

# Upper Mississippi River and Great Lakes Region Joint Venture Science Office

# 2009 Annual Report



Second Annual Report: Developed to inform and update on the role, vision, and recent accomplishments of JV staff and associated biologists that form the JV Science Team. We welcome feedback from our valued colleagues.

## Joint Venture Science Office

**JV Mission:** The Upper Mississippi River and Great Lakes Region Joint Venture will deliver a full spectrum of bird conservation through regionally based, biologically driven, landscape-oriented partnerships.

Following JV Management Board direction, the Science Staff and Technical Committee will improve the scientific foundation of bird conservation within the JV region. Management Board technical priorities include:

- Apply scientific information to support strategic planning and implementation of all-bird conservation.
- Identify sources of uncertainty and evaluate biological assumptions of JV objectives.
- Provide a framework for coordinated habitat and population monitoring and evaluation.
- Maintain strong links among planning, implementation, and evaluation to improve delivery of all-bird conservation at multiple scales.

**Science Staff Vision:** Working with partners, the JV Science Office will help achieve regional population objectives for priority bird species and increase habitat conservation efficiency and effectiveness. JV scientists will integrate bird population and environmental trends in a proactive approach to conservation planning, design, and evaluation. Efforts will result in expanded bird viewing and hunting opportunities plus other societal values (improved water quality, flood reduction, and carbon sequestration) associated with healthy plant and wildlife communities. Superior outcomes will result from strong partner relationships built on trust, common purpose, and mutual support, exemplifying the synergy of an effective joint venture.

### **Contact Information:**

Gregory J. Soulliere and Bradly A. Potter Upper Mississippi River and Great Lakes

Region Joint Venture Science Office

U.S. Fish and Wildlife Service 2651 Coolidge Road, Suite 101 East Lansing, MI 48823-6316

Joint Venture web site: www.UpperMissGreatLakesJV.org

### 2009 Bird-group Committees – The "JV Science Team"

The Joint Venture Science Team consists of 10 JV Technical Committee members plus several ad hoc members with expertise in bird habitat conservation and biological modeling. This group of scientists was responsible for completion of the 2007 JV Implementation Plan and associated Bird-group Strategies. With the exception of JV Staff (Potter and Soulliere), Science Team members serve on a voluntary basis. Their contributions and dedication reflect the best of the JV science partnership.

### Waterfowl

John Coluccy, DU (co-chair) Greg Soulliere, FWS (co-chair) Todd Bishop, IA DNR Mike Eichholz, SIU Ron Gatti, WI DNR Dave Luukkonen, MI DNR Charlotte Roy, SIU and MN DNR Josh Stafford, IL NHS

### Shorebirds

Robert Gates, OSU (chair) Bill Bartush, USFS David Ewert, TNC Katie Koch, FWS Brad Potter, FWS Bob Russell, FWS Greg Soulliere, FWS

### Landbirds

David Ewert, TNC (chair) John Castrale, IN DNR Melinda Knutson, FWS Mark Nelson, USFS Brad Potter, FWS Michael Roell, MO DOC Greg Soulliere, FWS Wayne Thogmartin, USGS Tom Will, FWS

### Waterbirds

Dan Holm, IL DNR (chair) Robert Gates, OSU Steve Lewis, FWS Mike Monfils, MNFI/MSU Greg Soulliere, FWS Wayne Thogmartin, USGS

## Primary Science Office Objectives and Accomplishments in 2009

Using a scientific process, identify habitat requirements for bird species of greatest concern in the JV region. The JV Implementation Plan and associated bird-group strategies, completed in early 2008, provided the first list of explicit population and habitat objectives for priority

bird species (JV focal species) in the JV region. Several information gaps regarding breeding, migration, and wintering habitat requirements for birds were identified in the planning process. Lists of research and monitoring needs to improve habitat conservation were developed in 2008 and prioritized for each bird group during 2009.

Members of the JV Science Team and other bird conservation colleagues are currently completing research and monitoring projects based on this extensive list of evaluation needs. Science Office staff assisted in proposal development and, in some cases, data collection and analysis.

Improve bird habitat management partnerships and incorporate an adaptive approach in planning. In addition to collaboration at scientific meetings, formal oral and poster presentations were conducted at several events. JV plan "marketing" and

information sharing remained a science office priority; this effort in 2009 resulted in several follow-up requests for science products to better target bird habitat conservation.

A scientific planning approach was thoroughly incorporated into JV bird-group strategies and the JV All-bird Implementation Plan. Regular feedback on plan products, plus ongoing completion of evaluation needs identified in documents, will result in refinements (adaptation) to future plan iterations.

Provide quality customer service and technical assistance to partners.

Networking with the science community and members of the JV Management Board has improved our understanding of regional bird

conservation challenges, partner interests and available resources, and ongoing bird research, monitoring, and management initiatives.

JV Science Team members represent various agencies, organizations, and disciplines, and their 2009 efforts collectively enhanced JV science foundation, largely on a volunteer basis. Keeping these partners engaged in JV bird conservation planning required regular communication (email, phone, and in person).

The JV science office is recognized for regional bird habitat planning expertise. Technical assistance and input to conservation initiatives was provided when requested. A strong relationship with researchers using spatial data and modeling has improved our ability to design landscapes and has fueled discussion about potential data sources useful to future planning.

### 2009 Publications and Professional Reports

- Brasher, M. G., G. J. Soulliere, J. M. Tirpak, M. J. Petrie, J. L. Coppen, D. B. Pool, and R. R. Reker. 2009 (extended abstract). Regional population abundance objectives for waterfowl conservation planning in North America: recommendations for consistency. 5<sup>th</sup> North American Duck Symposuim, Toronto.
- Denton, J., C. Roy Nielsen, G. J. Soulliere, B. A. Potter. 2009 (extended abstract). Current and projected nest site availability for cavitynesting waterfowl in the Upper Mississippi River and Great Lakes Region. 5<sup>th</sup> North American Duck Symposuim, Toronto.
- Denton, J. C., C. L. Roy, G. J. Soulliere, and B. A. Potter. 2009 Draft. The Effect of Forest Maturation on Nest Site Availability for Cavity-nesting Ducks at 4 Hardwood Forests in the North Central United States. Journal of Wildlife Management.
- Denton, J. C., C. L. Roy, G. J. Soulliere, and B. A. Potter. 2009 Draft. Current and Projected Nest Site Abundance for Cavity-nesting Ducks in the North Central United States. Journal of Wildlife Management.
- Potter, B. A. 2009. Summary information for townships selected within American
  Woodcock management areas in Michigan.
  Report to Michigan Professional and Private Land Managers Group. 84pp.
- Potter, B. A. 2009. Using Future Midwest Landscape Project Data to model predicted changes in Upland Sandpiper habitat suitability based on bio-fuel production within Eastern Kansas. Report to the U.S. Environmental Protection Agency. 5pp.
- Potter, B. A. and G. J. Soulliere. 2009 (extended abstract). Generating abundance and distribution estimates for breeding waterfowl in the Upper Mississippi River and Great Lakes Joint Venture Region. 5<sup>th</sup> North American Duck Symposuim, Toronto.
- Potter, B. A. and G. J. Soulliere. 2009 (extended abstract). **Breeding waterfowl habitat objectives accommodate other marsh birds in the Upper Mississippi River and Great Lakes**

**Joint Venture Region.** 5<sup>th</sup> North American Duck Symposuim, Toronto.

Potter, B. A., G. J. Soulliere, J. M. Coluccy, R. C. Gatti, C. L. Roy, D. R. Luukkonen, P. W. Brown, and M. W. Eichholz. 2009 (extended abstract). Waterfowl research and monitoring priorities for the Upper Mississippi River and Great Lakes Joint Venture Region. 5<sup>th</sup> North American Duck Symposuim, Toronto.

- Soulliere, G. S. and B. A. Potter. 2009. Upper Mississippi River and Great Lakes Region Joint Venture Science Office Annual Report 2008. U.S. FWS, Fort Snelling, MN.
- Soulliere, G. J., B. A. Potter, and J. M. Coluccy. 2009 (extended abstract). Establishing nonbreeding habitat objectives for diving ducks in the Upper Mississippi River and Great Lakes Joint Venture Region. 5<sup>th</sup> North American Duck Symposuim, Toronto.
- Soulliere, G. J., B. J. Frawley, R. B. Peyton, and P. A. Bull. 2009 (extended abstract). **Comparing opinions and satisfaction of a citizen advisory committee to other Michigan waterfowl hunter stakeholders.** 5<sup>th</sup> North American Duck Symposuim, Toronto.
- Soulliere, G. J., B. A. Potter, and J. C. Denton. 2009 (extended abstract). Wood duck nest box programs: viable management or perpetuating myths? 5<sup>th</sup> North American Duck Symposuim, Toronto.

Tirpak, J. M., M. G. Brasher, B. D. Dugger, J. M. Eadie, R. S. Holbrook, K. J. Reinecke, R. R. Reker, G. J. Soulliere, W. B. Uihlein, III, and B. C. Wilson. 2009 (extended abstract). Linking winter waterfowl habitat to survival: challenges and opportunities in measuring conservation effect. 5<sup>th</sup> North American Duck Symposuim, Toronto.

Wires, L. R., S. J. Lewis, G. J. Soulliere, S. M. Matteson, D. V. Weseloh, R. P. Russell, and F. J. Cuthbert. 2009 *In review*. Upper Mississippi Valley/Great Lakes Waterbird Conservation Plan. A plan associated with the Waterbird Conservation for the Americas Initiative. Final Report submitted to the U. S. Fish and Wildlife Service, Fort Snelling, MN.

### 2009 Professional Presentations and Posters

- Denton, J., C. Roy Nielsen, G. J. Soulliere, B. A. Potter. August 2009. Current and projected nest site availability for cavity-nesting waterfowl in the Upper Mississippi River and Great Lakes Region. Poster presented at 5<sup>th</sup> North American Duck Symposuim, Toronto, Ontario, Canada.
- Potter, B. A. June 2009. Generating habitat objectives for shorebirds in the Upper Mississippi River and Great Lakes Region using a bioenergetics model approach.
  Presentation at Western Lake Erie Basin Partners meeting, Ottawa National Wildlife Refuge, OH.
- Potter, B. A. July 2009. Upper Mississippi River and Great Lakes Region State x BCR assessments. Presentation at Joint Venture Management Board meeting, St. Clair, MI.
- Potter, B. A. July 2009. Tracking habitat accomplishments and land change in the Upper Mississippi River and Great Lakes Joint Venture Region. Presentation at Joint Venture Management Board meeting, St. Clair, MI.
- Potter, B. A. October 2009. **Decision support tools for selection of Woodcock priority areas in Michigan.** Presentation to Michigan professional and private land managers group, Houghton Lake, MI.
- Potter, B. A. and G. J. Soulliere. April 2009. Upper Mississippi River and Great Lakes Region Joint Venture research and monitoring priorities. Presentation at Michigan Ornithological Congress Meeting, Petoskey, MI.
- Potter, B. A. and G. J. Soulliere. April 2009. Upper Mississippi River and Great Lakes Region Joint Venture research and monitoring priorities. Presentation to the Wisconsin Bird Conservation Initiative Research and Monitoring Committee, Madison, WI.
- Potter, B. A. and G. J. Soulliere. June 2009. Upper Mississippi River and Great Lakes Region: planning and monitoring for bird conservation. Presentation at Coordinated Bird Monitoring Sub-regional Workshop, Onalaska, WI.

- Potter, B. A. and G. J. Soulliere. August 2009. Generating abundance and distribution estimates for breeding waterfowl in the Upper Mississippi River and Great Lakes Joint Venture Region. Presentation at 5<sup>th</sup> North American Duck Symposuim, Toronto, Ontario, Canada.
- Potter, B. A., T. Will, and W. E. Thogmartin. December 2009. Are we using strategic monitoring resulting in conservation success across regional landscapes? Presentation at 70<sup>th</sup> Midwest Fish and Wildlife Conference, Springfield, IL.
- Potter, B. A. and G. J. Soulliere. August 2009. Breeding waterfowl habitat objectives accommodate other marsh birds in the Upper Mississippi River and Great Lakes Joint Venture Region. Poster presented at 5<sup>th</sup> North American Duck Symposuim, Toronto, Ontario, Canada.
- Potter, B. A., G. J. Soulliere, J. M. Coluccy, R. C. Gatti, C. L. Roy, D. R. Luukkonen, P. W. Brown, and M. W. Eichholz. August 2009.
  Waterfowl research and monitoring priorities for the Upper Mississippi River and Great Lakes Joint Venture Region. Poster presented at 5<sup>th</sup> North American Duck Symposuim, Toronto, Ontario, Canada.
- Soulliere, G. J. July 2009. Establishing waterfowl research and monitoring priorities for the Upper Mississippi River and Great Lakes Region Habitat Joint Venture. Presentation to the Mississippi Flyway Council Technical Committee, Manitowoc, WI.
- Soulliere, G. J. July 2009. Upper Mississippi River and Great Lakes Region Joint Venture research and monitoring review. Presentation at Joint Venture Management Board meeting, St. Clair, MI.
- Soulliere, G. J. September 2009. Upper Mississippi River and Great Lakes Region Joint Venture bird conservation planning. Webinar presentation at Missouri Department of Conservation, Wetland Planning Partners meeting, Jefferson City, MO.

- Soulliere, G. J. and B. A. Potter. January 2009. Bird conservation planning in the Upper Mississippi River and Great Lakes Joint Venture Region. Presentation to Indiana Department of Natural Resources, Wildlife Program Leaders, Indianapolis, IN.
- Soulliere, G. J. and B. A. Potter. June 2009. Upper Mississippi River and Great Lakes Region Joint Venture: planning and monitoring. Presentation at Coordinated Bird Monitoring Sub-regional Workshop, Quincy, IL.
- Soulliere, G. J., B. A. Potter, and J. M. Coluccy. August 2009. Establishing non-breeding habitat objectives for diving ducks in the Upper Mississippi River and Great Lakes Joint Venture Region. Presentation at 5<sup>th</sup> North American Duck Symposuim, Toronto, Ontario, Canada.
- Soulliere, G. J., B. J. Frawley, R. B. Peyton, and P. A. Bull. August 2009. **Comparing opinions and** satisfaction of a citizen advisory committee to other Michigan waterfowl hunter stakeholders. Presentation at 5<sup>th</sup> North American Duck Symposuim, Toronto, Ontario, Canada.
- Soulliere, G. J., B. A. Potter, and J. C. Denton. August 2009. **Wood duck nest box programs:** viable management or perpetuating myths? Poster presented at 5<sup>th</sup> North American Duck Symposuim, Toronto, Ontario, Canada.

## **Evaluation Projects With Significant JV Funding and/or Science Staff Collaboration**

#### Reviewed and selected for funding in 2009 (2010 first field season)

## Distribution and Abundance of diving ducks on Lake St. Clair, Detroit River, and Western Lake Erie

This 2-year study will use 1974-2009 fall aerial survey data for scaup and canvasbacks to develop a model predicting spatial patterns in distribution based on lake characteristics and human disturbance. Researchers also plan to estimate aerial detection probabilities of diving ducks, plus test a spring diving duck survey that provides data comparable to fall surveys. *PI: Dave Luukkonen (MI DNR)* 

### Foraging thresholds of spring-migrating dabbling ducks in central Illinois

This 2-year project will experimentally estimate "giving-up-density" (GUD; when birds stop feeding in an area due to reduced forage) of spring migrating dabbling ducks using moist-soil wetlands. GUD will be evaluated with respect to initial seed density (kg/ha), seed size, predation risk (visual obstruction near foraging sites), substrate type (e.g., sand or clay), and environmental covariates (e.g., temperature). *PI: Joshua Stafford (IL Natural History Survey)* 

#### **Ongoing projects (2009 first field season – progress reports available)**

#### Migrant landbird stopover site quality and use on northern Great Lakes islands

The first year of this 3-year project was completed in 2009. Its focus is on migrant and resident Neotropical landbirds, documenting stopover site use of shoreline areas at northern Great Lakes islands. Researchers will determine site quality and importance of coastal areas as stopover sites by examining body condition, plus determine migration timing and duration of stay for different species by sex and age class. *PI: Nancy E. Seefelt (Central MI University)* 

## An assessment of waterbird populations and breeding habitat requirements on northern Great Lakes islands

The first year of this 3-year project was completed in 2009. Researchers are documenting distribution and numbers of breeding waterbirds in the Beaver Island archipelago. The project has special emphasis on reproductive success of Black-crowned Night-Herons and Common Terns, identifying habitat requirements/preferences, plus determining impacts (positive or negative) of cormorant control on these species. *PI: Nancy E. Seefelt (Central MI University)* 

Combining radio telemetry and ground technologies to evaluate landbird migration and identify stopover locations along the upper Mississippi River system

The primary goal of this 2-year project is to understand migratory timing, spatial patterns, and stopover locations and habitats of landbirds using the Upper Mississippi River system. A combination of NEXRAD, land cover maps, radio telemetry, and physiological assessments (as an indicator of habitat quality) will be used to evaluate site specific habitat use, stopover duration, and distances birds move between stopover sites. *PI: Pat Heglund (U.S. Fish and Wildlife Service)* 

## Enhancing breeding waterfowl monitoring and landscape characterization through geo-referenced data collection in Wisconsin and Michigan

After a 1-year delay, equipment was purchased in 2008, and 2009 was the first field season of this 3-year project to record GPS coordinates for each breeding duck pair observed during spring aerial surveys in MI and WI. Michigan survey crews were able to collect 2009 data in half the state, but had a software malfunction they believe can be corrected before 2010. Crews in WI were not trained in time for the 2009 survey. The state of MI is completing helicopter-based VCF surveys this spring where they will also collect coordinates for each breeding pair. Analysis of these data will help better determine landscape features important to different species of ducks breeding in the region. *PI: Ron Gatti (WI DNR), Dave Luukkonen (MI DNR), John Coluccy (DU), and Greg Soulliere (UMRGL JV)* 

#### **Ongoing multi-year projects (progress reports available)**

## Evaluating factors limiting blue-winged teal production and survival in the Great Lakes region

2009 was the third successful field season of the 4-year project, following challenges with high mortality of birds and radio transmitters in early testing. Marked birds from the past three years, especially year three, have provided good information on survival, vital rates, recruitment success, and habitat characteristics of breeding Blue-winged Teal. A fourth and final year of fieldwork was planned for spring 2010. However, due to the high prevalence of avian TB in game-farm teal used for decoy trapping in recent years, WDNR decided it could no longer purchase and use potentially diseased game farm birds in the wild. Researchers are establishing a pen-reared flock in 2010 to complete the last field season with disease free home-grown teal in 2011. *PI: Ron Gatti (WI DNR)* 

#### Vital rates of breeding waterfowl in the boreal forest of the Great Lakes Region

2009 was the second field season of this 3-year project to improve survey techniques for breeding Ring-necked Ducks and determine recruitment success and habitat characteristics influencing hen success. Due to the remote locations and low nesting densities, researchers have had significant challenges with sample sizes, totaling 38 nests, 22 marked hens, and 15 broods radio tracked. Additional funding for a third field season to increase sample size was requested and approved. *PI: Charlotte Roy and Christine Sousa (MN DNR) and Jody Kennedy and Elizabeth Rave (Bemidji State University)* 

#### Great Lakes colonial waterbird survey

2009 was the third and last field season of this 4-year project to inventory all breeding waterbirds on the Great Lakes, the forth such decadal census. Upon completion of data analysis, scientists will provide: 1) estimates of regional population sizes for each species, 2) changes in population abundance and distributions, 3) estimates of colony size with and without habitat-based detection rates, 4) comparison of accuracy for ground and aerial counts, 5) comparison of estimates obtained from the traditional one-season count with an estimate of peak numbers obtained from several counts during a season, and 6) identification of a subset of sites to monitor on a more frequent basis in the future for detecting population trends. *PI: Francesca Cuthbert and Linda Wires (University of MN)* 

# Black Duck satellite radio (PTT) telemetry study: examining local and geographic habitat use patterns over the annual life cycle and connections among significant biomes

2009 was the last field season of this 2-year project investigating habitat use, migration timing, and stop-over duration during migration and winter. Although only  $\frac{1}{2}$  of the 68 transmitters functioned through the complete spring migration period, researchers identified important black duck wintering and staging areas leading to improved decision-making with respect to ongoing habitat protection and management. Information regarding chronology and duration of stay (use days) will be used in conjunction with energetic carrying capacity models currently being developed to generate habitat objectives during the non-breeding period. A better understanding of settling and breeding habitats will also be gained through this work. *PI: Tina Yerkes* (*DU*) and Jake Bowman (University of DE)

#### Foraging ecology of fall migrating shorebirds in the Illinois River Valley

Field collection of shorebirds and core samples from feeding locations was completed in 2008, and data analysis and a progress report were developed in 2009 with the following highlights: 1) totals of 286 shorebirds (Pectoral and Least Sandpipers, Lesser Yellowlegs, and Killdeer) and 572 core samples were collected, 2) ingesta from all shorebirds was sorted and summarized, 3) 286 core samples extracted at shorebird collection sites were processed, and 4) core samples extracted at random sites should be completed by late 2009. *PI: Joshua Stafford (IL Natural History Survey)* 

#### **Recently completed projects (final reports available)**

## Current and projected nest site availability for cavity nesting waterfowl in the Upper Mississippi River and Great Lakes Region

2008 was the last field season of this 3-year project. A master's thesis and two manuscripts for publication were drafted in 2009. Results confirm the JV planning assumption that regional nest site availability does not limit cavity-nesting duck populations (i.e., suitable nest cavity abundance in Region 3 far surpasses population needs). *PI: Charlotte Roy and Eric Hellgren (Southern IL University)* 

### Updating the National Wetland Inventory for the state of Ohio

The Ohio NWI update was completed in 2009. Methods used for this project were more sophisticated than the first inventory completed 20-30 years ago, but will allow a better comparison of wetland change between the two periods. *PI: Ducks Unlimited and OH DNR* 

## Translating regional population goals for bird species of concern into local habitat conservation objectives: overcoming the intervening impediments

The project was completed in 2008, with results describing various approaches to translating population objectives into habitat objectives, plus a discussion regarding decision optimization (i.e., determining whether an area should be managed for one cover type and bird group vs. another, based on large-scale landscape and bird population characteristics). A final report is currently in the USGS review process. *PI: Wayne Thogmartin (U.S. Geological Survey)* 

### Conservation planning tools for spring migration in the upper Mississippi River/ Great Lakes region: understanding habitat and nutrient requirements of spring staging waterfowl and shorebirds

With field work and most data analysis completed in 2008, this extensive and complex project is in various stages of reporting (publication/presentation by multiple graduate students and professional colleagues). Results will be used to revise energetic models used to calculate non-breeding habitat objectives in JV planning documents. *PI: Tina Yerkes and John Coluccy (DU), Mike Eichholz (Southern IL University), and Bob Gates (OH State University)* 

### JV Science Office Goals and Future Direction

### Near-term (<2 years)

- Strengthen relationships with science entities important to JV mission, and collaborate on bird research and monitoring critical to regional bird conservation. Key science partners include the JV Science Team, North American Waterfowl Management Plan Science Support Team (NSST), Regional Coordinated Bird Monitoring (CBM) Team, and science partners associated with Landscape Conservation Cooperatives (LCCs).
- Promote use of JV planning tools, collect feedback regarding strengths and weaknesses of 2007 Implementation Plan, develop and refine GIS and other planning products useful to partners, and measure effectiveness of products to partners. Priority focus will be enhanced bird habitat delivery by partner organizations serving on the JV Management Board.
- Address concerns regarding JV science foundation identified in the North American Waterfowl Management Plan 2006 Assessment, and work toward comprehensive completion of science elements in the matrix of "Desired Characteristics of Joints Ventures."
- Expand knowledge of bird ecology, contemporary conservation practices, measuring landscape change, and the potential impacts of climate change on priority bird species. New information will be used to develop and refine JV bird species accounts, bird habitat conservation objectives, planning documents, and habitat accomplishment reporting.

### Long-term (>2 years)

- Identify and integrate regional bird conservation priorities with societal initiatives developed to counter environmental threats. A primary focus will be mitigation and adaptation to climate change.
- Establish JV partnership as a national leader in bird conservation by continually improving scientific foundation, efficiency, and effectiveness of conservation initiatives in the JV region. Strategic Habitat Conservation (SHC) via planning-implementing-evaluating will be central to improving JV conservation approaches over time.

### **Science Office Personnel**

**Greg Soulliere:** Greg has served as the JV Regional Science Coordinator for five years. His goal is to improve the science foundation used for bird habitat conservation decisions, ultimately increasing the efficiency and effectiveness of the JV partnership. He has extensive field experience in waterfowl and wetland ecology and waterbird habitat management, and a growing understanding of the habitat requirements for other bird groups. He chairs the JV Technical Committee and Science Team, a collection of scientists providing technical guidance to JV partners who carryout bird habitat delivery.

Greg received a M.S. degree in Wildlife Management from the University of Wisconsin, where he studied the biology and ecology of cavity nesting ducks. His B.S. in Wildlife Biology is from Michigan State University. Greg also completed an M.B.A. at Lake Superior State University, fueling an interest in human resources management and applying business concepts to natural resource decision making.



### Phone: 517-351-4214, Email: Greg\_Soulliere@fws.gov

**Brad Potter:** Brad started as a Biological Technician with the JV Science Office in 2005 and was promoted to Wildlife Biologist/Spatial Modeler in 2009. His work for the JV partnership centers on developing habitat and population models and spatial data management. Brad serves on the Joint Venture shorebird and landbird subcommittees, but assists in developing many JV science products. His career interests include using advancing technology and methods for landscape planning and designing models for Strategic Habitat Conservation.

Brad received a M.S. degree in Conservation Biology from Central Michigan University (CMU) where he studied wildlife crossing locations along highways in northern Michigan. He also received his B.S. degree in Biology at CMU, and it was there his interest in GIS applications for wildlife management began, using a spatial model to predict abundance and distribution of wolf habitat in the northern Lower Peninsula of Michigan.

Phone: 517-351-4213, Email: <u>Bradly\_Potter@fws.gov</u>



Upper Mississippi River and Great Lakes Region Joint Venture Science Office Annual Report For more information about the Joint Venture, visit our web site: <u>www.UpperMissGreatLakesJV.org</u>