



U.S. Fish & Wildlife Service

Inside Region 3

January 2013



U.S. Fish & Wildlife Service

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Tom Melius • Regional Director
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The Winter Season Doesn't Mean Hibernation For Service Staff

While 2012 held many success stories, 2013 is gearing up to be yet another year we can look back on with pride. Although the winter months might appear on the surface to be the calm before a storm of activity, in terms of public use and the task of managing our national treasures, quite the opposite is true. The successes we see at each year's end couldn't be reached without the dedicated behind-the-scenes work done during this seeming lull of winter.

Our maintenance crews, who are the backbone of this work, deserve a "shout out" of thanks for all they are doing to orchestrate another outstanding year. These behind-the-scenes heroes deserve thanks for putting in the heavy lifting and physical work of maintaining the vast range of equipment and facilities that will be put into more frequent use as the warmer season comes back into bloom.

Our refuges continue to offer many cold weather opportunities that draw the public out from the warmth of home to visit us and enjoy the great outdoors, be it our winter fests, events offering a snowshoe or cross country ski trek thru our scenic trails, ice fishing, or educational events for families and school groups.

We also see the frozen lakes this time of year speckled with ice fishing shacks...a sure sign of many enjoying the fruits of our labor. While out of the spotlight, our fish hatchery staff is stirring the key ingredients to success, as fish culture continues year round and lake trout eggs are shipped, and fry hatched and reared during the cold winter months. The culture pallid sturgeon and the care of mussel host species also continue.

Our staff complete many site visits during these low profile months for habitat restoration projects that will be in full swing as the ice and snow subside. Perhaps less glamorous, but also vital to success, the winter months are a critical time for staff to complete important paperwork and meet with partners to plan for the smooth and successful completion of work during the traditional field season.

2013 is a significant anniversary year for us, as this December will be the 40th Anniversary of the Endangered Species Act. In this issue of Inside Region 3, we begin our look at both the historic and the current endangered species conservation work occurring within our region. We will continue to highlight endangered species work in each issue this year, leading us to the anniversary.

This year we will also continue our work with surrogate species, identifying species and taking the next steps involved with our managing for their success.

I'm pleased to reflect on the many great things that we've done together throughout the past year, and I'm looking forward to yet another productive year ahead.

Please enjoy this month's issue of Inside Region 3.



Thomas O. Melius

Tom Melius
Regional Director, Midwest Region



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Piping Plover: USFWS.

Two Rivers National Wildlife Refuge Produces Unprecedented Amounts of Feed and Habitat for Waterfowl



With an abundance of food to support them, waterfowl counts are high at Two Rivers National Wildlife Refuge. USFWS.

*By Cortney Solum
Two Rivers NWR*

Biologists at Two Rivers National Wildlife Refuge have determined that the summer drawdown performed on Swan Lake was an overwhelming success. This assessment is based on exceptional amounts of natural seed production by wetland plants and high levels of bird use during the early part of the 2012 fall waterfowl migration.

The backwaters of the Illinois River that make up Swan Lake are an important migration stop along the Mississippi flyway. Located

near Grafton, Ill., the lake is managed by Two Rivers National Wildlife Refuge. U.S. Fish and Wildlife Service biologists Ken Dalrymple and Brian Loges, in collaboration with researchers from the University of Tennessee, report that seed production by plants grown in Swan Lake averaged more than 3,000 pounds per acre. This is an unprecedented amount of natural food for waterfowl. Typically native moist-soil plants growing in wetlands similar to Swan Lake produce less than half of the production reported from this summer's growing season.

The report states 164,120 ducks could use Swan Lake for 110 days based on available seed.

“Most refuges cannot sustain this number of birds without providing supplemental corn,” stated Matthew Gray, Ph.D. from the University of Tennessee. “In other words, the drawdown of lower Swan Lake will provide significant quality habitat for migrating waterfowl this winter.”

A drawdown is a wetland management technique performed by slowly removing water from a wetland for the summer season to dry out the

sediment at the bottom and promote plant growth. The ability of the refuge staff to complete a drawdown on the lower half of Swan Lake was enhanced by the summer drought. A drawdown could not be completed in recent years due to extended flooding on the Illinois River. In addition to waterfowl, many other bird groups benefit from the flush of vegetation and insects following the drawdown. “Estimating and then monitoring the number of waterfowl that can be supported in the lake are useful exercises to measure success towards the refuge's waterfowl habitat goals,”

said U.S. Fish and Wildlife Service Regional Zone Biologist Brian Loges. “Refuge management centers on evaluating how the resources of the refuge can help support the needs of migrating waterfowl.”

From weekly aerial counts, the Illinois Natural History Survey reported the daily average count in November was an amazing 105,773 migrating waterfowl at Two Rivers NWR. [You can view these counts and others by clicking here.](#) 🦆

Innovation at Work: The Mobile eDNA Filtering Lab

By Chris Olds, Alpena Fish and Wildlife Conservation Office and Katie Steiger-Meister, External Affairs

One of the U.S. Fish and Wildlife Service's newest tools in the detection of Asian carp comes from a scientific method developed and implemented by the University of Notre Dame that analyzes water samples for traces of Asian carp DNA left behind in the environment, known as environmental DNA (eDNA).

To determine the presence of Asian carp genetic material in a river or lake, fish biologists take a water sample from the surface of the water. The water sample may contain traces of the Asian carp DNA in the form of scales, cells, feces or mucus. The water sample is then filtered onto sterilized filter paper through a vacuum

manifold. Once complete, the filter paper is sent to an eDNA processing lab.

During the eDNA sampling and filtering process, much care is taken to prevent the water samples from becoming contaminated or compromised. When performing eDNA water sampling at remote locations, Service staff were confronted with the challenge of filtering numerous water samples in a sterilized environment with limited access to adequate lab facilities.

With the expected implementation of an eDNA program for the Great Lakes by 2014, the Alpena Fish and Wildlife Conservation Office (FWCO) began exploring options, during 2011, for field-based filtration of water samples.



Alpena Fish and Wildlife Conservation Office's new mobile eDNA filtering lab will allow for on-site water filtering in a controlled and sterilized environment, even at remote sampling locations. USFWS.



The new Mobile eDNA filtering lab allows for up to six filtering stations to be set up at one time. USFWS.

Biologist Chris Olds suggested a mobile filtering unit similar to the Lake Sturgeon Stream-Side Rearing Units employed by Genoa National Fish Hatchery. The concept was a self-sufficient trailer designed for use at remote sampling locations along Lake Huron

that maintained the ability to utilize a plug-in power source if facilities were available.

Brainstorming and design considerations started in October 2011. The final trailer concept was shared with the Regional Safety Office and the

La Crosse Fish Health Center Staff, in late 2011, to ensure that it would meet all safety requirements and quality assurance standards for the water filtering procedures.

Upon approval, the trailer contract was awarded to Featherlite Inc. on July 3, 2012. Featherlite Inc. worked with the Alpena FWCO to ensure that the internal trailer components would meet all of the filtering needs, both at remote sampling locations and when hooked up to shore power. The final product is Alpena's new mobile eDNA filtering lab, fully stocked and capable of filtering numerous water samples, even at the most remote field sites.

Highlights include six filter stations, a freshwater tank that links to a de-ionized water system and enough storage space to accommodate the necessary equipment for the collection of 300 water samples. A prime example of innovation at work in the Service, the trailer's capabilities are endless. The new unit can be utilized as a mobile eDNA filtering lab, a mobile field station, or even a mobile classroom. 🐟

WSFR 75th Celebration Highlights Hunter Education, Hosts Iowa DNR Presentation

By Valerie Rose Redmond
External Affairs

The Regional Office continued its Wildlife and Sport Fish Restoration Program 75th anniversary celebration with a presentation of Iowa's Hunter Development and Outreach Programs, by Megan Wisecup of the Iowa Department of Natural Resources, November 1.

Wisecup began the four hour session that stressed the underlying message that a successful hunt is one in which everyone returns home safely.

Iowa's hunting education program became mandatory in 1983 after state officials began to see injurious trends. Classroom and online education courses cover a range of topics including: Responsibility and Ethics, Wildlife Management and Conservation, Boating Safety, and Wildlife Identification.

Hunting education is a priority in Iowa, one of only a few states that still allow party hunting with up to 80 people in a group. The main causes of injury are target fixation,

a victim out of sight and careless equipment use.

The Iowa DNR utilizes Google web analytics to determine when customers are accessing a site. This facilitates class offerings during peak season. Iowa was one of the first states to develop an online registration system. The system allows the DNR to, through a Happy Birthday Wish, alert 11-year old would be hunters that they can now apply for a hunting license.

Wisecup also covered the benefits of a blaze orange wardrobe when out in the field. A public service announcement video stressed the importance indicating that, "the more blaze orange you wear the more visible you are in the forest." The video also examined blaze orange wardrobe comparisons and visibility differences in the field.

Tree stand safety was also covered extensively. Tree stand public service announcements are



(From left) Daniel Lovdahl, Fabian Romero and Megan Wisecup demonstrate how to properly wear a harness. USFWS.

incorporated in the courses.

"This is how you know you've had a successful hunt," says the young man in the video with a smile at the camera, before picking up the phone to call his wife. "Honey, I'm coming home," he said.

The video details the importance of leaving location details with your friends and family, and how suspension trauma is a serious risk. "Wearing a harness is key," Wisecup said, before sharing an unfortunate story of a man who mistakenly tied the string to the trigger and shot himself in the groin. "He did survive, but it was very difficult to find

him since he didn't leave a good plan to where he would be."

Those who completed the Iowa On-line Hunter Education Course prior to attendance received an Iowa Hunter Education Certificate, since the training met their field day requirement for hunter safety certification.

This was the second in a series of brown bags hosted by the WSFR program to celebrate its milestone anniversary. 🦌



Daniel Lovdahl demonstrates how to properly operate a firearm. USFWS.



Citizen Tip Helps Close the Knox County Indiana Whooping Crane Case

By Tina Shaw
External Affairs



A pair of whooping cranes feed and rest, at Patoka River National Wildlife Refuge, Indiana, on their migration south. USFWS.

A citizen tip helped bring closure in the case of a whooping crane shooting in Indiana. John Burke and Jason McCarter, of Knox County, Ind., pled guilty and were sentenced in November 2012 for their involvement in the shooting of a whooping crane.

Wildlife law enforcement agents with the U.S. Fish and Wildlife Service Office of Law Enforcement and Indiana Department of Natural Resources

investigated the case and report that a plea agreement was reached.

The crane was last seen alive by an International Crane Foundation volunteer, Jan. 7, 2012. On January 21, 2012, an Indiana Department of Natural Resources Conservation Officer received information from a citizen concerning the possible shooting of a whooping crane. That information led to charges against McCarter and Burke.

The whooping crane killed was taught its migratory path by ultra light aircraft and belonged to a nesting pair. It was one of approximately 100 birds left in the eastern flyway.

Burke and McCarter were charged and sentenced in United States District Court, in Terre Haute, Ind. As part of the plea agreement, Burke and McCarter each received: three years probation, are required to pay a

donation of \$5,000 to the International Crane Foundation, must perform 120 hours community service at the Indiana Department of Natural Resources Goose Pond Fish and Wildlife Area, and are not allowed to hunt during their probation.

In addition to the Endangered Species Act, whooping cranes are protected by the Federal Migratory Bird Treaty Act and state laws. An

investigation into the killing of a second whooping crane in Jackson County continues. Anyone with information can call the Turn In A Poacher hotline at 1-800-TIP-IDNR. 🦢

Successful Migration of Ducks on a Stick

By Tom Kerr, District Manager, St. Croix WMD

In a partnership between the St. Croix Wetland Management District, Friends of the St. Croix Wetland Management District and local libraries, the District's Ducks on a Stick Collection has been migrating and, during the past five months, more than 15,000 people have had the chance to learn more about Wisconsin's migratory waterfowl as a result.



Roberts Library Director Brenda Hackman and St. Croix Wetland Management District manager Tom Kerr with the Ducks on A Stick Display. USFWS.

The library connection was Friend's member Buck Malick's idea. Through his local library contacts, the Ducks on a Stick Collection spent two months in the Hudson, Wis. public library and continued on to libraries in New Richmond and Roberts, Wis.

According to Malick, "The exhibit of mounted ducks is popular with all ages.

Since many people never get within arm's length of a duck, library users are fascinated by the small details of bills and feet. They're surprised at the softness of the feathers."

Depending on the size of the library, between four and ten of Wisconsin's common waterfowl species are displayed.

The Ducks on a Stick Collection is a valuable educational tool that allows people to test their waterfowl identification skills. The collection is very popular at district events, often attracting many people to look at the taxidermy mounts. Many people never have the opportunity to view Wisconsin's common breeding and migratory waterfowl species this close.

Through this unique partnership coordinated by the Friends Group, more than 500 people a day will see ducks on a stick at the New Richmond

Library. This is a great opportunity to highlight the story of Wisconsin's Waterfowl Production Areas. The display is part of the Friend's Group effort to promote the mission of the St. Croix Wetland Management District.

Ducks on a stick was funded through generous donations from the Friends of the St. Croix Wetland Management District, St. Croix County Sportsman's Alliance, Star Prairie Fish and Game, Willow River Rod and Gun Club and the USFWS Challenge Cost Share Program. 🦆

[For more information on the St. Croix WMD, click here.](#)

[To learn more about the St. Croix WMD Friends Group, click here.](#)

[To check us out on Facebook for up-to-date information on programs or District activities, click here.](#)



Much to Quack About: The 16th Annual Minnesota Waterfowl Symposium

*By Valerie Rose Redmond
External Affairs*

The U.S. Fish and Wildlife Service, in partnership with the Minnesota Waterfowl Association and the Minnesota Department of Natural Resources, will host the 16th annual Minnesota Waterfowl Symposium.

When: February 2 - 9 a.m. - 4 p.m.

Where: Mall of America Ramada, 2300 East American Boulevard, Bloomington, Minn.

For more information about the symposium please call the Minnesota Waterfowl Association at 763-767-0320.

A River Runs Through It: Hydrogeomorphic Restoration and Public-Private Partnerships Build Future for the Big Muddy

By Ashley Spratt
External Affairs

Cutting edge research funded by Landscape Conservation Cooperatives in the Midwest, coupled with on-the-ground conservation and management through public-private partnerships, is building a future for the lower Missouri River.

The Plains and Prairie Potholes LCC and Eastern Tallgrass Prairie and Big Rivers LCC, charged with identifying priority science needs to combat landscape scale natural resources threats, joined forces this year to support the Lower Missouri River Hydrogeomorphic Restoration and Management Project. This project will inform more effective conservation and management across 670 miles of the Missouri River from Decatur, Nebraska to St. Louis, Missouri.

The lower Missouri River, the largest free-flowing river reach in the United States, encompasses

nearly 1.5 million acres of bottomland habitat for fish, wildlife and plants, while providing commercial transportation and recreation opportunities. Since European settlement, the Missouri River has been highly altered due to upstream reservoirs, water control and flooding events.

“We are gathering the data in layers, piecing together the geology, soil structure, topography, and finally, the hydrology of the river. What was the nature of the river before it was altered, including its dynamics, and seasonal and long-term patterns?” said Mickey Heitmeyer, lead researcher for the LCC project. “Once we have that data, we map it, layer over layer, and compare it to current day conditions.”

On-the-ground private landowners and natural resource managers, like those representing the U.S. Fish and Wildlife Service’s Partners for Fish

and Wildlife Program and Missouri River Recovery Program, national wildlife refuges, state parks, and many others, will be able to use the data generated by this research to inform strategic land acquisition, land protection and restoration.

“For landowners who participate in the Partners for Fish and Wildlife Program, we try to explain that we are trying to restore historic habitats which have been lost to benefit migratory birds and resident wildlife,” said Kelly Srigley-Werner, program coordinator in Missouri. “The hydrogeomorphic restoration project will really help us target strategic areas to get back what used to be on the landscape and will be a powerful tool we can use to effectively demonstrate and communicate with landowners.”

The lower Missouri River contains countless

conservation properties and efforts maintained by local, state and federal agencies, nonprofit groups and private entities. National wildlife refuges, state parks, conservation areas and other publicly owned properties can use the maps that are developed through the hydro-geomorphic analysis to guide land acquisitions and restoration efforts in the face of evolving natural resources challenges like climate change, energy development and shifts in agricultural practices.

This year the Missouri/Mississippi Rivers Confluence Conservation Partnership - a Partners for Fish and Wildlife collaboration - was recognized by the Department of the Interior as a signature demonstration of partnering for the America’s Great Outdoors Rivers Initiative, bringing together private landowners, conservation organizations, and public natural resources agencies

to promote a balance between fish and wildlife habitat and agriculture and community development. The hydro-geomorphic analysis can also assist with guiding future efforts recognized and supported by America’s Great Outdoors.

Since 2004, the Missouri/Mississippi Rivers Confluence Conservation Partnership has restored and enhanced more than 21,000 acres of private land, and protected more than 8,000 acres of wetland habitat on private land across Pike, Lincoln, St. Charles and St. Louis counties.

“Our property has great interest in habitat conservation for waterfowl and other wildlife. We have been fortunate to have a trusting relationship with Ducks Unlimited, the U.S. Fish and Wildlife Service and other partners to help design and improve our lands through the Partners for Fish and



Wildlife Program,” said private landowner Warren Hager. “The support this partnership provides has enabled our habitats to be more diverse, and our relationships have allowed us to rely on expertise when we need it.”

Leaning on the results of this cutting edge LCC research will improve scientific understanding about the lower Missouri River and provide a tool for the conservation community to put the right conservation efforts in

the right places, for the right reasons, ultimately allowing for maximum return on conservation investments. 🐦

Click below to learn more about:

- ***Missouri/Mississippi Rivers Confluence Conservation Partnership***
- ***Hydrogeomorphic Restoration and Management Project***
- ***Plains and Prairie Potholes LCC***
- ***Eastern Tallgrass Prairie and Big Rivers LCC***

2012 A Good Year for Great Lakes Piping Plovers

By Vince Cavaliere, Great Lakes Piping Plover Coordinator, USFWS East Lansing, Michigan



Piping Plover. USFWS.

In 2012, endangered piping plovers in the Great Lakes experienced the third highest number of chicks fledged since the recovery program began. A total of 58 nesting pairs established 64 nests; from these nests, 193 chicks hatched and 121 chicks fledged in the wild. The year also marked the second highest ratio of chicks fledged per pair ever recorded for the program.

Locations with especially high fledge rates included Whitefish Point which fledged 11 out of 12 chicks; Tawas Point State Park, which fledged eight out of

eight chicks; Grand Marais, with seven out of 10 chicks; and Sleeping Bear Dunes, which once more led the way with 45 chicks fledged.

Approximately 15 plover monitors were hired through various partner groups to monitor plovers at different locations throughout Michigan. Additionally, dozens of volunteers spent time assisting with different monitoring efforts. Where possible, protective exclosures are built around all the piping plover nests in the Great Lakes, and the nests are regularly

monitored to protect them from disturbance and predators.

A research team from the University of Minnesota travels among all of our piping plover sites to band the chicks and adults. They also help locate and monitor nests, help at the captive rearing facility and conduct research on the piping plover population.

Some highlights for the year include:

■ Sleeping Bear Dunes has, by far, the largest concentration of breeding Great Lakes Piping

Plovers. In 2012, 22 pairs nested at the park, roughly 38 percent of the entire Great Lakes population. With the help of Great Lakes Restoration Initiative dollars, Sleeping Bear Dunes National Lakeshore was able to dedicate up to five staff, whose duties included piping plover monitoring during the 2012 breeding season, plus time for Law Enforcement to help with the effort. A nest on the Lakeshore's South Manitou Island was the first recorded there since recovery efforts began.

■ Although plovers have attempted to nest at Tawas Point several times in recent years, there has not been a successful nest at the park since the Great Lakes Piping Plover recovery program began. That changed in 2012 as two different pairs of Great Lakes piping plovers nested at Tawas Point State Park and fledged an excellent eight chicks out of eight eggs laid.

■ Port Inland had two piping plover pairs in 2012 that initiated two nests; two chicks fledged,

both from the same nest. Interestingly, the male from that nest was a plover from the Great Plains in Manitoba. We believe this is the first time a plover from one of the other two populations bred successfully in the Great Lakes.

■ The Captive Rearing Facility, located at the University of Michigan Biological Station, near Pellston, Michigan, once again took in eggs and chicks that were abandoned due to weather, predation or some other factor. Dozens of volunteer zoo keepers from zoos across the country, including Disney's Animal Kingdom, The National Zoo, The Detroit Zoo and many others help incubate eggs and raise chicks that were then released into the wild, at the end of the season, with other wild piping plovers. 🐦



Piping Plover. USFWS. Page 11

Illinois' Unique Places and Species

By Kristopher Lah
Chicago ES Field Office,
Kristen Lundh, Rock Island
ES Field Office, Kim Mitchell
Regional Office Ecological
Services, Cathy Pollack
Chicago ES Field Office

On December 28, 1973, President Richard Nixon signed into law the Endangered Species Act. The Endangered Species Act of 1973 is by far the most significant piece of endangered species legislation and is considered one of the world's most important conservation laws.

Throughout 2013, Inside Region 3 will feature highlights of the Midwest Region's endangered species program.

As we celebrate conservation successes during the Endangered Species Act's 40th anniversary year, Illinois may not be the place one would expect to find unusual endangered species, unique ecosystems or inspirational conservation success stories. Yet all are here, in Illinois, where endangered plants and animals are found in



Eastern Prairie Fringed Orchid. USFWS.

unexpected, unique and interesting places.

Unknown to many, Illinois has a small karst region characterized by numerous surface sinkholes and underlying caves. The Salem Plateau karst region is found in two western Illinois counties near St. Louis. Endemic to the cave streams that flow underground through this region is the endangered Illinois cave amphipod, a small freshwater crustacean.

Sinkhole density in the Salem Plateau is as high as 230 sinkholes/square mile. Joints and fractures in the subsurface allow surface water to flow rapidly into caves that the amphipod inhabits.

There is an intimate relationship between the Illinois cave amphipod's habitat and the land-use practices on the surface that threaten the species. Due to the proximity to St. Louis, this beautiful area of the state is being developed at a high rate. Between 2000 and 2010, the population of St. Clair County

increased by 19.3 percent and Monroe increased by 5.5 percent.

Listing the Illinois cave amphipod as endangered has led to land acquisition to permanently protect cave entrances and parts of cave recharge areas. Threats to this species have not been reduced enough to consider it for delisting, but we are working toward recovery.

Within the state of Illinois, the Chicago metro area is home to some of the highest diversity of plants and animals in the state, as well as home to threatened and endangered species. A globally rare ecosystem called dolomite prairies is found in the Chicago area. These prairies and associated wetlands are found where the Niagara Escarpment emerges at or near the ground surface. The Niagara Escarpment is a limestone geological feature that runs predominantly east-west from New York State, through Ontario, Michigan, Wisconsin and Illinois.

Dolomite prairies and fens are often found where the

escarpment is exposed on the earth's surface. In turn, these wet prairie ecosystems support a complex of life, including federally threatened and endangered species found in few other areas.

The escarpment is exposed in the Lower Des Plaines River Valley, and small prairie wetland remnants there are home to the Hine's emerald dragonfly (the only endangered dragonfly), the threatened lakeside daisy and endangered leafy prairie clover. Visiting these amazingly intact and functioning sites gives one a sense of truly being in a natural area. Yet these remnants of diversity lie like islands amidst what can seem like a sea of development.

Living in some Illinois wetlands and bordering uplands is the eastern massasauga, a small (up to 2 feet long), shy rattlesnake. The massasauga was fairly common in Illinois before most of the state's wetlands were drained. Now, only six to eight populations remain and are scattered among sites in southern, east central, and northeastern parts of the state, including

the Chicago metro area.

In response to drastic declines in recent years, conservation partners launched an Illinois Recovery Team and then developed a massasauga restoration plan specifically for northeastern Illinois. The plan calls for rescuing the remaining snakes in northeastern Illinois and then using them to build a breeding population. Long-term goals include habitat restorations and reintroductions back into the wild when good habitat and a healthy zoo population have been established.

Surprising to some, Illinois is home to approximately 40 species of orchid. One of the rarest is the eastern prairie fringed orchid, a federally threatened plant. Most populations in Illinois are found in northeastern Illinois, near Chicago, in sedge meadows and prairies. More than half of Illinois' populations of eastern prairie fringed orchid are in Illinois Nature Preserves, providing the highest form of land protection in the state.

More than 70 Illinois volunteers monitor this orchid's populations during

the blooming season. They collect population information and also hand-pollinate flowers to increase seed production. Some volunteers also manage lands through prescribed burns and invasive species control to maintain and improve conditions for the orchid's conservation.

When the Endangered Species Act was passed in 1973, it shined a light on the plight of charismatic species. Over the last 40 years, as little-known and obscure species have been added to the list, the Act has brought to light

the complexity of life that comprises the fabric of ecosystems.

People are part of this fabric, and addressing threats to obscure species addresses threats to people as well. During the last 40 years, bald eagles and peregrine falcons have returned to nest in Chicago, and a healthy wolf population is found, not far north, in Wisconsin and Michigan.

During the next 40 years, we face more difficult challenges, but we expect to be talking about the unexpected species that have recovered and that continue to live in Illinois: Illinois cave amphipod, Hine's emerald dragonfly, lakeside daisy, leafy prairie clover, eastern massasauga and eastern prairie fringed orchid. 🐉



Hine's Emerald dragonfly. USFWS.

During the next 40 years, we face more difficult challenges, but we expect to be talking about the unexpected species that have recovered and that continue to live in Illinois: Illinois cave amphipod, Hine's emerald dragonfly, lakeside daisy, leafy prairie clover, eastern massasauga and eastern prairie fringed orchid.



Five ultralight-led whooping cranes arrived in Florida, in November 2012.
(Courtesy photo by Operation Migration)

Whooping Cranes Make Trip to Florida in Record Time

By Georgia Parham
External Affairs

The November 23 arrival of five young whooping cranes in Florida marked the earliest that ultralight-led cranes have completed the 1,200-mile trip from Wisconsin. The birds departed Wisconsin on September 29 and arrived at their wintering grounds at St. Marks National Wildlife Refuge in Wakulla County, Florida. These cranes are the 12th group to be guided by ultralight aircraft from central Wisconsin to the Gulf coast of Florida.

In addition to the five birds led south by ultralight aircraft, six cranes made their first southward migration as part of the

Whooping Crane Eastern Partnership's Direct Autumn Release (DAR) program. The DAR cranes were hatched and raised by biologists with project partner International Crane Foundation. The six birds were released in the company of older cranes from whom the young birds learn the migration route south. The ultralight-led and DAR cranes are joining two wild-hatched chicks in the 2012 cohort.

There are now 115 whooping cranes in the wild in eastern North America, thanks to efforts by the WCEP partners, including the Service, the International Crane Foundation, Operation Migration, the Wisconsin

DNR and others. WCEP is conducting the reintroduction project in an effort to restore this endangered species to part of its historic range in eastern North America. To follow the progress of the program, go to www.bringbackthecranes.org

In other whooping crane news, two Indiana men, John Burke and Jason McCarter, pled guilty to shooting a whooping crane in Knox County, Indiana, in early 2012. The whooping crane killed was a WCEP bird; it was taught its migratory path by ultralight aircraft and belonged to a nesting pair. For more information, [click here.](#) 🐦

Indiana Bat Calendar -

A Fact a Day for 2013

By Georgia Parham
External Affairs

Bats are fascinating creatures, and now the Midwest Region has a way for educators, conservationists and all who appreciate bats to stay up to date and learn about the endangered Indiana bat and other species.

The Region has launched the Indiana Bat Calendar, an electronic calendar featuring 365 bat facts, and found on the Region's website. Subscribers can sign up to automatically receive the daily bat fact, and the widget on the website is available for posting by other agencies and organizations.

Bat facts cover life history and conservation efforts for the Indiana bat and for other bat species common in the Midwest. Lori Pruitt, the Service's lead for Indiana bat recovery and compiler of the facts, said the project is an effort to raise awareness of Indiana bats, bat conservation in general and critical issues such as white-nose syndrome and impacts of pesticide use.

To sign up for the calendar, go to <http://www.fws.gov/midwest/endangered/mammals/inba/calendar>:

If you're signing up for the calendar from a Service computer, you will need to open the Service webpage (<http://www.fws.gov/midwest/endangered/>) from Internet Explorer rather than Chrome. On the left hand side of the screen, you will see a box labeled "Daily Bat Fact." In that box, click on the "Subscribe by email" link and then follow instructions to sign up for the bat fact. You will get a confirmation message sent to your Service email account and will be asked to click a link to activate your account. You'll have to cut and paste that link into Internet Explorer to activate it.



If you're interested in using the bat calendar widget on your website, contact Courtney Celley in External Affairs at Courtney_Celley@fws.gov. 🐦

Upper Midwest and Great Lakes LCC Shares Three-Year History, Progress and Future Direction in First Annual Report

By Ashley Spratt
External Affairs

Since 2010, the Upper Midwest and Great Lakes LCC has grown to represent more than 30 agencies and organizations across state and international boundaries, committed to healthy ecosystems for current and future generations of fish, wildlife and people.

In January 2013, the LCC released its first annual report outlining the partnership's accomplishments over the past three years, including a break

down on spending, steering and technical committee membership, research progress, communications efforts and future direction.



In this report, steering committee co-chairs Tom Melius and Becky Humphries provide a broad perspective of LCC accomplishments, successes and ongoing efforts to connect cutting edge scientific research

with on-the-ground natural resources management.

Since 2010, the LCC has provided nearly \$3 million to research institutions working on increasing the scientific foundation for management of natural resources and the development of tools and frameworks to improve collaboration within the conservation community. LCC partners continue to zero-in on key science needs within the upper Midwest and Great Lakes natural resources community.

This year, technical committee members reviewed and proposed priorities for science and collaboration to guide conservation research and future investments. Climate change, terrestrial and aquatic connectivity, and energy development were identified among the partnership's top priority resource challenges.

The report also highlights ongoing front-line research on climate change,



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information management and delivery, species vulnerability, aquatic connectivity, and additional investigations into large-scale natural resource challenges like renewable energy development,

invasive species and land-use change.

The Upper Midwest and Great Lakes LCC has capitalized on pre-existing conservation communities and networks to engage with federal, state, non-governmental and tribal groups to ensure an open, two-way dialogue surrounding LCC activities. This annual report offers continued transparency and accountability on behalf of the partnership as the LCC forges ahead in 2013.

To view the full annual report visit: <http://www.greatlakeslcc.org>.



Becky Humphries, Director of the Ducks Unlimited Great Lakes Atlantic Region, and Tom Melius, Regional Director of the U.S. Fish and Wildlife Service Midwest Region, co-chair the steering committee of the Upper Midwest and Great Lakes LCC.



Making Climate Change Data Relevant to Land Managers

By Ashley Spratt,
External Affairs

Global climate models project that Earth's temperature will warm by about 2° to 4°C (about 3° to 7°F) in the coming century. But what does that mean for communities, natural resource managers, and other local interests? And how can climate scientists ensure that climate data is useful to a wide range of individuals with different data needs?

In cooperation with the Upper Midwest and Great Lakes Landscape Conservation Cooperative (LCC), Dan Vimont, associate professor at the University of Wisconsin-Madison, and his team of climate scientists are releasing a newly developed set of downscaled climate data developed specifically to address climate change challenges at a local level. The data set will be housed and available to conservation and land managers through U.S. Geological Survey in early 2013.

"The data can be used in a number of different ways, by groups with very different needs," Vimont said.

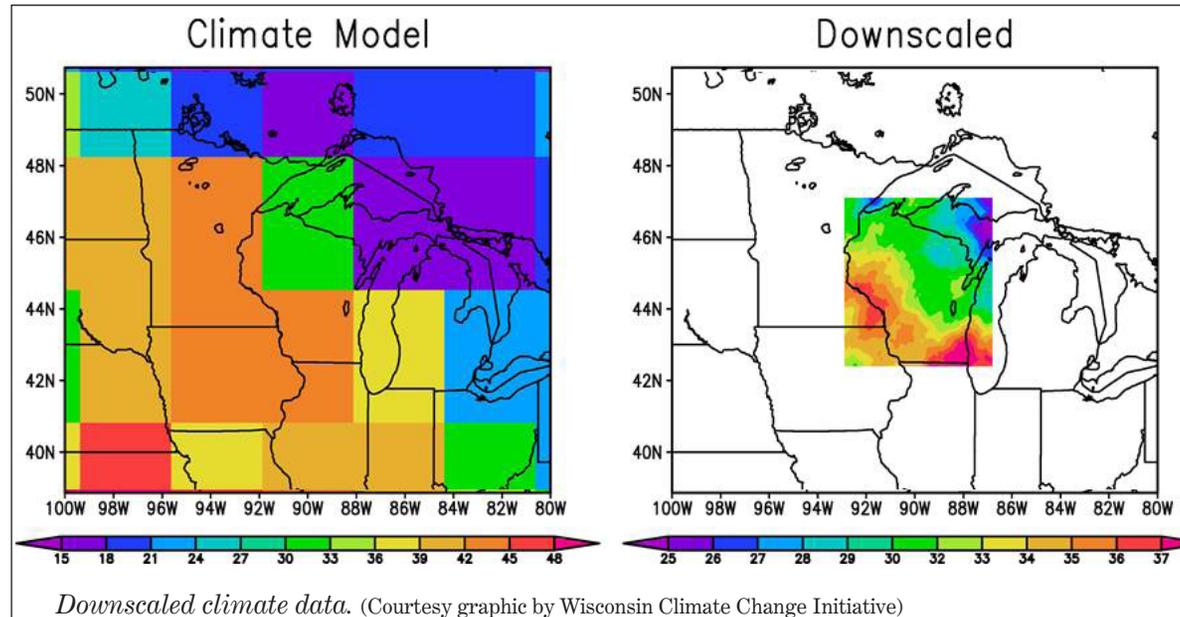
For example, the data could be used to assess and anticipate climate change impacts on specific natural resources,

for this variety of uses because of its probabilistic nature. It also applies high spatial (eight kilometer) and temporal (daily) resolutions across the study region, critical components for adaptation planning.

Based on this newly developed data, the LCC is

Preliminary analysis shows an increase in the number of "very hot" days, a decrease in the number of "very cold" days, wet areas getting wetter and dry areas getting drier. For example, in the Chicago area, data shows the area will warm by 3 to 8°F by mid-century, have

These characterizations of the potential weather extremes and the downscaled data will allow upper Midwest and Great Lakes natural resources managers prepare for anticipated climate impacts.



ecosystems and regions, but it is also valuable for evaluating potential effects on industry, agriculture, tourism, and other human activities. Ultimately, the data will be used to develop and recommend climate adaptation strategies.

The data is extremely flexible

supporting additional work to project the changes in the frequency and intensity of extreme weather events across the Great Lakes region, namely heat waves, cold spells, heavy precipitation events, and droughts.

more frequent very hot days (four weeks per year), and less frequent freezing days (five to six weeks per year). Winter precipitation could increase by 0-25 percent, and very wet days will become more frequent. In fact, the number of 2-inch rainfall events could double.

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For more information about this and addition cutting-edge, landscape level research, visit <http://www.greatlakeslcc.org>.