



# Upper Mississippi River Conservation Opportunity Area



## Accomplishment Report 2013

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## Acknowledgements

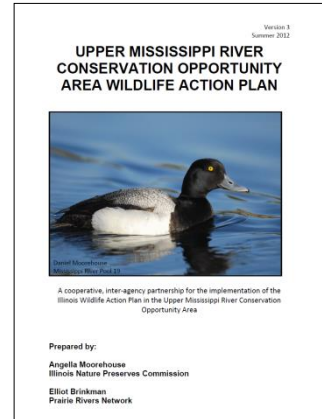
This report could not have been completed without input from our conservation partners working in the Upper Mississippi River Conservation Opportunity Area. Many thanks to those who contributed to the development of this report, and all who continually work to protect, restore, and manage the Upper Mississippi River ecosystem.

# Accomplishment Report 2013: Upper Mississippi River Conservation Opportunity Area

## Introduction

Planning for the Upper Mississippi River Conservation Opportunity Area (UMR COA) began in late 2010 with the majority of the implementation plan being prepared in 2011 with revisions in 2012. The plan was never intended to be a final static document but rather a working document that would be revised to remain useful to the stakeholders working on land conservation within the COA. To retain the usefulness of the plan, we felt it was important to examine what has been accomplished since the original draft was completed. Not technically an annual report, it includes many of the achievements accomplished by those working in the COA since the time the plan was developed, primarily 2011 and 2012. This report also includes some discussion on the next steps that are needed, as well as projects that are currently underway or planned for the near future.

This report is organized around the Illinois Wildlife Action Plan (IL WAP) campaigns – represented by goals in the UMR plan. Under each campaign goal there are brief highlights, and detailed objectives followed by narrative of the accomplishments under each category.



## Forest and Woodlands Campaign

**Goal: Conserve, restore, and manage forest, woodland, and savanna ecosystems and their ecological processes. Increase amount of functional native wooded habitat by 10%.**

### **Highlights:**

- Over 500 acres of reforestation planting, connecting contiguous forest blocks
- Prescribed burns on 300 acres of floodplain forest throughout COA
- Increasing capacity to protect land near Quad Cities by creating a conservation land trust

**Objective 1) Conserve large forest blocks and establish ecologically sustainable corridor routes to connect them.**

The Lost Mound – Hanover Bluff – Mississippi Palisades COA (included within the UMR COA) is mentioned repeatedly in the IWAP as a priority focus for connecting river habitat to the blufflands. The Jo Daviess Conservation Foundation (JD CF) has formed a Rivers to Ridges project creating a Northwest Illinois Recreation Network with partners working together to encourage people to explore Jo Daviess, Carroll, and Whiteside counties through the promotion of outdoor recreational opportunities. Additional conservation lands have been acquired connecting Lost Mound and Hanover Bluff to Wapello Land and Water Reserve.



Several plans have either been completed or are in progress for the Quad Cities area including a Comprehensive Plan and a Forestry Plan for Milan Bottoms (NLI), and forestry plans for Loud Thunder and Illiniwek forest preserves (RICOFPD). Tree plantings occurred at several sites including: 300 acres at Loud Thunder, 20 acres at Milan Bottoms and 75 acres at multiple locations in northwestern Henry County. A priority corridor connecting large forest blocks at the Ralph Martin Farm and Loud Thunder with the federally owned/managed riverine island (Andalusia Island) with the larger Milan Bottoms Natural Area is a priority focus that many agree upon. The lack of cost-share initiatives, none of which are targeted specifically to this area, along with the lack of funding resources and a public relations campaign to promote a more cohesive effort remains an impediment to progress. In attempt to deal with the lack of resources, River Bend Wildland Stewards, in cooperation with the soon to be incorporated River Bend Wildland Trust, are launching the River to Bluff Initiative to develop partners with the goal of land stewardship and protection along this corridor.

***Objective 2) Implement sustainable forestry practices on existing private and public wooded lands to enhance dominance of mast-producing trees and maintain diverse and healthy forest, woodland, and savanna communities.***

Invasive species treatments were conducted on at least 80 acres within the Quad Cities area with extensive work taking place at Black Hawk Forest and Josua Lindahl Hill Prairie nature preserves. Prescribed burning was conducted on approximately 200 acres of floodplain habitat (FWS). Another 40-60 acres were burned on Illinois nature preserves and 7 acres on FPD lands. Burns on the nature preserves were accomplished through a U.S. Forest Service grant that will expire in summer 2013. Without new funding, effective burn management within the Quad Cities will be more difficult and, aside from efforts by the FWS, burn acreage will likely decrease.

***Objective 3) Restore, sustain and preserve high quality forest woodland and savanna natural communities.***



There are a total of 80 INAI sites with forest habitat within the COA, the majority of these (51) are found within the Pere Marquette area. Of the 80, only 5 are recognized as high quality forest sites (category 1): Black Hawk in Rock Island and New Crystal Lake Club across from Burlington, Iowa; Long Island near Quincy; and Drift Island and Rip Rap Landing Woods in the Pere Marquette area. Maps have been created along with a chart listing all INAI sites with forest/woodland communities with a brief description of their needs. Funding and resources to implement stewardship needs remains a struggle. Currently, the State's Natural Area Acquisition Funds set aside for stewardship are primarily being used on

DNR-owned lands with a priority given to those protected within the INPC system. The only high quality forest INAI site owned by DNR is Rip Rap Landing Woods. Municipalities, as well as corporate and private landowners are being asked to assume a greater role in funding stewardship on protected natural areas.

Targeted forest management at priority natural areas, Black Hawk Forest and Josua Lindahl Hill Prairie, nature preserves was accomplished through the execution of a plan and resources provided by Interstate RC&D with support from a U.S. Forest Service Hazardous Fuels Mitigation grant. The grant

has nearly concluded and the search for new funding and resources will be critical to maintaining habitat improvements.

***Objective 4) Increase native forest/woodland acreage by expanding reforestation and tree planting activities.***

Partners in the Quad Cities area accomplished the goal of 375 acres of reforestation/tree plantings, and have a comprehensive plan for the long-term protection and restoration needs for Milan Bottoms. Currently, the best source of cost-share for reforestation projects on privately owned lands remains the Department of Agriculture (NRCS and SWCD offices). Due to political uncertainty and changes to the farm bill, these opportunities will likely be diminished. Those cost-share opportunities that remain are not promoted to landowners within any particular target area and there does not appear to be a willingness in most county offices to prioritize the natural areas and river to bluffland corridors for program enrollment.



## **Farmland and Prairie Campaign**

**Goal: Conserve, restore and manage native prairie ecosystems and their ecological processes, including grasslands and hill prairies and their adjacent habitats.**

***Highlights:***

- High-quality prairie resources mapping
- Stewardship on 20 remnant hill prairies throughout the COA
- 26 acres of Savanna restoration at Harry N. Patterson Land and Water Reserve
- 100 acres of grasslands planted by Henry County Soil and Water Conservation District (SWCD)

***Objective 1) Restore, sustain, and preserve high quality prairie natural communities.***

A total of 68 INAI sites have prairie or grassland habitat within the COA; half of these are found in the Pere Marquette area, which includes a scattering of blufftop hill prairies. Of the total, 49 are recognized as high quality (category 1) sites, primarily hill prairies. Again most of those (28) are in the Pere Marquette area, 14 are found in the Quad Cities area. Maps of all high quality prairie natural areas have been created along with a chart listing all INAI sites with prairie/grassland communities with a brief description of their needs. Funding and resources to implement stewardship needs remains a struggle. Incentive programs should be made available and promoted to willing landowners within the priority grassland and corridor areas.



***Objective 2) Manage existing native prairie communities (remnants) and restore areas of functional grassland.***

The Hill Prairie State Wildlife Grant allowed for the implementation of stewardship on approximately 20 private and public remnant hill prairies identified as priority natural areas within the UMR COA. Stewardship activities included invasive species control, woody (tree and shrub) removal, and prescribed fire. This grant required landowners to sign a management agreement committing to maintaining the stewardship work for a period of 10 years. Many of these sites are permanently protected in the INPC System including: Hanover Bluff, Ralls Woods, Mississippi Palisades, Josua Lindahl, Cedar Glen, Mississippi River Sand Hills, Grubb Hollow, Jennings, and Pere Marquette. Long-term protection of these hill prairies remains a priority.

Additional work occurred at the Harry N. Patterson Savanna Land and Water Reserve in Henderson County where a Grassland Public Lands State Wildlife Grant funded the clearing of 26 acres of small trees at brush within the prairie and savanna communities. Additional tree clearing will continue in 2013.



The identification of priority areas for large-scale grassland habitat project is taking place in the more rural counties of Mercer and Henry where new plantings could be linked to other native grassland habitat on a landscape scale along with the targeting of incentives and cost-share to offset the costs of restoration. Mercer County SWCD targeted grassland restoration through the CRP program with an estimated 100 acres planted with the COA in 2011-2012. Henry County SWCD

focused on grassland/wetland/tree restorations within the Spring Creek Watershed in northwestern Henry County with 150 acres of grasslands planted in 2011-2012. Mapping of these areas and potential links are maintained at the SWCD offices.

The Conservation Guardians of Northwest Illinois and JDCF host an annual burn school each spring to train local volunteers to conduct prescribed burns on privately owned prairie restorations in Jo Daviess County.

Interstate RC&D has hosted multiple wildland fire classes with the goal of enhancing the capabilities of local natural resource managers and landowners to use prescribed fire as a management tool including S234 Ignitions; S130/190 Introduction to Wildland Behavior; and S230 Crew Boss. These classes were attended by land managers as well as a few landowners who conduct burns on property they own within the COA.

***Objective 3) Restore natural landscape continuum of a functional river-to-bluff ecosystem.***

While this objective was placed in the Farmland and Prairie Campaign, giving consideration to the fact that the majority of the landscape is in agricultural use, it was not meant to be a goal exclusively about grassland but rather the connectivity of functionally natural habitat within the upland bluffs to the Mississippi River. This overarching objective is a critical theme repeated numerous times in the Illinois Wildlife Action Plan.



One of the best examples of a targeted landscape-scale plan to connect habitat from bluff to river exists in Jo Daviess and Carroll counties with the Lost Mound – Hanover Bluff – Mississippi Palisades areas. This concept, outlined in the IL WAP, inspired the Rivers to Ridges project – the Northwest Illinois Recreation Network developed by JDCF to encourage people to explore recreational opportunities in Jo Daviess, Carroll, and Whiteside counties.

The same concept was adapted by the River Bend Wildland Stewards in the creation of the River to Bluff Initiative, with the purpose of promoting land stewardship and linking habitat within the Loud Thunder Forest Preserve and the Mississippi River – Andalusia Slough / Milan Bottoms areas. Funding resources are available for land acquisition or purchase of conservation easements, but few willing landowners have come forward at this stage.

NLI has developed a plan to connect habitat blocks within the watershed of Milan Bottoms. Plans for Loud Thunder are being prepared by the Rock Island County Forest Preserve District, and will need to be linked at some level to the Milan Bottoms plan to include the larger Andalusia Slough area. Restoration activities are ongoing at both Milan Bottoms and Loud Thunder.

## Streams Campaign

**Goal: Maintain Integrity of stream and river ecosystems and their riparian corridors and improve water quality and connectivity, where appropriate within the Upper Mississippi watershed.**

### **Highlights:**

- Lower Rock River mussel and fish surveys conducted by IDNR and Western IL University
- Cool- and coldwater stream surveys in Driftless area conducted by IL Natural History Survey
- Survey of Mississippi River Pool 19 high-quality mussel beds near Nauvoo

***Objective 1) Restore and maintain main stem and main stem-to-tributary connectivity on key local rivers and streams.***

The watershed associated with Milan Bottoms was identified by partners as a key focus area. NLI has developed a plan to address some of the concerns within this watershed, but on the ground implementation is slow due to the large amount of private land, and lack of incentive programs to assist these landowners with conservation practices.

Mussel surveys were conducted by the Illinois Natural History Survey nearby on the Rock River in fall 2011 and fish survey were conducted by IL DNR within Mill Creek in fall 2012. Fish surveys uncovered 2 populations of the state-threatened banded killifish, previously undocumented from outside of NE Illinois, at Mill Creek (near Milan Bottoms) and Mississippi River Pool 20 (near Cedar Glen Nature Preserve). To supplement additional survey needs River Bend Wildland Stewards hosted a Bio Blitz at Milan Bottoms on June 1, 2013 to catalog all species found by biologists specializing in various taxonomic groups within a 24-hour period. Members of the public visited the site during the Bio Blitz to learn



about field collection and identification methods used by the biologists.

***Objective 2) Restore, sustain, and preserve high quality stream natural communities.***

There are no streams within the state recognized by the INAI as high quality (category 1). Currently, streams are recognized as being high quality based solely on the diversity of habitat, presence of sensitive fish species, or presence of more than 10 species of native freshwater mussels. Vegetative structure and other wildlife do not factor into INAI stream qualification at this time. Additionally, the INAI has not updated the high quality streams since the early 1990s. There is a critical need to develop standardized procedures on how stream segments should be added or removed from INAI. Within the COA, most of the “high quality” streams are either cool water streams located within the Driftless Area of NW Illinois, or high diversity mussel beds within the main channel of the Mississippi or Lower Rock Rivers. The fish and mussels of the cold water streams in the Driftless area have been surveyed recently (2009-2010) by the INHS and IL DNR. The mussel beds within the Quad Cities area were surveyed in the fall of 2011 by the INHS and a report of the findings has been completed. Additional surveys have taken place in Pool 19 near Nauvoo, IL, where mussel beds have now been mapped. Funds and additional resources have not been identified to meet the restoration needs of these streams.

***Objective 3) Restore and maintain the natural stream dynamics and ecological processes within key streams, wetland communities, and watersheds to sustain essential habitat for wildlife SGNC, especially migratory birds, mussel and fish communities.***

This objective also supports the wetland and SGNC campaigns.

Aside from extensive plans created by the Upper Mississippi River Conservation Committee (UMRCC) and federal agencies (ACE and FWS), there are few comprehensive watershed plans for tributaries within the UMR COA. The Illinois EPA has designated the north portion as part of the Mississippi North River Watershed (Jo Daviess to northern Mercer counties). The IL EPA has focused primarily on the Galena, Apple, and Plum rivers. In 2008, the NRCS completed Rapid Watershed Assessments for the Apple and Plum rivers. The USGS maintains stream monitoring sites to gauge the flow within these streams including: 2 sites in the Apple-Plum Basin, 4 sites in the Flint-Henderson Basin; 7 sites in the Lower Rock Basin; and 1 site in the Sny Basin.

The large-scale Piasa Creek Watershed Project, which includes portion of the southern UMR COA in Jersey and Madison counties, extending south into Macoupin County, was completed in 2010 meeting the goals of reducing soil erosion by 6,700 tons of a period of 10 years. The project was a collaborative effort by the Illinois-American local water utility, IL EPA, IL Pollution Control Board, and the Great Rivers Land Trust.

Some “baseline” data have been collected on major streams within the UMR COA, however the extent and actual data remains scattered among various agencies. There is not currently an interagency report of all the information available, making it difficult to assess future data needs. Funding of a coordinator tasked with the job of compiling this data and preparing a report to be distributed to all agencies working to improve stream dynamics and ecological processes is greatly needed. The Rock Island County NRCS has completed a plan for the Copperas Creek Watershed, however there are no plans to target incentive programs, or to create new programs specifically for this watershed.



The need to target efforts within the Milan Bottoms watershed has been identified as a high priority by multiple partners. Henry County NRCS/SWCD is focusing some of their incentive programs and BMPs within the Spring Creek Watershed. There is an additional plan for the Rock River Ravines, prepared by River Action, which failed to receive EPA 319 funding. Improvements to this plan may allow for reconsideration of a 319 grant in the future.

Citizen stream monitoring continues through the River Watch program, in spite of IL DNR funding cuts to the program. River Watch monitoring continues to be facilitated through in the Quad Cities through the Rock Island County Extension Office and in the Pere Marquette area through the National Great Rivers Research and Education Center (NGREC).

Chuck Theiling (ACE, Rock Island) is currently meeting with the commissioners of the Sny Levee District in Pike County to discuss options to use hydroponic biomass and nutrient farming techniques as an economical way to reduce soil run off and sedimentation in the Mississippi River. The Sny Levee District is the largest levee district within the UMR. The inundation of flood waters into the Sny in 1993 had a devastating impact on some of the natural areas which remained underwater for most of the year.

## Wetland Campaign

**Goal: Restore, enhance, and manage wetland habitat with the river bottomlands to improve habitat quality for all wetland types with an emphasis on improving marsh communities by 20%. Monitor wildlife usage of targeted sites to determine success of restoration**

### **Highlights:**

- 5 acre wet prairie and shallow water wetland restoration at Milan Bottoms near Quad Cities
- 10 acres of shallow water wetland and ephemeral ponds restored by Henry County SWCD
- 2000 acre backwater, side-channel, and bottomland forest restoration by US Army Corps of Engineers through Huron Islands Habitat Rehabilitation and Enhancement Project

***Objective 1) Restore and maintain targeted, high priority wetland communities to sustain essential habitat for SGNC, especially migratory birds, mussels and fish communities.***



This objective also supports the SGNC campaign.

The FWS provided \$10,000 to restore wetland habitat within the NLI tract at Milan Bottoms. This resulted in the creation of 4.3 acres of wet prairie and 1.1 acres of shallow water wetland. Henry County SWCD restored 10 acres of shallow water wetland and ephemeral ponds in NW Henry County.

***Objective 2) Restore and rehabilitate backwater wetlands to provide a diversity of topographic depths, with an emphasis on maintaining areas for overwintering fish survival within the main stem and backwaters of the Mississippi River.***

The ACE Huron Island Complex Habitat and Rehabilitation and Enhancement Project within Pool 18 (Iowa side) to provide deep water habitat for

overwintering fish continues on schedule. The project involves 164 acres of backwaters, 500 acres of secondary channels, and 1,336 acres of bottomland forest. Tasks include: mechanical dredging to connect sloughs, utilization of dredge materials to construct embankments, and planting mast-producing hardwood trees. These activities will provide bank protection, and create favorable conditions for aquatic plant communities.

***Objective 3) Restore, sustain, and preserve high quality wetland natural communities.***

There are at total of 14 INAI sites with wetland habitat in the COA. Of these, 5 are recognized as high quality (category 1) sites including 4 in the Quad Cities (New Crystal Lake Club, New Boston Marsh, McNeal Marsh, and Geneseo Fen), and 1 in Pere Marquette (Pin Oak Lake). These have all been mapped and their stewardship needs identified. Funding to address stewardship is needed.

## **Invasive Species Campaign**

**Goal: Reduce the threat and impacts of invasive plants and animals throughout the COA and especially on high priority lands through active control, increasing the capacity to control, and increasing general awareness of the problem through education and outreach.**

***Highlights:***

- Over 100 acres of invasives management in Quad Cities area
- Invasive species management workshops held throughout the COA
- Native plant sales as an opportunity to promote their use and also raise funds for stewardship
- Monitoring and removal of invasive species on priority natural areas

***Objective 1) Establish a Cooperative Weed Management Area (CWMA) to address invasive plants.***

There are still no active CWMA's operating within the UMR COA. The Quad Cities has a bi-state plan for initiating a CWMA and indeed has obtained letters of support from various agencies, municipalities, and NGOs; however, a lead agency or individual is needed to coordinate the effort. The Urban Forestry Renewal Project (USFS Hazardous Fuels Mitigation Grant) at Black Hawk Forest Nature Preserve facilitated multiple public meetings with landowners to educate them on the importance of invasive species control and prescribed fire. The Cooperative Extension Service was also involved in invasive species awareness.



In early 2013, Jo Daviess Conservation Foundation initiated invasive species workshops consisting of 3 monthly (Jan-Mar) sessions taught by Prairie Works, Inc.

***Objective 2) Promote use of native plants throughout the COA.***

River Bend Wildland Stewards hosts a native plant sale every year. Potted plants, plugs, and seed packets are sold at various events through special orders. During 2012, RBWS sold 1552 plants and 250 seed packets. County SWCD offices throughout the UMR COA typically host native plant (trees and

potted prairie plants) each spring. The Mercer County SWCD also presented a talk promoting the use of native wildflowers to private landowners.

***Objective 3) Implement invasive species surveillance, monitoring, and control by prioritizing work on high quality natural habitats and long-term protected lands.***

A list of the most critical invasive plant concerns has been completed by partners. Measures were taken to control each of these plants at various priority natural areas throughout the COA. Funding for invasive species control was provided through the USFS Hazardous Fuels Mitigation Grant (Quad Cities), Hill Prairie State Wildlife Grant, and from the efforts of dozens of volunteers and professionals working on these sites. There remains no comprehensive inventory or map of invasive plant species.

## **Land and Water Stewardship Campaign**

**Goal: Improve the stewardship and protection of both public and private lands and waters in the COA.**

***Highlights:***

- Fostering skilled stewards through prescribed fire training
- Private landowner restoration workshops held by Henry and Whiteside County NRCS

***Objective 1) Create a formal fire alliances within the various areas of the UMR COA to promote and expand the use of prescribed fire as a safe and effective management tool to restore local ecosystems.***

Within the Quad Cities, there remains an informal fire alliance lead by the River Bend Wildland Stewards with cooperation from other agencies and municipalities. During 2012, RBWS and their partners burned approximately 60 acres. RBWS hosted several wildland fire classes (S130/S190, S234, S230) with a total of 70 participants including professional land managers and private landowners. The need to formalize a fire alliance and to train (apprentice) additional burn leaders remains.



***Objective 2) Provide technical assistance, cost-share, and incentives for habitat restoration and management, invasive species control, use of prescribed fire and sustainable forestry techniques, and other forms of land stewardship on private lands.***

Within the Quad Cities area alone, over 100 acres of natural communities were managed for invasive species control, TSI, and other habitat improvements. Rock Island County and Whiteside County NRCS/SWCDs hosted separate landowner habitat management workshops during the fall of 2012.

Farm Bill incentive programs remains the best source of funding for restoration and stewardship on private lands; however, most of these programs are only for landowners with a current or previous crop history. The FWS maintains the Partners for Wildlife Program which offers cost share up to 50-70% for restoration projects on private lands.

**Objective 3) Prioritize and increase focused stewardship on high quality natural communities.**

The U of I Cooperative Extension Service held several workshops promoting stewardship activities to landowners in 2012. County NRCS/SWCD office also held workshops during the fall of 2012. Many of these workshops are targeted to landowners, the vast majority of which do not own high priority natural areas. Stewardship on the high quality sites does require additional skill to avoid negative impacts and is often best done by trained professionals, or through direct technical assistance and training to the landowners.

## Species of Greatest Need of Conservation (SGNC)

**Goal: Conserve the diversity of fish, wildlife, and plants, with a special focus on wildlife SGNC.**

**Highlights:**

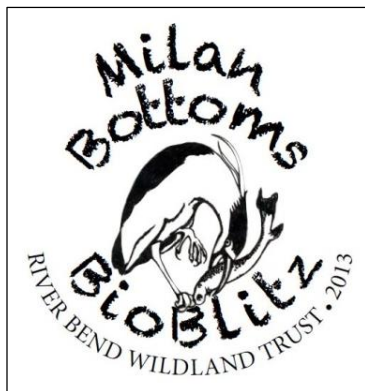
- Ornate box turtle monitoring at Lost Mound Ayers Sand Prairie conducted by FWS
- Multiple species monitoring through Western Illinois University Mississippi River Ecology Program at Kibbe Field Station
- Research and citizen science activities through National Great Rivers Research and Education Center

**Objective 1) Improve, enhance, and restore critical habitat for native migratory bird, fish, and mussel populations.**

Much of the species inventory work conducted by the IL DNR Division of Natural Heritage is focused on monitoring the status of populations of endangered and threatened species and reporting new “elemental occurrences” of listed species. Secondary priority is given to monitoring the vegetative diversity of the native plant communities at high quality natural areas (category 1 INAI sites) and sampling mussel beds. Comprehensive inventories are occasionally compiled when a site is enrolled in an INPC protection program. IL DNR Fisheries



Division does attempt to monitor fish diversity on various streams scattered across the state. IL DNR Wildlife Division monitors population of game species to help develop hunting regulations. The Illinois Natural History Survey does the best comprehensive inventory work, however, this is generally done in conjunction with specific research projects or contracts for agencies such as IDOT prior to new road construction. While the Natural Heritage Database maintains an updated list of listed species as well as vegetation community conditions of INAI sites there is no database for all species aside from county records maintained by INHS.



The Bio Blitz—an effort to catalog every observed species of plant and animal in a given area over a 24-hour period—has emerged as a new way to collect species inventories while allowing an opportunity for the public to see first-hand the work of biologists in the field. While various Bio Blitzes have been held across the state, there have been few in the UMR. JDCF hosted a Bio Blitz in

2012 at Wapello Land and Water Reserve near the town of Hanover. The River Bend Wildland Trust teamed up with NLI, FWS, ACE, and others to host a Bio Blitz at Milan Bottoms in June of 2013. River Bend hopes to continue to host an annual Bio Blitz in the Quad Cities area.

There are several research projects being conducted within the UMR by various universities, agencies, and private consultants. The National Great Rivers Research and Education Center (NGRREC) and the Upper Mississippi River Conservation Committee (UMRCC) are probably the best resources for research projects within the UMR, past and present. Some of the ongoing projects supported by the NGRREC include studies of phytoplankton, red-eared sliders, invasive carp, cladocerans, fish passage at Mel Price Lock and Dam 26, ecological assessment of Swan Lake, hill prairie restoration at Palisades Nature Preserve, forest resources within Pool 26, and forest restoration project at Reno Bottoms. In 2011, UMRCC updated the publication *Habits and Habitats of Fishes in the UMR*, which is available on their website and provides a thorough guide to fish identification and habitat needs in the UMR.

A long-term study of the population and habitat needs of the ornate box turtle continues at Lost Mound, Ayers Sand Prairie, Thompson-Fulton Sand Prairie, and 2 privately owned sites. Multiple surveys conducted by various agencies and institutions have assessed fish, mussels, water quality, and bird use within the Milan Bottoms area and adjacent landscape. There is a need to compile and summarize all of this data to be distributed to partners working on land management projects in this area.

Western Illinois University maintains the Mississippi River ecology program with numerous long- and short-term research projects at the Cedar Glen/Kibbe Field Station including: radio-tracking of turtles, fish and mussel surveys, heron rookery monitoring, phytoplankton studies, habitat use by native bees, and much more. Monmouth College also maintains a field station on the river which is seldom used. Augustana College has recently hired a Mississippi River Coordinator, Dr. Michael Reisner, who plans to develop a Mississippi Rivers Studies Center as a place for Augustana faculty, students, and community leaders to combine interdisciplinary scientific research with collaborative stakeholder efforts to solve environmental, economic, social, and institutional challenges facing communities within the Upper Mississippi River.

***Objective 2) Improve ecological processes of wetland habitats for the benefit of sensitive habitat-specific species.***

Before ecological restoration of wetland habitat can be conducted, more data is needed on which species diversity and abundance. Western Illinois University, working with the FWS, is planning to conduct herpatofaunal sampling of the Milan bottoms area. Illinois DNR will sample for fish. River Bend Wildland Trust (formerly Interstate RC&D) is planning a Bio Blitz for 2013 which will bring in experts from all disciplines to provide information on species diversity at Milan Bottoms.

The ACE EMP Project at Heron Island (Pool 18) is continues with the purpose of improving habitat for fisheries by creating deep pools for overwintering.

***Objective 3) Determine status of listed wildlife and plant species and high quality plant communities identified by the INAI.***

During 2010 and 2011, IL DNR Division of Natural Heritage contracted Applied Ecological Services to conduct assessments of category 1 high quality natural communities throughout the state. This has been completed, for all sites in which landowners granted permission for these assessments, and DNR is

currently summarizing these results for distribution to field staff, as well as other agency and NGO partners. While the researchers hired to perform these assessments did make attempts to find all documented listed species found at these sites and report any new listed species found, they were primarily botanists/plant ecologists and the data will be biased towards plants. There is no current funding mechanism to search for listed wildlife species. This remains the job of state and federal agencies, as time permits.

## Green Cities Campaign

**Goal: Integrate practices of sustainable community development through management and conservation of natural resources and wildlife.**

### **Highlights:**

- Improved recreation opportunities through trail development in Quincy area
- Education and outreach programs to connect the public to nearby resources

***Objective 1) Manage conservation lands and waters within and adjacent to urban landscape to provide wildlife-related opportunities in balance with wildlife habitat needs. Increase public access for compatible recreation within conservation land and waters, where appropriate.***

During the summer of 2012, FWS hosted the “Summer of Paddling,” sponsoring several events encouraging citizens to utilize water trails along the major rivers and tributaries. These events were attended by several thousand people. River Action hosted Floatzilla - Taming of the Slough adventure race (a triathlon using kayaks/canoes instead of swimming) as part of the Quad Cities Wild Places project. River Action also maintains a website devoted to promoting outdoor recreation through riverway bike and water trails and audio tours of the watershed.

While other neighboring states have taken an active role in establishing and promoting “water trails,” there is no concerted effort to market recreational use of water trails within the Illinois UMR COA. The IL DNR maintains a list of “public waters” in which they cite authority given by the River Lakes and Streams Act [615 ILCS 5] Adm. Code Ch. 1 Sec. 3704 Subch. h. These include the Mississippi River and all backwater lakes (i.e., Freness Lake in Jo Daviess County, Boston Bay in Mercer County, and Quincy Bay in Adams County), Illinois River, Rock River, and the lower portions of the Sinsiniwa River, Galena River, Apple River, Plum River, Henderson Creek, The Sny, and Bay Creek.



The Quincy Park District and the Quincy Park Foundation continue to strive to raise funds to expand the Cedar Creek Trail, an asphalt foot and bike trail, from 1 to 3 miles in length. Prairie Land Conservancy continues to develop plans to improve recreational opportunities at Stony Hills Nature Preserve within the bluffs of northwestern Hancock County.

IL DNR recently purchased 410 acres of bluffland in western Pike County for the purpose of providing additional deer hunting opportunities. The site is adjacent to a high quality hill prairie (Housen Hill Prairie INAI site).

***Objective 2) Educate local residents to create a better understanding of the need to preserve natural communities and habitats and the need to manage land and waters to maintain or improve water quality.***

Various agencies and non-profit organizations offer a wide variety of educational programs for students, educators and the public throughout the UMR.

River Action is educating local citizens within the Mississippi and Lower Rock River watersheds on the need for watershed protection through the Retain the Rain program, annual UMR Conference, Summer Education Series, and other platforms, including a on online watershed video that aired on local television.

Thousands of students were reached through the Rock Island County Forest Preserve District Conservation Field Days and Eco Camp. The Winter Ecology Program offered several sessions for the adult community. Mercer County SWCD presented a streambank table demonstration for 250 second graders, and joined other SWCDs in Environthon reaching 200 high school students. Additional programs were offered by River Action, ACE, and Cooperative Extension Service. Other events, such as Bald Eagle Days, Lawn and Flower Show, Gardner Days, Earth Week Fair, and Watershed Fest allowed area agencies and conservation groups to interact with the public on conservation issues.

The Cooperative Extension Service, IL DNR, ACE and others maintains numerous educational kits that can be loaned to teachers for use in the classroom. During 2012, Interstate RC&D's Smart Bus reached elementary school children with backyard conservation programs.



The McCulley Heritage Project in Calhoun County offers several educational programs, including a pond life resource kit that can be loaned out to educators and a tree-o-caching program. NGRREC maintains an education database for teachers, and regularly hosts workshops for educators and students. NGRREC hosted Waterfest 2011 teachers workshop, college for kids, stream discovery, and continues to support the River Watch citizen stream monitoring. The Great River Land Trust (GRLT) hosts an annual Conservation Day. GRLT also recently acquired Piasa Harbor with the intent to develop a riverfront park for recreational

opportunities on the Mississippi River. The Nature Institute offers environmental education programs for students and adults, typically several each month and hosts a Summer Discovery Day Camp.

***Objective 3) Provide, manage and maintain a sustainable patchwork of natural habitats and agricultural uses.***

Local land trusts are perhaps the best resource to provide this sustainable patchwork given close ties to the land and the residents. There are currently 3 active land trusts operating in the UMR COA: Jo Daviess Conservation Foundation in Jo Daviess County; Prairie Land Conservancy covering Henderson, Hancock, Adams, and Pike counties; and Great River Land Trust operating in the Pere Marquette/Alton region. Both the Natural Land Institute and The Nature Conservancy also own land and/or easements within the UMR, primarily in the Driftless area. NLI also owns 92 acres of the Milan Bottoms in the Quad Cities area. Priority focus areas for both of these land trusts remains elsewhere in Illinois – Rockford area

for NLI and Illinois River for TNC. Currently, Interstate RC&D and the River Bend Wildland Stewards are in the process of dissolving the RC&D and reorganizing as a land trust (River Bend Wildland Trust) which would cover the Illinois portion of the greater Quad Cities area (Rock Island, Henry, Mercer counties) with the ability to expand into Iowa in the future. NLI has supported one staff person in the Quad Cities since 2011; however, that contract is set to expire this spring and there are current plans for NLI to retain staff in the UMR. While the Iowa Natural Heritage Foundation covers the entire state of Iowa and is capable of providing land trust services (conservation easements and land protection negotiations) on the Iowa side there remains a critical need to develop a local land trust to cover the Quad Cities. It is hoped that River Bend Wildland Trust can serve this role. Additional fundraising and marketing strategies will be needed to move forward to meet this goal.



The McCully Heritage Project (MHP) in Calhoun County (Pere Marquette area) consists of 940 acres of working farmland with agriculture, forested lands, recreational and educational opportunities, wetland reconstruction, and a hill prairie plot. The services offered by MHP continue to demonstrate how working farms can incorporate this concept of a sustainable patchwork of habitats.

Several institutions within the Quad Cities, including Western Illinois Riverfront campus and Augustana College have prepared strategic plans for smart growth and green infrastructure projects within the Quad Cities. River Action's annual UMR Conference facilitates the preparation of green development plans engaging students and professors to work on various local project needs.

## Cultural Resources

**Goal: Protect and restore significant cultural resources including effigy mounds, Native American burial, ceremonial, and village sites, and pioneer cemeteries.**

### **Highlights:**

- Protection of Native American village and mound complexes
- Protection and preservation of historic structures and cemetery sites

**Objective 1) Protect significant cultural resources including Native American burial, ceremonial and village sites, and pioneer cemeteries.**

Jo Daviess Conservation Foundation has protected multiple Native American sites including a village site (Wapello Land and Water Reserve) and 2 effigy mound complexes (Casper Bluff and Keough Mounds land and water reserves). JDCF have done a lot to promote education of these cultural resource sites. In 2012 JDCF, in cooperation with the Galena Arts and Recreation Center and members of local Native American tribes, hosted Camp Casper at Casper Bluff Reserve. This 3-day camp attracted over 40 kids and allowed them to experience nature through the lens of history. JDCF has also partnered with the Friends of Hanover Land and Archaeological Reserve to host Native American Prairie Day at Wapello Reserve in which features education tours of the cultural features of the site. Additionally, JDCF supports a seasonal education day at the Apple River Fort.



McFarland Hills Land and Water Reserve was another Native American village site, located near New Canton in western Pike County, added to the INPC system of protected easements in 2012. Like Wapello, the agricultural field where the village site is located was restored to native prairie. In late 2012 a geomagnetic survey was performed of the village through funding from the Illinois State Archaeological Survey by staff from the University of Ohio. Geomagnetic surveys have also been conducted at Wapello and Casper Bluff.

The Great River Land Trust previously acquired and restored a home on the National Register of Historic Places, Riverview House. GRLT continues to maintain this house and offer educational tours of the home and looks for additional ways to protect cultural sites in the Pere Marquette area.

Currently, there is no list of historic sites that should be considered for nomination to the National Registry of Historic Places. There is also no comprehensive list of historic burial grounds and cemeteries within the region. There is a Quad Cities Archaeological Society that meets regularly at the Black Hawk Historic Site to educate members on archaeological issues and plan archaeological related events.

***Objective 2) Education local citizens in the proper methods of caring for cultural sites.***

During 2012, IL DNR and IL Historic Preservation Agency staff gave a lecture at Hampton (Quad Cities) discussing the proper methods for maintaining historic cemeteries. Additional resources and lectures are available upon request.

## **Conclusion**

The Upper Mississippi River COA plan provides a regional framework for the implementation of the Illinois Wildlife Action Plan through strategic, prescriptive action items. Since the completion of the COA plan in 2012, conservation entities and academic institutions have identified new ways to share information and resources, and directly collaborate on projects. This report demonstrates a strong commitment among partners to work together to achieve local and statewide goals for the conservation of wildlife and the habitats they depend on.