams

1. The Steering Committee may organize standing or ad-hoc workgroups at any time and shall select Work Team Chairs. Work team members may be appointed by individual Steering Committee members, or may be volunteers.
2. Workgroups will be responsible for defining, refining, or accomplishing tasks that assist with meeting Partnership goals and objectives. The Chair of each Work team, or their designee, will participate on Leadership Team and attend Steering Committee meetings and participate in scheduled teleconferences.

Dues and Budget

1. There will be no dues assessed to Partnership Steering Committee members.
2. There is no Steering Committee budget per se; resources available to conduct Partnership activities will collectively come from the participating partners and grants.
3. The National Mississippi River Museum & Aquarium/ Dubuque Historical Society and National Fish Habitat Partnership's Beyond the Pond will act as fiscal agents for the Steering Committee. The fiscal agent will keep track of the Fishers & Farmers Partnership account and move funds.

Procedure to Change By-Laws

Any member of the Steering Committee may propose changes to the By-Laws. Proposed changes will be circulated to the Steering Committee for a period of 60 days for review and comment, after which a Steering Committee vote will be taken to accept or reject the changes. To change the by-laws, a 2/3-majority vote of all seated Steering Committee membership is required.

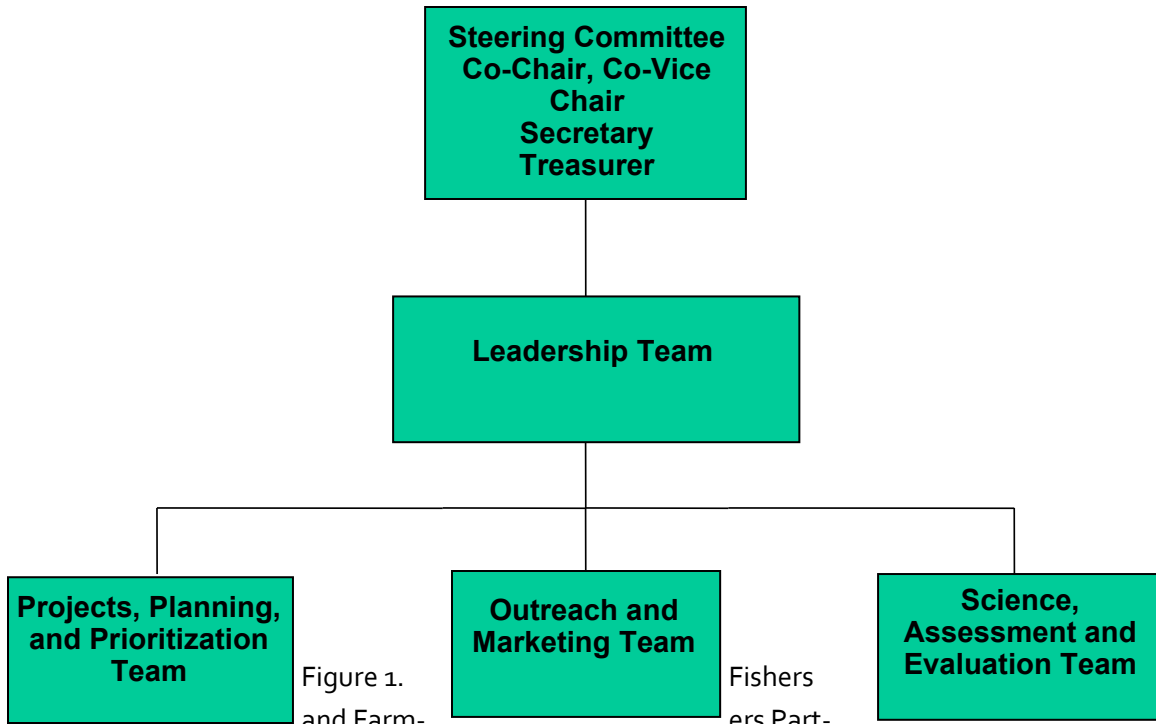


Figure 1.
Fishers
and Farm-
ers Part-
nership organizational chart.

APPENDIX VII: [FISHERS & FARMERS PARTNERSHIP FISH HABITAT ASSESSMENT MODEL RESULTS, BY DOWNSTREAM STRATEGIES](#)

[MIDWEST REGIONAL FISH HABITAT ASSESSMENT \(2013\)](#)

[\(Contact FFP Coordinator\)](#)

APPENDIX IX: [FISHERS & FARMERS PARTNERSHIP MONITORING PLAN](#)

[http://www.fishersandfarmers.org/documents/FFP%20Monitoring%20Plan%20Complete%20Draft%202%20w%20MO%20plan%20\(2\).pdf](http://www.fishersandfarmers.org/documents/FFP%20Monitoring%20Plan%20Complete%20Draft%202%20w%20MO%20plan%20(2).pdf)

[Contact Fishers & Farmers Coordinator](#)

APPENDIX VIII: [EXPLORING RELATIONSHIPS AMONG LAND OWNERSHIP, AGRICULTURAL LAND USE, AND NATIVE FISH SPECIES RICHNESS IN THE UPPER MISSISSIPPI RIVER BASIN](#)

http://www.fishersandfarmers.org/documents/14Nov12_ip-037133_6_final_draft.pdf

[Contact Fishers & Farmers Coordinator](#)

APPENDIX X: [MIDWEST FHP CLIMATE CHANGE FISH HABITAT MODELING RESULTS](#)

[Contact Fishers & Farmers Coordinator](#)

APPENDIX XI: [FISHERS & FARMERS FISH HABITAT PARTNERSHIP GIS DATA](#)

https://prenticeanalytics.sharepoint.com/teams/Fishers&Farmers/_layouts/15/guestaccess.aspx?guestaccesstoken=1ZpaGMk7gMaTkWNgnbzYw%2fGAHZp1IEJHZPtAeMIVHIs%3d&docid=07826d6712a08454294b962fdf59d6a07

[Contact Fishers & Farmers Coordinator](#)

Data Development Summary

Fishers & Farmers Meetings, Outreach and Data Support

March 31, 2016

Project Description

In 2012, the Fishers & Farmers Partnership for the Upper Mississippi River Basin (FFP) contracted to have a spatially explicit analysis of fish habitat condition performed using Geospatial Information Systems (GIS). Spatially explicit habitat assessment models, such as the models used in this map book, provide a robust interpretation of terrestrial and aquatic data and the relationships and influence of landscape activities (Martin et al., 2012). Aquatic and terrestrial data were collected throughout the Upper Mississippi River Basin (UMRB) and modeled using Boosted Regression Tree (BRT) modeling and validated using an internal crossvalidation method (Elith et al., 2008).

The FFP, and their fiscal agent the Dubuque County Historical Society, entered a cooperative agreement with the Natural Resources Conservation Service (NRCS) for composition of geospatial data and printable map books to guide conservation efforts throughout the basin. The UMRB is comprised of 139 Hydrologic Unit Code-8 (HUC-8) watersheds and over 180,000 catchments (1:100k National Hydrography Dataset) and 12 different Level III EcoRegions (CEC, 1997). The diversity of the landscape across the basin, and the sheer size of the basin, poses management and prioritization issues when performing large scale assessments. The production of state-scale map books provides a local assessment of modeling outcomes for distribution and reference.

The data represented in this map book were derived from models, analyses, and data developed by Downstream Strategies, LLC. and their partners (DS). Data were provided to PA contracted by the FFP to serve as the Science Team Lead and Geospatial Coordinator.

Methods

Model results were loaded into GIS and related to spatial data at the catchment scale (1:100K National Hydrography Dataset catchments). This allows for visual display of modeling results. The results of two post-modeling indices, Cumulative Anthropogenic Stress Index (CASI) and Cumulative Natural Quality Index (CNQI), are represented in this map book. These indices were derived based on the measures of variable influence and their functional relationships with the response (Martin et al., 2012). CASI values are generated from predictor variables that are anthropogenic in nature (i.e. impervious surface cover) and CNQI values are generated from predictor variables that are natural in nature (i.e. bedrock geology). In conjunction, these indices can be used to determine areas that may be suitable for restoration (high anthropogenic stress and low natural quality) or protection (high natural quality and low anthropogenic stress).

The ArcGIS desktop version of the Fish Habitat Support Tool (online/web version: <http://204.227.19.109/DS-USFWS-B/Index.html>) was utilized for ranking each of the watersheds. Ranking criteria were determined with input from the Fishers & Farmers Partnership Science Team to incorporate a modeled CASI and CNQI results for smallmouth bass and species richness modeling results (Table 1). The modeling parameters and weights were set to rank/prioritize between restoration and protection potential. Restoration priorities are areas with modeling results that indicate high anthropogenic stress and low natural quality and protection priorities are areas with modeling results that indicate low anthropogenic stress and high natural quality.

Thirty-nine (39) HUC-8 watersheds were analyzed for Illinois. Three (3), the Chicago, Pike-Root and Vermilion HUC8s were removed due to size (too small). This map book contains data for the thirty-six (36) remaining HUC-8s. The catchments were divided based on their corresponding HUC-8 in order to compare catchments within the watershed. Catchments were symbolized using Jenks natural breaks optimization for three classes, upper, middle, and lower thirds. This method of symbolizing allows for reduced variance within classes and maximized variance between classes (Jenks, 1967).

	Variable	CNQI Weight	CASI Weight
Protection Ranking	Smallmouth Bass	75	50 (inverted)
	Species Richness	75	50 (inverted)
Restoration Ranking	Smallmouth Bass	50 (inverted)	75
	Species Richness	50 (inverted)	75

Table 1. Ranking Tool (Fish Habitat Support Tool) settings for protection and restoration priority area identification. Inverted weights select for low values.

How-To-Use

This book contains maps for each of the species modeled in HUC-8 watersheds where the species was predicted to occur, therefore, not all watersheds within a state have maps for all of the modeled species. The book is organized by HUC-8 watersheds in alphabetical order. Follow instructions below on use and interpretation.

Locate the HUC-8 watershed of interest using the Index Map (Page 8).

Refer to the Table of Contents (Page 3) to determine the page range for the watershed.

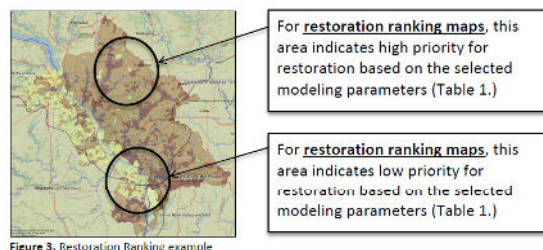
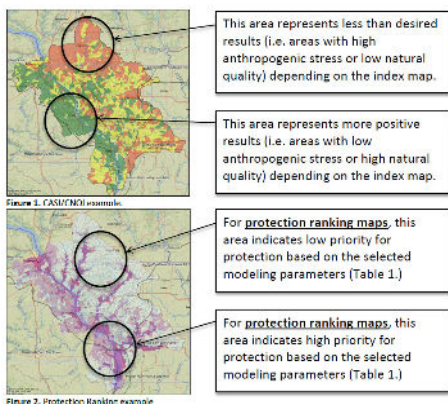
Refer to the descriptions below and figures on Page 7 to understand how to interpret each of the four types of maps. **Symbology**

Cumulative Anthropogenic Stress & Cumulative Natural Quality Index Maps

Watershed catchments are represented so that green areas indicate more positive results (i.e. areas with relatively low anthropogenic stress or high natural quality). Conversely, yellow and red areas indicate less than desired results (i.e. relatively high anthropogenic stress or low natural quality). In general, green areas indicate positive conditions while red areas indicate less than desired conditions based on the respective indices (Figure 1).

Protection & Restoration Ranking Maps

Watershed catchments are represented so that darker areas indicate more positive results (i.e. areas with relatively high potential for protection or restoration) based on the ranking criteria (Table 1). Conversely, lighter areas indicate less than desired ranking results (i.e. areas with relatively low potential for protection or restoration). In general, darker areas indicate positive conditions while lighter areas indicate less than desired conditions based on the rankings, protection (Figure 2.) and restoration (Figure 3).



GIS Data Download Links

[Fishers & Farmers Fish Habitat Partnership GIS Data](#)

State Map Book ArcGIS Map Package

APPENDIX XII: [FISHERS & FARMERS STORY MAP](#) (PROJECT LOCATION, DATA)

This map shows projects developed by local teams of farmers, landowners, and local collaborators, funded by Fishers & Farmers Partnership with support from U.S. Fish and Wildlife Service and the National Fish Habitat Partnership. Project updates are included on the story map.

[Contact Fishers & Farmers Coordinator](#)

APPENDIX XIII: AGRICULTURAL CONSERVATION PLANING FRAMEWORK

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APPENDIX XIV: 2018 GOALS & OBJECTIVES UPDATES

GOAL 1: Engage Farmers & Ranchers

OBJECTIVE 1.2: Identify priority farmer/landowner needs (i.e. profitability, fertility) at the local scale, and provide technical and organizational assistance to meet those needs.

New Strategies:

- *Support more “conservation consultants” or technicians that work with farmers whether through actually funding technicians in organizations, matching funding of current projects or programs, providing technical assistance to organizations that have NFHP funded projects, or writing letters of support to partners and seeking grants for more technicians. (New 2018)*
- *Introduce the Agricultural Conservation Planning Framework (ACPF) tool to participants in the Watershed Leaders Network (WLN). (New 2018)*

New OBJECTIVE 1.3: Utilize the Watershed Leaders Network, a formal project of Fishers & Farmers, to connect farmers and landowners. (New 2018)

New Strategies:

- *Seek funding and coordination for annual workshops to connect farmers and watershed leaders through conversations. Funding will be from NFHP and outside grants.*
- *Activate local leaders, build skills, and coach consistent watershed coordination.*
- *Help deliver organizational and technical assistance to watershed and farmer-led groups at training workshops, field day events, websites, and webinars.*

GOAL 3: Continue Development of Long-term, Basin Scale Strategies

OBJECTIVE 3.2: Implement Monitoring Plan (App. IX) with each Fishers & Farmers Partnership project across the basin.

New Strategy:

- *Pilot a localized social monitoring project to better understand barriers and facilitation factors for landowner adoption of conservation practices or participation in Fishers & Farmers. (New 2018)*

GOAL 4: Strengthen the Organization for Long-Term Action

OBJECTIVE 4.4: Build awareness of the Partnership’s beliefs, intentions, and capabilities with a broad range of communications strategies and tactics.

New Strategy:

- *Support funding for effective state farmer-led initiatives in the five states. Encourage program design that includes peer learning experiences and networks for participants, in addition to on-the-ground project funding. (New 2018)*