

PARTNERSHIPS IN ACTION: A DECADE OF STATE WILDLIFE GRANTS AND CONSERVING *ALL WILDLIFE* IN MISSOURI



Special Report: Tenth Anniversary-State Wildlife Grants Program

**Missouri Department of Conservation
and Conservation Federation of Missouri
August 25, 2010**

**Partnerships in Action:
A Decade of State Wildlife Grants and
Conserving *All Wildlife* in Missouri.**

**A Special Report
Prepared in Celebration of the 10th Anniversary
of the State Wildlife Grants Program**

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This year marks the 10th Anniversary of the State Wildlife Grants Program. In celebration of this major accomplishment in conservation history, it is fitting that we look back at the path that got us to this point and review some of the milestones this partnership program made possible. This special report is a summary of the inception, implementation, and accomplishments in conservation made possible from the State Wildlife Grants Program and its associated programs in Missouri.



INTRODUCTION

The State Wildlife Grants Program (SWG) provides federal funds for developing and implementing programs that benefit wildlife and their habitats, including species not hunted or fished. Indeed, priority is placed on projects that benefit species of greatest conservation need. Grant funds must be used to address conservation needs, such as research, surveys, management of species and habitats, and monitoring, identified within a state's wildlife action plan (i.e., Missouri Comprehensive Wildlife Strategy). These funds can also be used to update, revise or modify our state's strategy. The sources of these funds are Outer Continental Shelf Oil and Gas royalties that are deposited into the Land and Water Conservation Fund and apportioned to states annually based on a formula.

The State Wildlife Grants Program is one of several sources of federal assistance used by the Missouri Department of Conservation to ensure that Missouri has healthy, sustainable plant and animal communities for future generations to use and enjoy. Missouri has also received substantial funding through the competitive State Wildlife Grants Program (SWG-C), a sister program that is explained in more detail in a later section of this report. Part of our vision is to use all available funding at our disposal to ensure that all Missourians have fish, forest and wildlife resources in appreciably better condition tomorrow than they are today. That is why projects and other conservation actions are developed through citizen input, with government agencies and non-governmental organizations working together to protect, enhance, restore or create sustainable plant and animal communities of local, state and national significance.



Public and private landowners and resource managers in every region of Missouri benefit from conservation actions made possible through the State Wildlife Grants Program. Thousands of acres annually are positively affected by conservation practices such as clearing unwanted trees and brush, replanting native species, and applying prescribed fire or any number of other management techniques to simulate natural community processes. Practically every habitat has been improved by projects made possible by State Wildlife Grants, including grassland/prairie, glade, savanna/woodland, forest, wetlands, rivers, streams, lakes and karst. Funding has also supported research, surveys, monitoring, technical assistance to private landowners, and strategic conservation planning efforts and developments.

“BRIDGE TO THE FUTURE” BIRTH OF THE TEAMING WITH WILDLIFE COALITION

In 1990, the International Association of Fish and Wildlife Agencies (now just AFWA) established an Ad Hoc Nongame Funding Committee charged to develop a strategy for obtaining funding for the “Nongame Act.” Officially known as The Fish and Wildlife Conservation Act, the “Nongame Act” was passed by Congress and authorized at \$5.0 million, but no funds were ever appropriated. So, AFWA’s general goal was to establish a trust fund to provide states with nongame funding similar to the Pittman-Robertson and Dingell-Johnson trust funds. In 1991, an AFWA Steering Committee, composed of state agency representatives and conservation organizations, was formed to develop strategy for the initiative. The Association hired a wildlife diversity coordinator to conduct a public education effort and associated grassroots campaign to build support for the initiative.

A proud date for Missourians is 1994! That year, the “Bridge to the Future” Conference in St. Louis, Missouri, officially launched the Teaming with Wildlife (TWW) initiative. Over 400 conservation organizations were invited to join the TWW Coalition and AFWA called for a coalition and a TWW coordinator in every state. By 1998, the coalition had grown to include 3,000 member organizations nationwide. While the initial funding proposal of a recreational equipment excise tax did not gain traction, the goal of a permanent and dedicated annual funding for wildlife conservation (\$350 million proposed) was included in some burgeoning legislation called the Conservation and Reinvestment Act (CARA). The CARA included many other conservation programs totaling \$3.1 billion in funding and TWW became a coalition of parks, historic preservation and coastal interests, ultimately growing to be over 5,000 members strong (there are 6,300 member organizations now). From that point on, TWW became inextricably linked to CARA, which as discussed later, grew into the SWG Program today.



PROMISING BEGINNINGS CONSERVATION AND REINVESTMENT ACT (H.R. 701; CARA)

In March, 2000, the historic CARA legislation was overwhelmingly passed (315-102) by the House. The Senate Energy and Natural Resources Committee voted it out of committee 13-7, and the strongly bi-partisan supported bill made its way steadily through the 106th Congress. Although 65 Senators called for a floor vote, the bill never made it to a vote and CARA was never enacted into law. CARA would have been funded by royalties paid to the federal government on off-shore oil drilling leases; 50% of the Outer Continental Shelf revenues would have been redirected to states, rather than used for federal budget deficit reduction (recall that during the Clinton Administration there was a budget surplus). The CARA legislation was initially thought capable of bringing more than \$17 million annually in federal assistance to Missouri.

Instead, a last minute compromise was reached and only \$50 million of the \$350 million in proposed funding was appropriated for Federal FY2001. Many of the premises within the CARA legislation (i.e., pieces of language) were taken to create a program initially called the Wildlife Conservation and Restoration Program (WCRP) within the U.S. Department of Interior's budget. However, the TWW coalition fought hard and succeeded in getting an additional \$50 million in funding for wildlife at the last minute. In an interesting twist, this additional funding was inserted into the Commerce, Justice and State Appropriations (CJS) measure, as the Interior budget had already passed. The CJS measure amended the Pittman-Robertson Act (i.e., Wildlife Restoration Grant) as a subaccount using CARA wildlife language.

Funds in the new WCRP were apportioned to state fish and game agencies based on a formula of 2/3 population and 1/3 land; for Missouri, that meant MDC got 1.8% of the total authorization. The more than 5,000 state and local government, NGOs, and recreation advocates at that time whole-heartedly supported CARA and they felt short-changed for all their hard work. Still today, the TWW coalition member organizations (6,300 nationwide; 274 in Missouri) continue to fight for legislation that will commit to additional state-oriented funding on a permanent basis.

HOPEFUL YEARS OF PLANNING IN MISSOURI

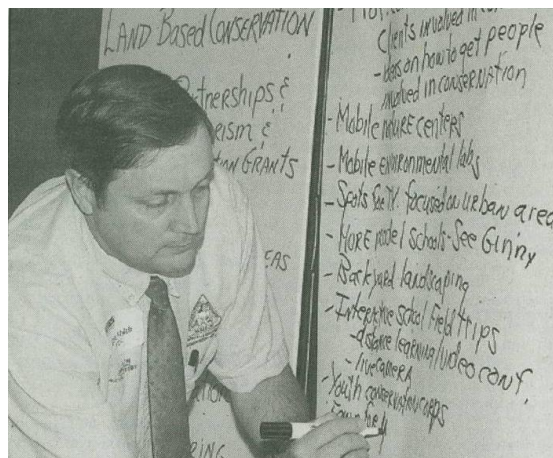
Turning back the clock to 1996, in the TWW formative and pre-CARA years, MDC leadership began developing a strategic approach for establishing a TWW Implementation Plan for Missouri. The purpose of this plan was to outline how a "new source" of federal funding (developed into CARA - H.R. 701) could be provided to local agencies and organizations in Missouri. The major emphasis for these funds had already been decided, they would be used for wildlife-related conservation, education and recreation. Many meetings were held and documents were prepared over the next several years to develop action plans similar to

the original Design for Conservation document that was used to promote the Conservation Sales Tax. An objective of any new source of funding was to ensure that projects and activities would be held in each Congressional District.

Title II of CARA would have made about \$7.3 million available annually for federal land acquisition, state conservation projects and urban parks. Since Title II would make funds available for land-based recreation through the Land and Water Conservation Fund (LWCF), Doug Eiken, former director of the Division of State Parks, expressed his support for CARA. However, Title III of the legislation required public participation in deciding how to use the estimated \$9.8 million MDC would have received for conservation programs. With Title III funding, MDC and the Department of Natural Resources could have made millions of dollars in grants available to local organizations and communities for conservation-related projects.

Early in 1999, the promise of new federal funding through CARA spurred members of the Conservation Federation of Missouri's TWW coalition (barely more than 100 organizations at that time) and MDC leadership to begin discussing how Missouri might expend any new funding that was sure to be made available the next year. One landmark TWW coalition meeting was held at MDC central office in Jefferson City, Missouri, on April 11, 1999 sponsored by the Conservation Federation of Missouri and MDC. During the TWW meeting, David Urich (Figure 1), a natural history programs supervisor at that time, kept busy listing ideas for projects suggested by the more than 40 coalition members that attended the meeting.

Figure 1. David Urich (1999) is busy recording ideas for fish and wildlife projects that could have been conducted with CARA funding. More than 40 Teaming with Wildlife Coalition members attended the meeting with leadership from the Conservation Federation of Missouri and Missouri Department of Conservation.



Plans from the 1999 TWW meeting also included mobilizing a massive letter-writing campaign to improve the chances for passage of CARA in 2000. Cheryl Riley (Figure 2), CFM's TWW coordinator at that time, explained to the group how CARA legislation could create a permanent source of funding for nongame species management, in addition to other conservation, outdoor recreation and education programs. Sara Marinello, TWW assistant coordinator for the International Association of Fish and Wildlife Agencies (now AFWA) in Washington, DC, also urged Missouri coalition members to contact their legislators and ask them to support CARA legislation. Former deputy director John Smith explained that funding from this legislation was intended to keep common species

common, conserve habitat for wildlife, and prevent species from becoming endangered. The need for nongame funding was as apparent then as it is now, since approximately 90% of all wildlife in the country are not hunted or fished, but only about 5% of all wildlife funding is devoted to these native plants and animals.



Figure 2. Cheryl Riley (left) and Sara Marinello (1999) explaining to members of the Teaming with Wildlife coalition how CARA legislation could create a permanent source of funding for nongame species management, with additional funding for other conservation, outdoor recreation and education programs too.

LEADERSHIP IN ACTION

In March 2000, as the CARA legislation was making its way through Congress, former Director Jerry Conley established an ad hoc task force within MDC. Their task was to develop an expenditure plan for use of CARA funding; serving on the task force was Dave Erickson (Chair), Bob Krepps, Kathy Love, George Seek, Norm Stucky, Rick Thom and Ollie Torgerson, with Dan Witter as facilitator (all of whom are now retired employees). Their charge was to solicit input from MDC Regional Coordination Teams, the Unit Chiefs Team, and Central Office staff, and compile a prioritized list of potential expenditures with annual cost projections and deliver their recommendations to Director Conley by September 29, 2000.

Department leadership at that time wanted to focus on partnerships by making half of the new grant funds available to local governments, organizations, universities and school districts for qualifying projects in wildlife-related conservation, education and recreation.

Initial plans for investing the other half included defining projects, activities and staffing that would be devoted to keeping Missouri’s forest, fish, and wildlife resources healthy and sustainable. In addition, a new Title in CARA would also have provided funds to work cooperatively with family farmers and forest landowners with conservation easements and incentives to help conserve and recover threatened and endangered species.

In the aftermath of CARA failing to pass in the 106th Congressional Session, the Missouri TWW coalition didn’t give up! The coalition continued to seek public support for legislation that would provide permanent funding at increased levels. CARA was to be introduced again during to the 107th Congress, and it was hoped that an even greater coalition force and a tide of public support might achieve passage. To this end, a public comment forum, entitled “The Conservation Focus” was held in Jefferson City on April 6, 2001. This gathering was another opportunity for public input on how WCRP funds were to be spent, which would help MDC develop plans for allocation of WCRP funding for projects and activities. Included in this campaign to garner greater support, printed materials were developed to increase public support; they were entitled “How Teaming With Wildlife Will Benefit Missouri,” and were circulated widely. We explained how expenditures for fish and wildlife-related recreation in Missouri accounted for one-third of all travel-related spending in the state (>\$165 million). Today, outdoor pursuits in Missouri generate \$11.4 billion in economic benefits and generate about \$439 million in state and local taxes.

BIRTH OF THE WILDLIFE DIVERSITY FUND

The first federal funding from what we now call our SWG Program was from the WCRP appropriation in 2001; MDC received \$969,823 in obligated federal funding. To meet the federal requirement to provide matching funds, MDC provided the non-federal matching funds through equal expenditures for employee time from staff in the newly-created Private Lands Services Division (PLS). Having reached Division status in December 1999, the PLS Technical Assistance to Landowners program qualified for reimbursement under the new SWG Program. To take full advantage of the 55 federal: 45 non-federal match ratio for expenditures, MDC was able to receive \$868,699 in reimbursement from \$1.9 million in total expenditures). After receiving the federal reimbursement funds and depositing them into the Conservation Commission (Commission) fund, the dollars became “state” funds.



In 2002, the Commission approved the use of these reimbursement funds for additional wildlife conservation work. The Commission authorized \$400,000 to be placed in the "Conservation Fund" and also made \$30,000 available to each of the ten MDC Regions and to MDC's research coordination team (\$330,000 total) for conservation projects and activities. In the Wildlife Division FY2003 budget (in RAPTOR), the "Conservation Fund" was called "WCRP." Later, it was labeled "State Wildlife Grants" (FY2004 and FY2005), but it has been named the "Wildlife Diversity Fund" in every budget since FY2006.

This "new" source of funds, supplemental to MDC's annual operating budget, were to be used for qualifying projects and activities (i.e., meeting the requirements of the WRCR Grant Program) that MDC staffs would otherwise not have been able to do. The Commission's intension was "to distribute some of the benefits of the new funding through our Regional staff to best address local situations and to gain appreciation from staff for what the new funds could accomplish." According to an internal memo, the funding was to be used in four major ways as follows:

- Internally fund new projects and activities or enhance existing projects;
- Supplement the Commission Fund for general MDC purposes;
- Fund cooperative projects with partners;
- Establish a competitive grants program for partners for beneficial, qualifying projects (i.e., the Wildlife Diversity Fund).

A report prepared by Natural History Division (January 2002) described using these "new funds" in three ways; 1) Internal Uses, 2) Cooperative Projects, and 3) Competitive Grants Program. Under the heading of "Internal Uses," about a dozen projects and activities were listed as examples of what the ten Regions and the Research Division (now Resource Science Division) were using their \$30,000 each to accomplish. Projects were either listed under the category of Conservation, Education, or Wildlife-Related Recreation. There was a wide variety of activities conducted, including creating emergent marsh, funding research into mercury contamination in fish and human consumption, producing and distributing Teacher's Education Trunks, creating an interpretive trail at the West Plains Office (former location), funding volunteer work, and constructing viewing platforms and trails on Conservation Areas.

According to the January 2002 report, \$114,500 in funding was awarded to five "Cooperative Projects" with partners in which "MDC had substantial involvement for projects and activities which were mutually beneficial." Interestingly, projects were selected by an internal WCRP Implementation Committee, which was a mix of the CI/IT Committee of today and the UCT. For these five projects in 2002, our partners provided \$164,800 in matching funds to begin an East-West WildLands Initiative, fund a coordinator for the Kansas City WildLands Project, reprint a soft-bound version of the revised *The Wild Mammals of Missouri* (Schwartz and Schwartz, 1959), fund the Outdoor Classroom Grants Program, and control sericea lespedeza and other exotic plants on public prairies in the Grassland Focus Areas.

The remaining amount of “new funds” in 2002 was awarded to twelve partnership projects selected through an MDC-internal “Competitive Grants Program.” The \$104,498 in grant awards was equally matched by partners for projects and activities related to conservation, education and recreation. Traditional partners included Audubon Missouri, Saint Louis Zoo, and Quail Unlimited, while newer partners included Jefferson City Parks and Recreation, Friends of Lakeside Nature Center, and the cities of Jackson, St. Charles, Camdenton, and Clinton, Missouri. Projects included strategic planning, restoring glade and savanna habitats, constructing a lake, rehabilitating or constructing interpretive nature trails, and initiating environmental education programs (e.g., Quail Academy, stream quality research, restoration program).

COMPETITIVE STATE WILDLIFE GRANTS PROGRAM FOR IMPERILED FISH AND WILDLIFE

In addition to formula based apportionments of SWG provided to states, Congress authorized funding in 2008, 2009 and 2010 for a competitive State Wildlife Grants (SWG-C) program to encourage multi-partner projects. Also coming from the U.S. Fish and Wildlife Service, the SWG-C grant funds (ranging from \$5.0 - 9.0 million annually) are awarded to projects that implement strategies and actions to conserve imperiled species contained in approved State Wildlife Action Plans (i.e., Missouri’s Comprehensive Wildlife Strategy). Priority is given to projects with well thought-out conservation plans that identify the highest priorities in each state in the areas where the biggest differences for imperiled species can be made. Missouri received funding for two in-state SWG-C projects, totaling \$5,412,000 and \$465,000 from another multi-state grant for which we are the administrating agency (\$135,000 went to Missouri). These projects are described in more detail in the sections that follow.

THE TEAM BEHIND STATE WILDLIFE GRANTS AND TEAMING WITH WILDLIFE

Missouri was among the first states to emerge as a “team leader” in the Teaming with Wildlife coalition initiative; having led the “Bridge to the Future” Conference in 1994 in St. Louis, Missouri, which officially launched the Teaming with Wildlife (TWW) initiative. At that time, only 400 conservation organizations joined the TWW coalition, but it grew to include 3,000 member organizations nationwide by 1998. Today, the Coalition is stronger than ever with more than 6,000 organizations nationwide, including state fish & wildlife agencies, wildlife biologists, hunters, anglers, birdwatchers, hikers, nature-based businesses and other conservationists who support the goal of restoring and conserving our nation’s wildlife.

In Missouri, our coalition of 274 organizations ranks fifth in the nation in the number of TWW conservation partners and supporters (Appendix A). Our coalition supports efforts to secure permanent funding needed to fully implement Missouri's Comprehensive Wildlife Strategy (CWS). In addition to the tens of thousands of TWW coalition team supporters, additional members of the team behind State Wildlife Grants and TWW efforts in Missouri include the following:

- 1) Stakeholder groups within Conservation Opportunity Areas;
- 2) TWW Steering Committee - state resource agencies and NGOs;
- 3) Conservation Federation of Missouri – CWS implementation and TWW coalition building through a full time TWW coordinator position (Amy Buechler);
- 4) MDC staff with SWG and wildlife diversity program responsibilities
 - a. CWS Coordinator/Wildlife Action Plan Coordinator (Dennis Figg);
 - b. Threatened and Endangered Species Coordinator (Peggy Horner);
 - c. Invasive Species Coordinator (Tim Banek);
 - d. Natural Areas Coordinator (Mike Leahy);
 - e. Wildlife Diversity Chief/Wildlife Diversity Program Manager (Gene Gardner).

Since the creation of the State Wildlife Grants program, the Association of Fish and Wildlife Agencies (AFWA) have worked with states to facilitate information sharing and fostering interstate collaboration. The AFWA TWW program (i.e., standing AFWA Committee and dedicated staff) are committed to encouraging effective state and local-level conservation work, creative problem solving, public and private partnerships, ample funding, research, and dogged determination to work out practical management strategies. On the legislative front, AFWA organizes TWW Fly-In events annually to Washington, DC; these events have been held every year since the SWG program was approved by Congress (2001). During this event, Missouri schedules short Hill visits with our 11 different congressional offices within a 1.5 day period. Our simple, yet consistent, message is that restoring and improving habitats benefit both wildlife and people, how important the SWG program funding has become to accomplish this work, and how critical our need is to secure short-term and long-term funding for CWS implementation.



Although the SWG Program usually has strong bipartisan support (e.g., in 2009, 62 senators and 155 members of the House from both parties supported a substantial increase in SWG funding), it is difficult to gain support from all 11 Congressional representative from Missouri for increased and dedicated federal funding for fish, forest and wildlife conservation, education and outdoor recreation for Missouri. Despite this challenge, the TWW team will continue to encourage their support for healthy habitats and the populations of wildlife that they support, because nature provides important aesthetic, recreational, economic and cultural values to all Missouri citizens.

MISSOURI’S COMPREHENSIVE WILDLIFE STRATEGY PUTTING CONSERVATION INTO ACTION

In 2001, the federal assistance program we now know as the SWG program began providing funding to states for conservation and management of species of greatest conservation need (SGCN). This funding, also soon after its beginning, became contingent upon each state developing a “Comprehensive Wildlife Conservation Strategy” (i.e., sometimes referred to as state wildlife action plans). Missouri’s Comprehensive Wildlife Strategy (CWS) is our state wildlife action plan and it was developed as the primary tool for keeping fish and wildlife healthy and off the list of threatened and endangered species.

Missouri’s CWS is a “strategy,” or a way to go about the business of conservation planning and implementation, it is not a plan (i.e., a project design and schedule). Missouri’s CWS applies the Strategic Habitat Conservation process to conservation planning and implementation. The CWS identifies habitats for species that are in the greatest need of conservation and promotes beneficial conservation actions in the highest priority places, called Conservation Opportunity Areas (COAs). Action plans for 36 of Missouri’s highest priority COAs were developed and compiled into a *Directory of Conservation Opportunity* (MDC, 2005). In the last five years that Missouri’s CWS has guided where conservation actions should occur, we have done a good job of investing conservation planning and implementation in our highest priority places.



Since its inception ten years ago, SWG has enabled our conservation community to make significant contributions to the restoration and management of habitats in Missouri and their associated fish, forest and wildlife resources. Missouri receives on average about \$1.2 million in annual apportionment from this U.S. Fish and Wildlife Service program through Congressional authorization; \$12.5 million has been obligated to Missouri during the last decade (Figure 3; Table 1). However, as required by the legislation, these federal funds required a match of non-federal funds. Although Department staff expenditures (\$14.0 million total) have been used to meet the SWG match requirement over the past 10 years, matching funds of at least an additional \$4.2 million have been provided by our conservation partners during this same period. Also, through nationwide competition, Missouri received \$2.0 million in additional funds from the State Wildlife Grants-Competitive (SWG-C) Program, which were also matched by \$3.9 million from MDC and its partners. Therefore, Missouri has accomplished more than \$45.8 million in conservation actions since 2002 through these two SWG funding sources. The path to this success has not been without obstacles, but our state’s strong coalition of partners has made a decade of conservation success possible. Both triumphs and disappointments in the early years of CARA and some facts regarding the legacy of the SWG Program are provided in this report.

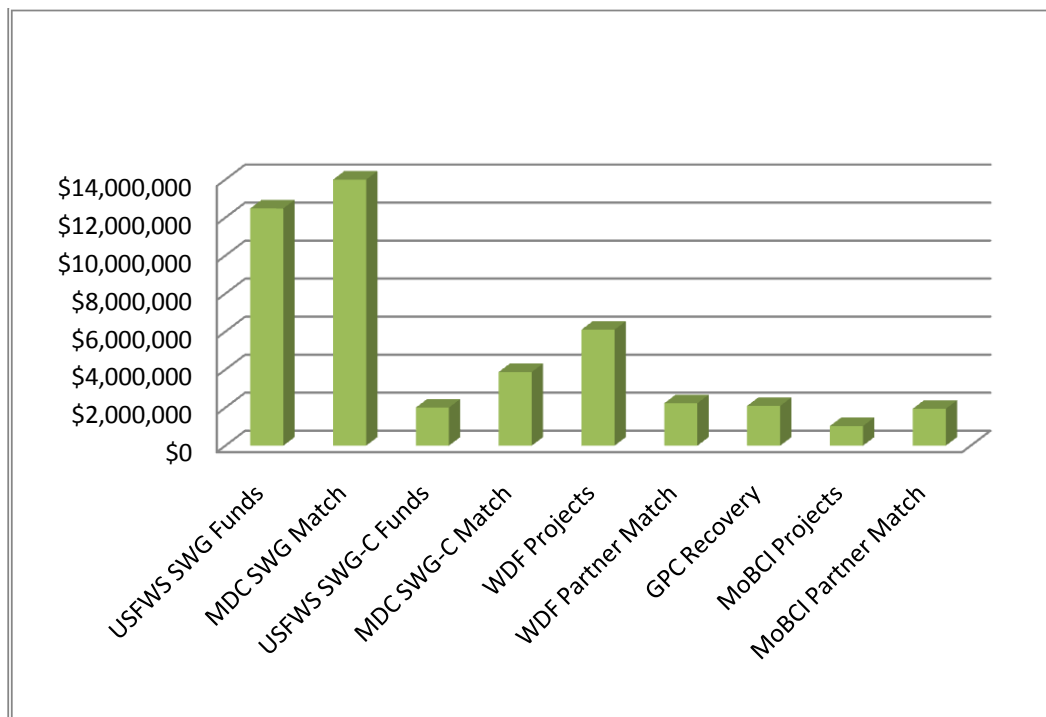


Figure 3. Source and distribution of funding (FY2002-2010) made possible through the State Wildlife Grants and competitive State Wildlife Grants federal assistance programs, MDC diversity program staffs and partnerships, the Wildlife Diversity Fund competitive grant program, the greater prairie-chicken recovery effort, and the Missouri Bird Conservation Initiative competitive grant program.

SWG Program Area	Source of Funding	Expenditures
SWG Funds	USFWS	\$12,482,000
SWG Non-Federal Match	MDC and Partners	\$13,998,000
SWG-C Funds	USFWS	\$ 2,003,000
SWG-C Non-Federal Match	MDC and Partners	\$ 3,874,000
WDF Grant Program (MDC-internal)	SWG Reimbursement	\$ 6,103,000
WDF Grant Program Match	Partners	\$ 2,231,000
Greater Prairie-Chicken Recovery	WDF Grant Program	\$ 2,091,000
Missouri Bird Conservation Initiative	WDF Grant Program	\$ 1,032,000
Missouri Bird Conservation Initiative Match	Partners	\$ 1,941,000
TOTAL		\$45,755,000

Table 1. Source and distribution of funds (FY2002-2010) from the State Wildlife Grants Program, competitive State Wildlife Grants Program, MDC diversity program staffs and partnerships, Wildlife Diversity Fund competitive projects, the greater prairie-chicken recovery effort, and the Missouri Bird Conservation Initiative competitive projects.

Direct expenditures of SWG funding through MDC administrative staffs and specific grant agreement projects occur through three main grant agreement areas via annual approval by the U.S. Fish and Wildlife Service; 1) glade, savanna, grassland/prairie, and woodland habitat management, 2) research and surveys, and 3) coordination. The MDC receives reimbursement for expenditures under these three pre-approved “project areas” according to an annually-established non-federal match ratio (most commonly 50:50); with each annual SWG apportionment established as the “cap” for that year’s amount that is eligible for reimbursement. Reimbursement is based upon the staffs and programs described in “The Team Behind State Wildlife Grants and Teaming With Wildlife” section described in an earlier section. Because annual performances of these three SWG project areas are reported in much great detail in separate annual reports, the information contained in those reports are not duplicated here.

Competitive State Wildlife Grants Program (SWG-C)

It has already been mentioned in an above section that Congress authorized funding in 2008, 2009 and 2010 for a competitive State Wildlife Grants program (SWG-C). By submitting proposals, states projects compete for funding to implement strategies and actions to conserve imperiled species contained in approved State Wildlife Action Plans (i.e., Missouri’s Comprehensive Wildlife Strategy). Priority is given to projects with well thought-out conservation plans that identify the highest priorities in each state. As mentioned earlier, Missouri received funding for two in-state SWG-C projects and for one multi-state grant. A short summary of each of these three SWG-C projects is provided below.

In 2003, Missouri conducted a SWG-C project, entitled “Restoration of the Osage River Basin in Missouri.” Project expenditures of \$2.70 million were used to accomplish several major objectives; 1) reconcile water usage and in-stream flow needs in order to support healthy aquatic communities in the Osage River Basin under present and proposed future flows; 2) artificially propagate paddlefish and mark fingerling fish to be stocked in the Osage Basin and determine movement and potential spawning of adult paddlefish with tagging and telemetry; 3) maintain aquatic and terrestrial habitats capable of supporting diverse communities of plants, wildlife and aquatic organisms by monitoring select populations and using best management practices to promote natural movement and minimize damage from pollutants such as sediment; 4) achieve status and recovery of federally-Threatened Niangua darter and bluestripe darter through improvements to road crossings; and 5) determine the relations of fish assemblages to sediment in small streams of Missouri’s Osage River Basin. Much of this information was critical for efforts to conserve the integrity of the aquatic communities downstream from the Bagnell Dam during the relicensing procedure with AmerenUE and the Federal Energy Regulatory Commission.

Also from 2003-2006, Missouri received a SWG-C grant to develop a comprehensive, landscape-based Comprehensive Wildlife Conservation Strategy (CWCS) to target priority management actions on the species and habitats with the greatest conservation need. Through expenditures of \$1.83 million federal funds and \$0.89 million in MDC funds (\$2.71 million), MDC developed Missouri’s CWCS through a public input process (i.e., working with citizens and NGO conservation partners). The Department integrated the strategic planning initiatives and priority areas of such conservation partners as the Missouri Prairie Foundation, Audubon Missouri’s Important Bird Areas, and TNC’s portfolio sites. Also, a major goal of the CWS was to implement the planning recommendations proposed by the interagency Biodiversity Task Force contained in *The Biodiversity of Missouri* report (Biodiversity Task Force, 1992). In conjunction with this SWG-C grant, MDC expanded the Natural Heritage Database of Missouri (i.e., Missouri Species and Communities of Conservation Concern Checklist; MDC 2010), moved to Biotics as the Heritage platform, and expanded upgrades of Missouri Fish and Wildlife Information System, the Missouri Biospeleological Database, and the Missouri Flora database. It also provided additional support for the Missouri Natural Areas System, including integration of the natural areas plan with the CWS and adoption of the Missouri Ecological Classification System (Nigh and Schroeder, 2002). This SWG-C grant also funded the Conservation Landscapes Summit that created a forum where the broad conservation community of Missouri could identify priority geographies together (i.e., COAs), followed by stakeholder meetings held within the 33 highest priority COAs in the state.

Missouri also received \$135,000 from a SWG-C project, entitled “State Wildlife Implementation Resources and Capacity Building Tools for Amphibian and Reptile Conservation” (\$465,000 total SWG-C award). This project includes partners from 14 states and represents a national cooperative effort to address amphibian and reptile conservation needs. Through conducting regional assessments of species of greatest conservation need,

this project will evaluate amphibian and reptile species vulnerabilities to climate change, priority habitats, and monitoring needs. Other activities include identifying important herpetological areas much in the same way that Important Bird Areas were identified. This multi-state partner project will also produce capacity building opportunities for state wildlife agencies with respect to amphibian and reptile conservation. For example, a regulatory summit to assess and provide recommendations regarding the efficacy of state amphibian and reptile regulations and law enforcement was held. Missouri is the Administrating agency for this SWG-C grant.



Wildlife Diversity Fund

Funding through the Wildlife Diversity Fund is made available in a way that makes Missouri unique among most other states. As mentioned earlier, MDC receives reimbursement funds from the U.S. Fish and Wildlife Service for authorized expenditures (i.e., the three SWG program areas described earlier), and depositing them into the Missouri Conservation Commission fund. These federal dollars then become State of Missouri “non-federal” funds. What is unique about this process is that in 2002 the Missouri Conservation Commission approved the use of these “reimbursed dollars” for additional wildlife conservation projects and activities, thus creating the earliest version of the Wildlife Diversity Fund (WDF). This process also essentially doubles those funds available for wildlife diversity projects. After more than nine years, the WDF still operates as an MDC-internal, competitive grant program that has provided substantial additional funding (about \$6.1 million from MDC and \$2.2 million as match from partners) that has been additive to the 10-year SWG program apportionment (Figure 3 above; Table 1 above).

Significant portions of the WDF funds are available annually for projects that compete for funding (usually from 40-50 projects are approved), while the remaining balance is allocated between implementation of greater prairie-chicken recovery efforts (\$2.1 million to date) and Missouri Bird Conservation Initiative (MoBCI) habitat projects (\$1.0 million in grants with \$1.9 million in partner match) (Figure 3 above; Table 1 above). While performance and accomplishments of the WDF projects and MoBCI projects are provided in greater detail in the sections that follow, a short summary of accomplishments regarding greater prairie-chicken recovery efforts is all that is provided below, other than the total amount of expenditures provided through the WDF.



From 2002-2010, more than 636 projects were funded through the WDF grant program (561 WDF projects and 75 MoBCI projects). Figure 4 illustrates the distribution of selected projects throughout the state in relation to Missouri’s four Ecological Sections. Figure 5 indicates these same selected projects in relationship to the nine Congressional Districts in Missouri. Please note that Figures 4 and 5 each indicate only 308 point locations for the 636 projects actually accomplished; it is simply not possible to illustrate projects with a broad geographic scope (e.g., statewide projects) with a point location. Examples of projects that defy assignment of a point location include Mississippi River and Missouri River fisheries studies, funding staff positions for partnering agencies, inventorying or monitoring aquatic resources in Conservation Opportunity Areas, and genetics studies. Therefore, it cannot be assumed that certain counties or Congressional Districts have not benefitted from grant funding simply because a point is not illustrated on these two maps. Please see Appendix B for selected project success stories in Missouri made possible with SWG, WDF or MoBCI funding.

For ease of summarizing the accomplishments of the 636 projects, each one has been placed into one of seven categories of conservation action. Table 2 and Figure 6 provide a guide to the distribution of more than \$7.76 million in WDF funding from FY2002-2010. Note that more than \$6.03 million (78% of the total) was expended for habitat-related work through the combined categories of habitat restoration and management, greater prairie-chicken recovery, and invasive species management. Considering that an additional \$973,241 in expenditures was applied to species of greatest conservation need studies, more than \$7.0 million (or 90%) of the WDF expenditures during the last decade have been directed to projects that implement the priority objectives of Missouri’s Comprehensive Wildlife Strategy. Each category of conservation action is summarized further in the sections below.



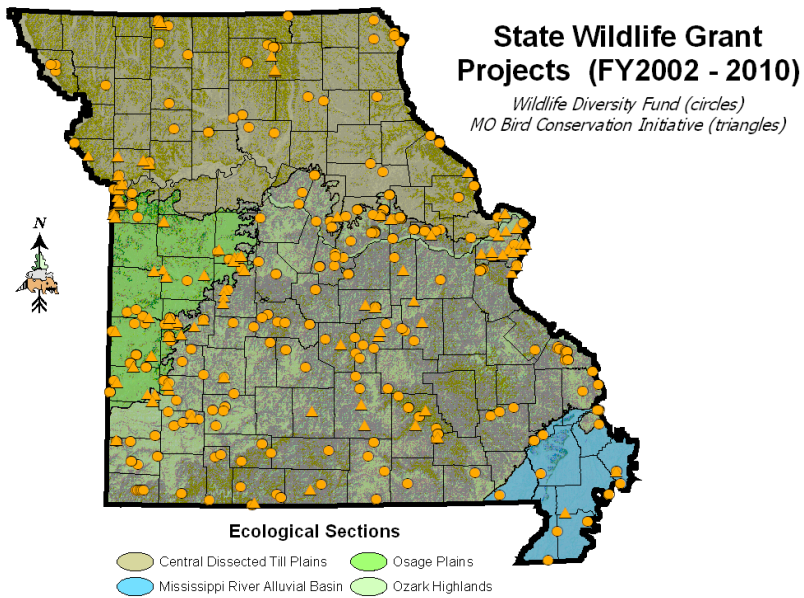


Figure 4. Relationship of 308 SWG, WDF and MoBCI projects to Missouri’s four major ecological sections.

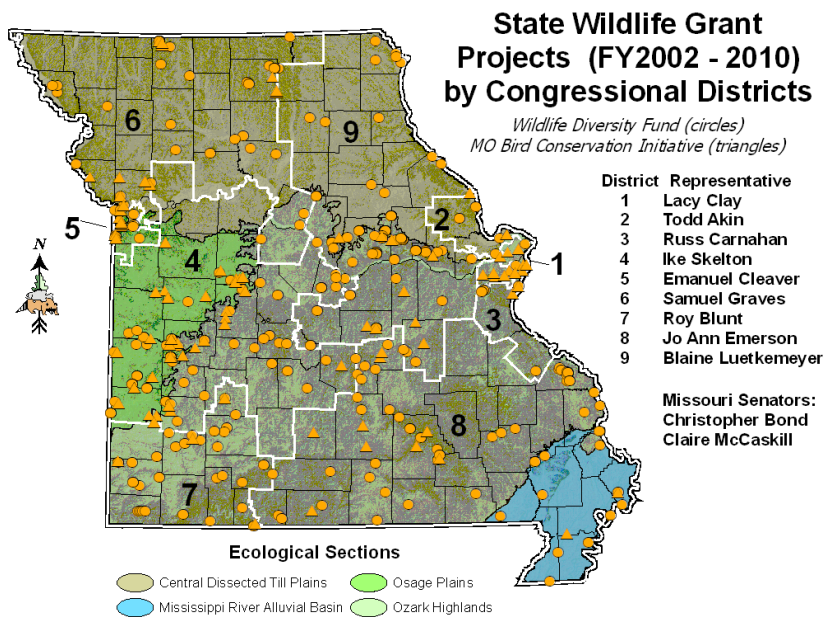


Figure 5. Relationship of 308 SWG, WDF and MoBCI projects to Missouri’s nine Congressional Districts.

Category of Conservation Action	Expenditure
Administration	\$ 577,941
Education/Outreach	\$ 109,147
Greater Prairie-Chicken (GPC) Recovery Program	\$2,091,314
Habitat Restoration and Management	\$3,424,326
Infrastructure Development	\$ 70,751
Invasive Species Management	\$ 515,496
Species of Greatest Conservation Need (SGCN) Studies	\$ 973,241
TOTAL	\$ 7,762,216

Table 2. Summary of Wildlife Diversity Fund expenditures for categories of conservation actions (FY2002-2010).

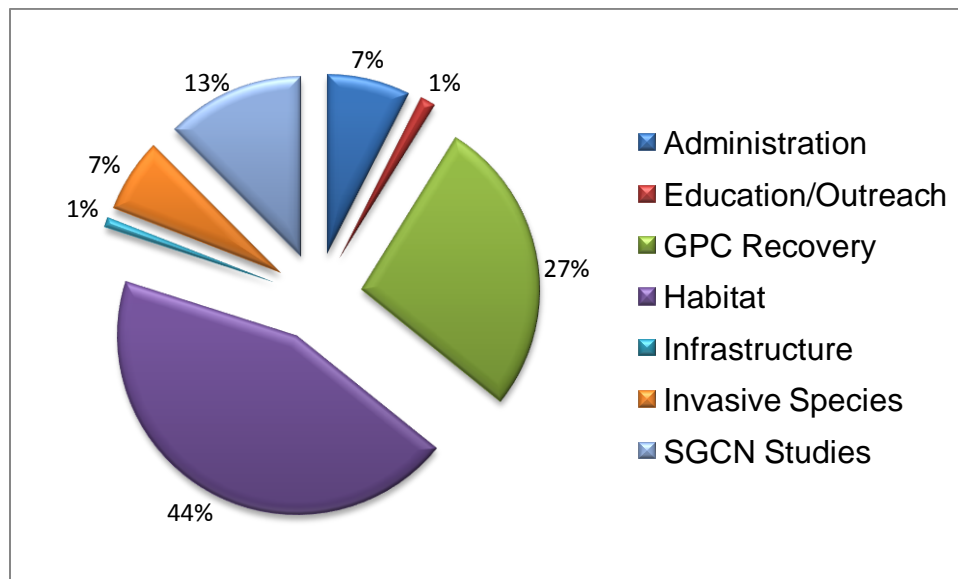


Figure 6. Percent allocation of the total Wildlife Diversity Fund expenditures provided in Table 2.

Administration

Funding under the category of Administration was used (primarily during earlier years) for building the capacity of conservation partners to conduct on-the-ground conservation actions and for development of strategic approaches for conservation initiatives that were larger in scale and scope. This category of funding accounted for only \$578,000 (or 7%) of the \$7.76 million SWG expenditures (Table 2 above; Figure 6 above). Examples of capacity building projects included partnerships with The Nature Conservancy to fund an employee to work within the Grand River Grasslands COA (e.g., Dunn Ranch) in Missouri and Iowa. Also, a volunteer coordinator was hired for the Bridging the Gap and Kansas City WildLands

partnerships to focus on invasive species control and greenway development in the Kansas City metro area. Matching funds for staffing was also provided to the Missouri Prairie Foundation for coordination of contracts for statewide habitat projects, assistance with SWG administration, and TWW coalition building, and development of priority grassland/prairie restoration projects.



To address the need for more wildlife friendly grassland habitat (i.e., diverse warm season grass mixtures and buffer strips) in the face of equipment shortages, SWG funds were used to help purchase eight warm season grass drills. In key grassland geographies across the state, MDC, National Wild Turkey Federation, and several Soil and Water Conservation Districts (SWCD) put this new equipment to work installing buffer strips and enhancing/restoring grassland, prairie, glade, and savanna through multiple program opportunities. Individual Districts own and maintain the drills, but make them available at no charge to landowners for use in installing diverse warm season grass, forb, and legume plantings that benefit a host of wildlife species.

More recently, funds categorized under Administration were used to develop new partnerships with land trust organizations that work with private landowners in COAs to achieve species of greatest conservation need (SGCN) habitat protection and management. This partner capacity building included facilitating staff training, developing outreach materials, cost-sharing stewardship fees, and contributing support for monitoring and enforcement of conservation easements. Funds from both WDF and SWG-C supported statewide efforts to develop spatial information (i.e., GIS) regarding the occurrence of natural communities and SGCN in support of Missouri's Heritage Database. Regional assessments of aquatic COAs were also conducted to assist with regional conservation planning efforts. Personnel and equipment to conduct strategic planning efforts were provided by WDF for analysis of land cover and other landscape factors that aided in determining threats to riparian corridors within watersheds that are priorities for protection. Other efforts included the development and publishing of best management guidelines aimed at avoiding or minimizing impacts to SGCN from construction or other habitat alteration activities. WDF funding helped to support Audubon Missouri and a number of other partners that worked together to develop Important Bird Areas in Missouri. Missouri also contributed WDF funds to AFWA to help support a large partnership effort to provide communication, products, and services that assisted in the development of Missouri's CWS and related SWG activities.

Education/Outreach

In the early years, education and outreach activities were supported by federal funding because the legislative language in the WCRP allowed education and recreation as authorized activities. Only \$101,000 in WDF funding (or 1% of the total expenditures) from the early program supported collaboration between the Missouri Department of Education, Missouri Conservation Heritage Foundation and MDC to establish conservation and environmental education curricula for K-12 schools (Table 2 above; Figure 6 above). Other projects included establishing outdoor classrooms to teach grassland bird ecology, purchasing educational materials for “teacher’s trunks” that contained aids in preparing classroom messages about conservation, and holding teachers workshops in outdoor settings. Also, an environmental education program was initiated at the University of Central Missouri (formerly Central Missouri State University). Additional projects included building an outdoor amphitheater and creating interpretive materials for native plants along trails in cities and MDC conservation areas.



In 2001, a WDF grant contributed to the partnership between the University of Missouri Press and MDC to share costs for printing a revision of *The Wild Mammals of Missouri* (Schwartz and Schwartz, 2001) as a soft-cover edition, making it affordable to more people and encouraging its use as a classroom textbook. Although not reimbursable through the SWG federal aid program, a SWG-C grant and a WDF grant paid for printing *The Terrestrial Natural Community of Missouri* (Nelson 2005) and for the second printing of the revised edition (Nelson 2010) consecutively, which serves as the quintessential reference for natural community managers and as the foundation for development of strategic habitat initiatives within Missouri’s COAs. Grants from WDF also support development and printing of outreach and educational materials for landowners regarding recovery efforts for the greater prairie-chicken and other SGCN grassland birds.

One legislative initiative that would create additional, more permanent funding for state agency programs is called the Teaming With Wildlife Act. If this legislation were passed by Congress, language in the Act follows that of the early WCRP, which means that expenditures for educational and recreational activities would once again be authorized. Reverting back to the original language would allow significant expansion of conservation (i.e., outdoor) programs to a much broader base of conservation partners, thereby expanding the scope of benefits to more Missouri citizens.

Greater Prairie-Chicken Recovery Efforts

As a result of continuing population declines, MDC initiated a comprehensive greater prairie-chicken Recovery Program in 2006. Twenty-one agencies and conservation organizations work together as the Missouri Grasslands Coalition (GC) to gather funds, impact policy, and implement recovery efforts within six priority geographies (i.e., grassland COAs). In addition to intensive management of native prairie owned by GC partners, restoring suitable grassland habitat on working lands within highly fragmented landscapes is a focus of recovery efforts. The third year of a five-year translocation project has been completed, and a comprehensive marketing campaign has reached more than 900 landowners within target geographies. Although Missouri's native prairie-chicken population has continued its long-term decline, a positive response to intensified management by grassland songbirds and Northern bobwhite populations have been documented.



Figure 7. Several species of greatest conservation need grassland/prairie birds benefit from greater prairie-chicken habitat restoration projects.

Habitats

It is not feasible to conserve every plant and animal one at a time, so Missouri's approach to conserving all wildlife is to emphasize functioning habitats, natural communities and healthy landscapes. In this context, we strive to address the diverse needs of plants and animals that are species of greatest conservation need (SGCN) and conserve habitat for *all wildlife*. Missouri's CWS is an approach to conservation planning that uses ecologically-based assessments and existing plans to integrate conservation action for *all wildlife*. Missouri's COAs are the priority places where conservation actions are focused. Using an ecological framework to guide aquatic and terrestrial assessments, target species and their habitats (i.e., natural communities and landscapes) were identified for each ecological unit. Through collaboration, MDC considered the priorities of conservation partners, and combined the collective information into a framework of conservation opportunity that

represents the diversity of Missouri. The COAs represent the highest priority places where MDC, other public agencies, private conservation organizations, and citizen conservationists want to go to work for SGCN and their habitats.



Funding through WDF, MoBCI and the greater prairie-chicken recovery program conserves a wide variety of habitats and supports priority conservation actions that benefit species of greatest conservation need (SGCN) and address local conservation priorities. More than \$3.42 million (or 44%) of all WDF expenditures were provided in support of more than 300 habitat projects conducted throughout Missouri over the past 10 years (Table 2 above; Figure 6 above). Table 3 provides a summary of these expenditures by habitat type, while Figure 8 indicates the percent of total expenditures by habitat type. Also, Figure 9 illustrates the distribution of these habitat projects in Missouri by habitat type. Priority was given to projects that facilitated natural community management or restored habitats for fish, wildlife and plants that are not common enough to be hunted or fished. Although not designed as such, some projects also directly benefited species that are federally threatened or endangered. Projects also received priority if they occurred in a COA. In addition, projects that involve local partners and non-profit organizations were strongly encouraged, especially when matching funds were contributed to meet project objectives.

Habitat Classification	Expenditure
Rivers & Streams	\$ 153,040
Canebrakes	\$ 14,300
Old Field	\$ 125,100
Forest	\$ 223,053
Glade	\$ 326,630
Grassland/Prairie	\$ 1,040,338
Karst	\$ 252,850
Savanna	\$ 172,350
Woodland	\$ 641,685
Wetland	\$ 474,980
TOTAL	\$ 3,424,326

Table 3. Summary of Wildlife Diversity Fund expenditures by habitat type (FY2002-2010).

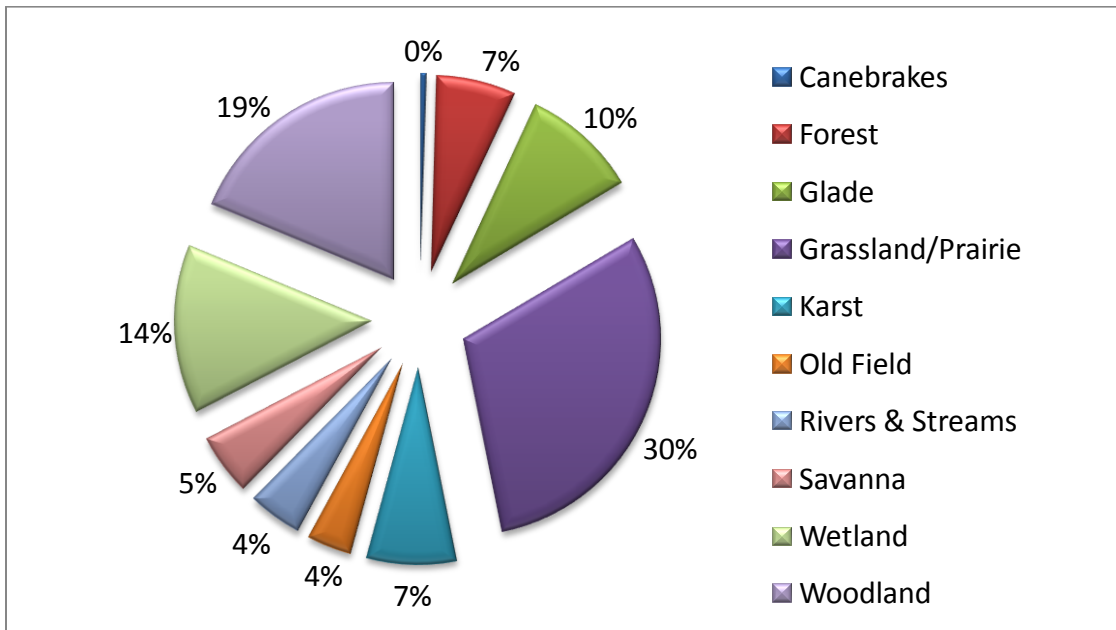


Figure 8. Percent allocation of the total Wildlife Diversity Fund expenditures for habitat projects by habitat type as provided in Table 3 above.

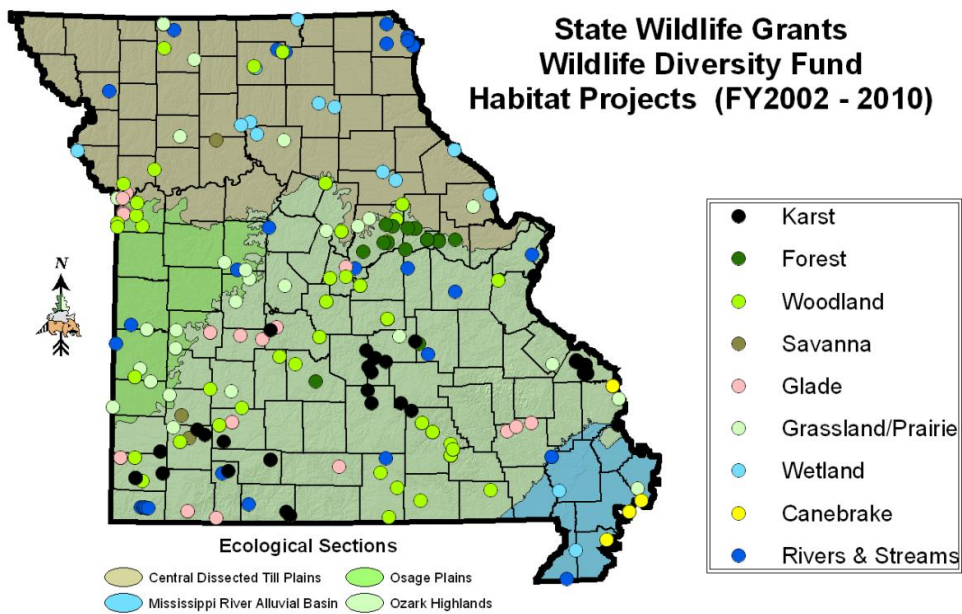


Figure 9. Distribution of Wildlife Diversity Fund habitat projects by habitat type.

Infrastructure



As noted previously, in the early years of the WCRP, recreational developments were activities authorized under that legislation. Some of the earliest, and most popular, projects developed in Missouri with the “new source” of funding were trail developments. Expenditures for infrastructure development accounted for only \$70,751 (or <1%) of the WDF grants awarded over the last nine years (Table 2 above; Figure 6 above). The Department provided funds to the City of Camdenton, City of St. Charles Parks and Recreation, Clinton Parks and Recreation, and the City of Jackson for construction of nature interpretive trails in their city parks. While SWG funds are not authorized for infrastructure development, in 2004, MDC and The Nature Conservancy entered into a partnership (using a WDF grant) to construct a seed processing facility at Wah’Kon-Tah Prairie. Still today, this modest investment of WDF continues to annually provide a sufficient quantity of diverse, high quality, locally adapted and affordable seed (approximately 100,000 lbs. since 2005) used to restore thousands of acres of quality prairie with high biodiversity values.

Invasive Species

Non-native species negatively affect our environment and the diversity of natural communities. Compared to other threats to biodiversity, invasive introduced species rank second only to habitat destruction; invasive species cause more damage than some pollutants! In fact, introduced species are a greater threat to native biodiversity than pollution, harvest, and disease combined. Of 1,880 imperiled species in the United States, 49% are endangered because of introduced species alone, or because of their impact combined with other forces. Further, through damage to agriculture, forestry, fisheries, wildlife and other human enterprises, introduced species inflict an enormous economic cost, estimated at \$137 billion per year to the U.S. economy alone. Invasive species endanger Missouri’s fish, forest and wildlife resources by consuming or poisoning their habitat, their food—or them! Through the SWG and WDF grant programs, more than \$515,000 (or 7%) has been expended to fight invasive species (Table 2 above; Figure 6 above). Clearly, with such minor funding, we can’t stop invasive species from negatively impacting habitats. Therefore, making public education and awareness a major strategy in the battle is cost effective, compared to manpower and other costs associated with the mechanical and chemical controls of invasive species populations.

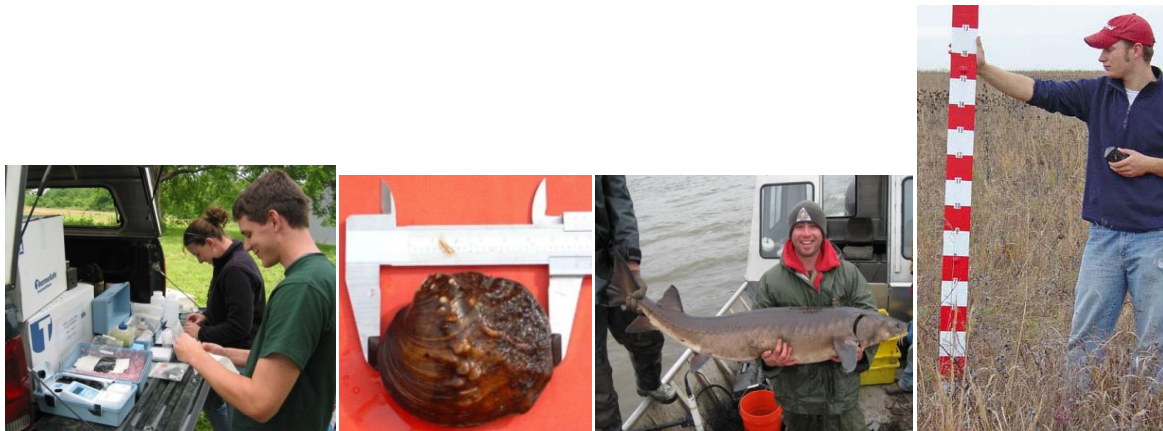
Since the early WCRP program, significant funding and manpower has been put toward controlling invasive species. Approximately 68 projects have used grant funds to combat the spread or control populations of invasive species, including sericea lespedeza, bush honeysuckle, teasel, and spotted knapweed. Significant funds have also been spent to control encroachment of woody vegetation into prairie and grassland habitats, which is perhaps not thought of as invasive species, but invasive to that natural community just the same. In more recent years, projects to eradicate the growing problem of highly destructive feral hogs in Missouri have been funded. Although some SWG, WDF, and MoBCI grant funds have been contributed to efforts to control aquatic nuisance species such as zebra mussels, Asian carp, and Eurasian watermilfoil, funding from the Aquatic Nuisance Species Grant Program, and the Sport Fish and Wildlife Restoration programs have provided support for control measures. While boater surveys, watercraft inspections and decontamination trainings have greatly increased the awareness of how aquatic nuisance species are transferred from one water body to another, they are not preventing the spread of these unwanted species; more funding is needed for additional control efforts.



Three years ago (2007), MDC enlisted its first invasive species coordinator to step up efforts to prevent the introduction and control of invasive species statewide. Since then, and with additional temporary staff through seasonal interns, significant strides have been made. In the realm of public information, online maps and other information is updated constantly on MDC's website, a variety of printed information is reprinted from existing sources, or constantly developed, and circulated widely. Also, priority billboard messages are scattered throughout the state, and even radio spots targeting specific audiences are aired through MDC's partner Learfield Communications at critical times (e.g., prior to Memorial Day to prevent spreading emerald ash borer in firewood). New approaches such as introducing insects as biocontrol agents for spotted knapweed could also pay dividends in future years. Critical partnerships continue, or have been forged anew, with the Missouri Department of Agriculture, Missouri Department of Natural Resources, Missouri Department of Revenue, Missouri Department of Transportation, Truman State University, University of Missouri Extension, USDA APHIS, USDA Forest Service, U.S. Fish & Wildlife Service, U.S. Army Corps of Engineers, U.S. Coast Guard Auxiliary, Missouri Master Naturalists, Missouri Forest Keepers and the Missouri Aquaculture Association. Any increase in SWG funding or ANS grant funding for invasive species eradication and control, and the resulting matching funds from these important conservation partners, would always be put to good use waging the "never ending battle against invasive species."

Species of Greatest Conservation Need Studies

The earliest memos and planning documents developed by MDC leadership (e.g., memo from Director Jerry M. Conley, March 13, 2000) discussed ways the “new” funding (CARA at that time) was to be used to complement and expand programs and provide funding to tackle new initiatives, such as research and management to enhance populations of “nongame” and endangered species. In 2001, SWG began providing funds to states for conservation and management of species of greatest conservation need (SGCN). This funding, also soon after its beginning, became contingent upon each state developing a “Comprehensive Wildlife Conservation Strategy.” Missouri’s Comprehensive Wildlife Strategy (CWS) is our state wildlife action plan and, like all the other state’s plans, it was developed as the primary tool for keeping fish and wildlife healthy and off the list of threatened and endangered species. Our CWS identifies habitats for species that are in the greatest need of conservation and promotes beneficial conservation actions in the highest priority places. It is crucial to understand that our Missouri CWS places its greatest emphasis on conserving quality habitats for fish and wildlife (i.e., healthy natural communities), therefore, having invested more than \$6.03 million (or 78%) of grant funds for habitat work in priority geographies (Table 2 above; Figure 6 above) has benefitted the highest priority SGCN and many more species as well. Despite this strategic habitat approach, our strategy facilitates species surveys, inventories, research, and monitoring programs as the best way to provide better data on species and habitats.



With limited funding, there are still SGCN listed in the *Missouri Species and Communities of Conservation Concern Checklist* (January 2010) for which little information is known regarding their range, status, or trends. Over the last decade, more than \$973,000 (or 13%) of grant project expenditures were awarded for a variety of field surveys and inventories of fish and wildlife (140 out of 561 total projects) to determine presence, assess population levels, or indicate trends in populations of our species of greatest conservation need (Table 2 above; Figure 6 above). Missouri is also one of only four states that included conservation actions for protection of SGCN plants in our state strategy. The WDF grants are used to



conduct plant and vegetation inventories, surveys, and monitoring at priority places to either assess plant biodiversity and species status, or identify measures to prohibit detrimental habitat impacts. Department staff also put forth a great deal of effort to track occurrences of plant and animal SGCN, communities of conservation concern, and unique natural features in the Missouri Natural Heritage Program database.

Aquatic SGCN studies that have been funded by these grants (\$780,913), including lake and pallid sturgeon habitat use in the Missouri and Mississippi rivers and development of a simple blood test designed to determine female brood stock with minimal hold time. Stream sampling in priority watersheds to determine fish community assemblages has yielded beneficial data regarding the status and distribution of several species of greatest conservation need fishes (e.g., blacknose shiner, Topeka shiner, Niangua darter). Genetics studies of crayfish and the hellbender provided badly needed information about the geographical relationships of their populations and how Chytrid fungus threatens the Ozark hellbender and other amphibians.

Missouri has some of the most diverse assemblages of freshwater mussels in the Midwest, making it imperative to conduct status surveys for many SGCN mussels (e.g., fat pocketbook and ebonyshell) to ascertain potential impacts to Unionid populations from water quality degradation or stream alterations. Other aquatic related studies include amphibian surveys within COAs, determining the status of two state endangered turtles, and in-stream work to prepare priority prairie stream habitats for re-introductions of the federally Endangered Topeka shiner.





Investigations involving groundwater resources (i.e., caves and springs) include determining population size, movement, growth, genetic structure, and habitat for the grotto sculpin, and evaluating water quality impacts to the populations of grotto sculpin in Missouri to assist in developing recovery plans. Other karst related studies included delineating the groundwater recharge zone of caves and springs to protect populations of Ozark cavefish, monitoring karst water quality in other priority recharge areas, and developing habitat conservation plans for the spring cavefish in Missouri.

Terrestrial SGCN studies that have been funded almost entirely with WDF grants include implementation of the greater prairie-chicken (GPC) recovery efforts (\$2.1 million for GPC; \$192,328 for all other species). Work related to recovery of this high priority grassland bird, which also benefits a suite of grassland birds and other grassland/prairie plants and animals, includes restoration and management (e.g., woody vegetation removal, invasive species eradication), investigations of habitat use, lek re-colonization via translocation of GPC stock from Kansas, and private landowner services related to grassland establishment or management. Other studies of bird SGCN supported by SWG and WDF funding include monitoring grassland bird populations on high priority prairie areas and evaluating bird communities and habitat use in bottomland hardwood forests. The Missouri Bird Conservation Initiative has also directed almost \$3.0 million in WDF to on-the-ground bird habitat work in Missouri since 2004 (not included in the grant amounts above). Details of the MoBCI project work are discussed in a separate section of this report below.



Other terrestrial SGCN concerns studies included surveys for Kirtland's snake and monitoring of Massasauga rattlesnake populations at Pershing State Park and Squaw Creek National Wildlife Refuge. Grant studies also included determining the effects of fall and winter burning on red bats hibernating on the forest floor in southwest Missouri and using non-intrusive methods to census cave-dwelling bats with thermal infrared video. Work that contributed to achieving recovery goals for the federally Endangered Hine's emerald dragonfly and American burying beetle were also supported through SWG and WDF.

Conservation actions for plant SGCN that were supported by WDF grants include a corkwood restoration project, Hall's bulrush recovery efforts, and a study on the affects of burning on rosette survival and seedling recruitment of federally Threatened decurrent false aster.



The Missouri Bird Conservation Initiative (MoBCI)

Established August 16, 2003, the Missouri Bird Conservation Initiative (MoBCI) partnership has grown to be a 56-member organization. Although the individual interests of MoBCI organizations may vary, these partners find synergy in working together for a common objective – conserving birds and their habitats. MoBCI is Missouri’s “step down” of the North American Bird Conservation Initiative (NABCI), and like NABCI, MoBCI is about conserving birds across geopolitical boundaries, across taxonomic groups, and across diverse landscapes. So effective is this partnership that MoBCI received the 2008 Group Award for “Outstanding Contributions to Bird Conservation,” presented by NABCI and the Association of Joint Venture Management Boards (Figure 10). A significant portion of Wildlife Diversity Funds are used to deliver bird conservation through a competitive grant program conducted by the MoBCI Steering Committee.



Figure 10. Past and present Missouri Bird Conservation Initiative Steering Committee members at the MoBCI Conference (August 22, 2009); they are displaying the 2008 Group Award for “Outstanding Contributions to Bird Conservation,” presented by NABCI and the Association of Joint Venture Management Boards.

To date, a significant portion of SWG funds have been used to deliver bird conservation statewide through a competitive grant program conducted by the MoBCI Steering Committee. Grant funds originate from MDC (i.e., WDF allocation), the U.S. Fish and Wildlife Service Partners for Fish and Wildlife Program, the National Wild Turkey Federation’s Superfund, proceeds from the annual MoBCI Conference, partner contributions, and other sources. Since 2004, MoBCI has directed more than \$2.97 million to bird conservation projects in Missouri; MoBCI has awarded more than \$1.03 million in grants, which brought more than \$1.94 million in additional matching funds for these projects from conservation partners. Figure 10 and Table 4 (above) illustrate that 96% of WDF grants distributed through the MoBCI grants program (or \$2.85 million) have been directed to on the ground habitat restoration or management projects (categories of habitat and invasive species) that have delivered bird conservation at state and local levels. To date, more than 75 projects that benefit birds and all other wildlife throughout the state (Figure 11) have been conducted.

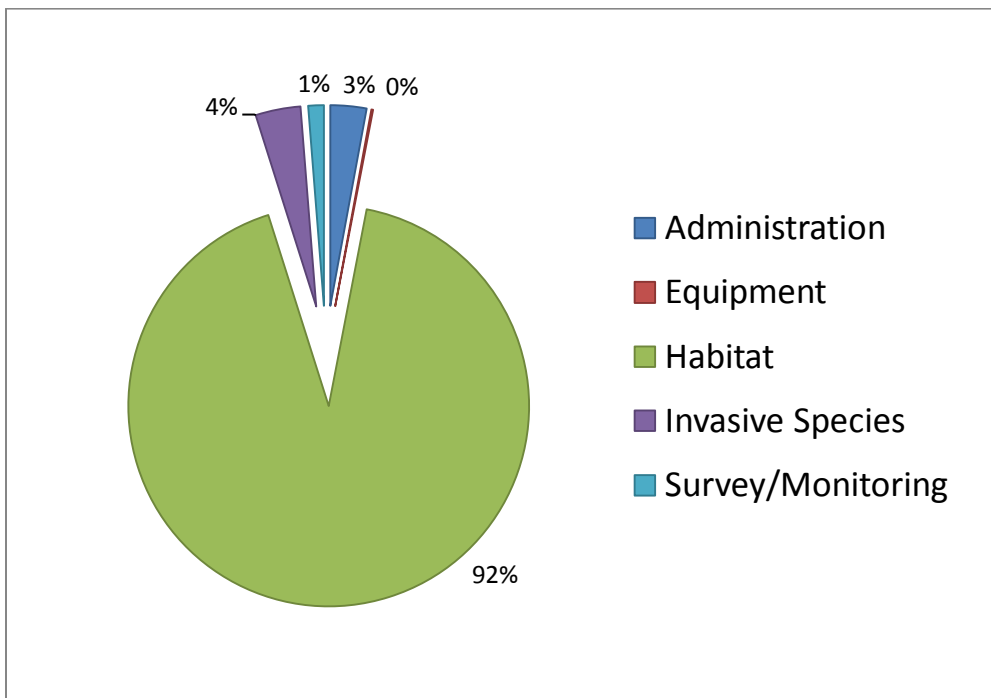


Figure 11. Percent allocation by project type of Wildlife Diversity Funds distributed by the Missouri Bird Conservation Initiative (FY2004-2011).

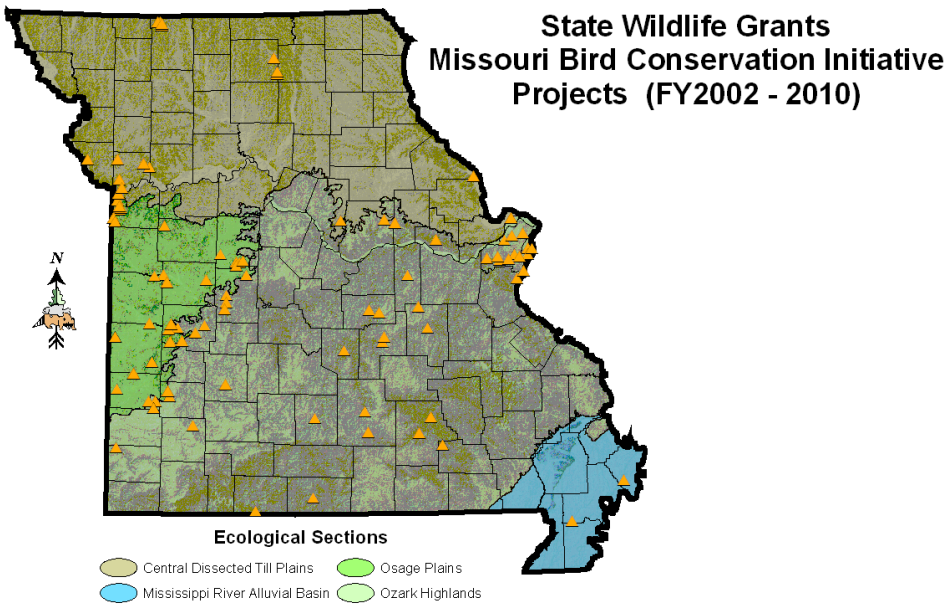


Figure 12. Distribution of Missouri Bird Habitat Initiative projects in Missouri.

A summary of expenditures for habitat projects and invasive species control projects funded through the MoBCI grants program is provided in Table 4. It is obvious that grassland/prairie habitats have received the most support for habitat projects. However, what may appear as a disproportionate amount of expenditures directed to grassland/prairie habitat is actually appropriate, given that so many species of grassland birds are high priority species of greatest conservation need and temperate grassland ecosystems are the most imperiled natural communities in the world.

Project Type	Expenditure
Forest	\$ 677,273
Glade	\$ 84,139
Grassland/Prairie	\$1,317,084
Savanna	\$ 53,219
Woodland	\$ 159,060
Wetland	\$ 395,423
Invasive Species	\$ 162,629
TOTAL	\$ 2,848,827

Table 4. Summary of grant expenditures by habitat type and invasive species projects awarded through the Missouri Bird Conservation Initiative grant program (FY2004-2011).

CONCLUSION: FUTURE CHALLENGES



Despite the disappointing prospects of finding increased funding in these tough economic times, Missouri is joining with many states across the nation and making plans to celebrate the 10 Year Anniversary of State Wildlife Grants. Teaming With Wildlife Week (September 4-12, 2010) will be an opportunity to highlight the SWG Program and Missouri's Comprehensive Wildlife Strategy. Missouri's TWW Steering Committee is planning several activities for this week and the remainder of September. One such event is a series of Congressional tours to SWG funded sites to share the importance of this annually appropriated funding source with our Congressional leaders. Leaders of COAs are also being encouraged to consider hosting a volunteer work day at one of the many COAs or in some way celebrate the success of a project funded by the SWG, WDF or MoBCI grant programs. Also, this special report serves to document a decade of the highly successful SWG grant program and the accomplishments of the WDF and MoBCI grant programs that emerged from it.

Over the next three years Missouri will be revising the Comprehensive Wildlife Strategy. During this process, resource professionals, NGO partners and Missouri citizens will continue to examine and define the relationship between strategic habitat conservation and climate change. Climate impacts will surely make conserving healthy habitats for future fish, wildlife and plants even more challenging. Fact is, fish and wildlife managers must manage and restore wildlife habitats, monitor change, and respond adaptively to change. In the face of this inevitable change, Missouri's CWS will continue to serve as the guide for strategic approaches to conservation planning and delivery, and we are guardedly optimistic that SWG program funding will continue to support our priority actions to conserve *all wildlife*.

"I recognize the right and duty of this generation to develop and use our natural resources, but I do not recognize the right to waste them, or to rob by wasteful use, the generations that come after us."

Theodore Roosevelt, speech, Washington, D.C., 1900



Appendix A

TEAMING WITH WILDLIFE

a natural investment

Missouri Teaming with Wildlife Supporters

Last Updated: 7-7-2010

1. A Community Organization to Restore Nature
2. Adaptive Ecosystems, Inc.
3. Alliance for a Livable World
4. American Fisheries Society-Missouri Chapter
5. American Rod & Gun
6. Anchorage Farm
7. Applied Ecological Services, Inc. - Kansas City Office
8. Aquaest Retreat
9. Arcadia Valley Impact Club
10. Arundale Mandarin Products
11. Association of MO Interpreters
12. Audubon Missouri
13. Audubon Society of Missouri
14. Avian Conservation Alliance of the Americas
15. BASS Pro Shops (National)
16. Beaver Canoe Rental, Inc.
17. Big Cedar Lodge
18. Blue River Watershed Association
19. Bogg's Creek
20. Bridging the Gap
21. Bridlespur Hunt Club
22. Budgetel Inn St. Charles
23. Burroughs Audubon Society of Greater Kansas City
24. Cedar Glade Press
25. Center for Plant Conservation (National)
26. Chesterfield Citizens Committee for the Environment
27. Clarence Care Center
28. Claycomo Economic Development Group
29. Claycomo Friends of the Park
30. Claycomo Park Board
31. Clay County Department of Parks, Recreation and Historic Sites
32. College of the Ozarks Fisheries and Wildlife Association
33. Columbia Audubon Society
34. Conservation Federation of Missouri
35. Conservation Federation of Missouri - Southside Division, St. Louis District Chapter
36. Conservation Foundation Charitable Trust
37. Cotton Boll Girl Scout Council, Inc.
38. Crouser International Trucks
39. Cuiivre River Wildlife Management Association
40. D&D Quality Deer Processors
41. DeSoto Chamber of Commerce
42. Des Peres Parks & Recreation
43. Double Dye Farms
44. EarthWays Environmental Education Center
45. Eastwood Kennel
46. EcoWorks Unlimited
47. Eleven Point River Conservancy
48. Farmers Coop Elevator Association
49. Fishing River 4, The
50. Flower and Garden Design
51. Forrest Keeling Nursery
52. Four Seasons Capital Growth
53. Friends of Big Muddy
54. Friends of La Barque Creek Watershed
55. Friends of Lakeside Nature Center
56. Friends of Rock Bridge Memorial State Park
57. Gateway Cooperative Weed Management Area
58. Gateway Greening, Inc.
59. Gateway Trailnet, Inc.
60. Good Samaritan Boys Ranch
61. Grand River Audubon Society
62. Greater Ozarks Audubon Society
63. Greenbelt Land Trust of Mid-Missouri, The
64. Greenway Network, Inc.
65. Harvest Arts
66. Howardville Community Betterment
67. Hubbard Lumber Company
68. Izaak Walton League-Greater Ozarks Chapter
69. James River Basin Partnership
70. Jim Rathert Photography
71. Jonesburg State Bank
72. Junior Academy of Science
73. Kansas City Herpetological Society
74. Kansas City Parks and Recreation
75. Kansas City Wildlands
76. Kansas City Zoological Garden
77. Kickapoo High School Environmental Club
78. LaBarque Creek Conservation Opportunity Area Team
79. LaBarque Watershed Stream Team Association
80. Ladue Middle School
81. Lake of the Ozarks Watershed Alliance
82. Lambert Field Rod & Gun Club
83. Leisure Ponds
84. Lewis & Clark Boat House and Nature Center
85. Little Blue River Watershed Coalition
86. Litzinger Road Ecology Center
87. Longboat Outfitters
88. M.A.K.O. Fly Fishers
89. Mark Diller Real Estate
90. Mark Twain Forest Watchers
91. Martha Lafite Thompson Nature Sanctuary
92. Massasagua Flats LLC
93. Meramec River Recreation Association
94. Metropolitan Energy Center
95. Mid-America Regional Council
96. Midland Empire Audubon Society
97. Mid-Missouri Conservation Society
98. Midwest Research Institute (National)
99. Mississippi Co. Conservation Assn.
100. Mississippi Valley Duck Hunters Association
101. Missouri B.A.S.S. Federation
102. Missouri Bird Conservation Initiative
103. Missouri Botanical Garden
104. Missouri Clean Energy Systems
105. Missouri Coalition for the Environment
106. Missouri Conservation Agents Association
107. Missouri Conservation Heritage Foundation
108. Missouri Dept of Conservation

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www.teaming.com



TEAMING WITH WILDLIFE
a natural investment

Missouri Teaming with Wildlife Supporters

Last Updated: 7-7-2010

109. Missouri Ducks Unlimited
110. Missouri Farmland Preservation Trust
111. Missouri Forest Products Association
112. Missouri Herpetological Association
113. Missouri Hunter Education Association
114. Missouri Master Naturalists - Boone's Lick Chapter
115. Missouri Master Naturalists - Chert Glade Chapter
116. Missouri Master Naturalists - Confluence Chapter
117. Missouri Master Naturalists - Great Rivers Chapter
118. Missouri Master Naturalists - Meramec Hills Chapter
119. Missouri Master Naturalists - Miramiguoa Chapter
120. Missouri Master Naturalists - Ozarks Chapter
121. Missouri Master Naturalists - Springfield Plateau Chpt
122. Missouri Native Plant Society
123. Missouri Native Seed Association
124. Missouri Ozarks Springs & Streams Advocacy
125. Missouri Park & Recreation Association
126. Missouri Parks Association
127. Missouri Prairie Foundation
128. Missouri River Communities Network
129. Missouri River Relief
130. Missouri Smallmouth Alliance
131. Missouri Society of American Foresters
132. Missouri Stream Teams
133. Missouri Trout Fishermen's Association -- Springfield
134. Missouri Waste Control Coalition
135. Missouri Wilderness Coalition
136. Missouri Wildflowers Nursery
137. National Wild Turkey Federation - MO State Chapter
138. NWTF - Benton County Thunderin Gobblers
139. NWTF - Boonslick Trail Gobblers Chapter
140. NWTF - Bootheel Boss Gobblers Chapter
141. NWTF - Bunt Cumbea Laclede County Chapter
142. NWTF - Clark County Longbeards Chapter
143. NWTF - Four Rivers Chapter
144. NWTF - Gateway Long Spurs Chapter
145. NWTF - Kirksville Ridge Runner Chapter
146. NWTF - Little Dixie Longbeards Chapter
147. NWTF - Locust Creek Longbeards Chapter
148. NWTF - Meramec Valley Strutters
149. NWTF - Platte Purchase Chapter
150. NWTF - Osage Gobblers Chapter
151. NWTF - Rhine Valley Chapter
152. NWTF - Sugar Creek Gobblers Chapter
153. NWTF - Union Covered Bridge Gobblers Chapter
154. National Youth Hunting Association (National)
155. Nevada/Vernon County Chamber of Commerce
156. New Acts Productions
157. North American Grouse Partnership - MO Chapter
158. Odyssey Adventures
159. Open Space Council
160. Orscheln Farm & Home L.L.C.
161. Otahki Girl Scout Council
162. Outdoor Adventure Club
163. Ozark Center for Wildlife Research
164. Ozark Fly Fishers
165. Ozark Gateway Audubon Society
166. Ozark Greenways Inc.
167. Ozark Koala Ecosystem Services
168. Ozark Regional Land Trust
169. Ozark Society - Mississippi Valley Chapter
170. Ozark Underground Laboratory
171. Ozark Wilderness Waterways Club
172. Ozarks Methodist Manor, The
173. Pan's Garden
174. Pedro's Planet, Inc.
175. Pierce City FFA Chapter
176. Pierce City Sportsmans Club
177. Platte Land Trust
178. Powell Gardens
179. Prairie Chicken Bed and Breakfast
180. Prairie Garden Trust
181. Pure Air Native Seed Company
182. Quail and Upland Wildlife Federation, Inc.
183. Quail Forever - Ozarks Plateau Chapter
184. Quail Unlimited-Missouri State Council
185. Quail Unlimited - Southwest Missouri Chapter
186. Quality Forest Management LLC
187. Riley Chevrolet, Oldsmobile, Cadillac and Toyota
188. River Bluffs Audubon Society
189. Ruffed Grouse Society (Mid-Missouri Chapter)
190. Safari Club International - Central Missouri Chapter
191. Saint Louis Zoo
192. Scenic Rivers Stream Team Association
193. Schmitt Auto Body & Paint
194. Shaw Nature Reserve
195. Sierra Club-Joplin Section
196. Society for Conservation Biology - Missouri Chapter
197. Soil and Water Conservation Society - Show-me Chapter
198. Southeast Missouri Hospital Foundation
199. South Grand River Watershed Alliance
200. Southwest Missouri Fly Fishers
201. Spradlin Insulation
202. St. Louis Audubon Society
203. Steelville Area Chamber of Commerce
204. Stream Conservation Service
205. Stream Team #76
206. Stream Team #134 (Sinking Creek Biomonitoring)
207. Stream Team #151 (Valley Park Lions)
208. Stream Team #191
209. Stream Team #192
210. Stream Team #211 (Arnold)
211. Stream Team #248
212. Stream Team #387
213. Stream Team #625
214. Stream Team #642
215. Stream Team #742 (Concord)
216. Stream Team #818
217. Stream Team #882
218. Stream Team #913
219. Stream Team #937

Teaming with Wildlife

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Appendix A

TEAMING WITH WILDLIFE

a natural investment

Missouri Teaming with Wildlife Supporters

Last Updated: 7-7-2010

- 220. Stream Team #1013
- 221. Stream Team #1313
- 222. Stream Team #1462
- 223. Stream Team #1617 (Howardville)
- 224. Stream Team #1987
- 225. Stream Team #2082
- 226. Stream Team #2101
- 227. Stream Team #2517
- 228. Stream Team #2542
- 229. Stream Team #2753
- 230. Stream Team #2863
- 231. Stream Team #2866
- 232. Stream Team #2958
- 233. Stream Team #2990
- 234. Stream Team #3003
- 235. Stream Team #3032
- 236. Stream Team #3046
- 237. Stream Team #3062
- 238. Stream Team #3481 (Big Piney Tie Rafters)
- 239. Stream Team #4031 (Timberland)
- 240. Stream Team (Castor River Pack Rats)
- 241. Stream Team (Fort Zumwalt West High School)
- 242. Stream Team (Friends of LaBarque Creek)
- 243. Stream Team (North Moreau Watershed Keepers)
- 244. Stream Team (Pot O' Gold)
- 245. Stream Team (The Hideout)
- 246. Stream Team (West Junior High School SAVE)
- 247. Summersville Chamber of Commerce
- 248. Sunnen Products Company
- 249. Table Rock Lake Water Quality Inc.
- 250. Teachers for Teaming
- 251. The Green Center
- 252. The Nature Conservancy - Missouri Chapter
- 253. The Wildlife Society-Missouri Chapter
- 254. The Wildlife Society-Univ. of Central MO Student Chpt
- 255. The Wildlife Society-Univ of MO Columbia Student Chpt
- 256. Tracker Marine
- 257. Trout Unlimited-Show Me Chapter
- 258. Tumbling Creek Cave Foundation
- 259. Tyson Research Center
- 260. UMSL, Pierre Laclède Honors College - CHERP
- 261. Univ of Missouri-Columbia-School of Natural Resources
- 262. Upper White River Basin Foundation (Ozarks Water Watch)
- 263. Vaughan Pools, Inc
- 264. Village of Claycomo City Hall
- 265. Washington University - Department of Biology
- 266. Webster Groves Nature Study Society
- 267. Wecomo Sportsman's Club
- 268. West Plains Lions Club
- 269. Wild Birds for the 21st Century (Inc.)
- 270. Wild Canid Survival & Research Center
- 271. Wildcat Glades Conservation & Audubon Center
- 272. Wonders of Wildlife
- 273. World Bird Sanctuary

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Celebrating 10 Years of State Wildlife Grant Funding



2010 marks the 10th Anniversary of the State Wildlife Grants Program – a national funding source created to prevent species from becoming endangered by protecting and restoring native habitats. Missouri has received more than \$12.4 million over the past 10 years (averaging about \$1.2 million annually) to help ensure that Missouri has healthy, sustainable plant and animal communities for future generations to use and enjoy. Part of this vision is to have fish, forest and wildlife resources in appreciably better condition tomorrow than they are today. That is why projects and other conservation actions are developed through citizens, government agencies and non-governmental organizations working together to protect, sustain, enhance, restore or create sustainable plant and animal communities of local, state and national significance.

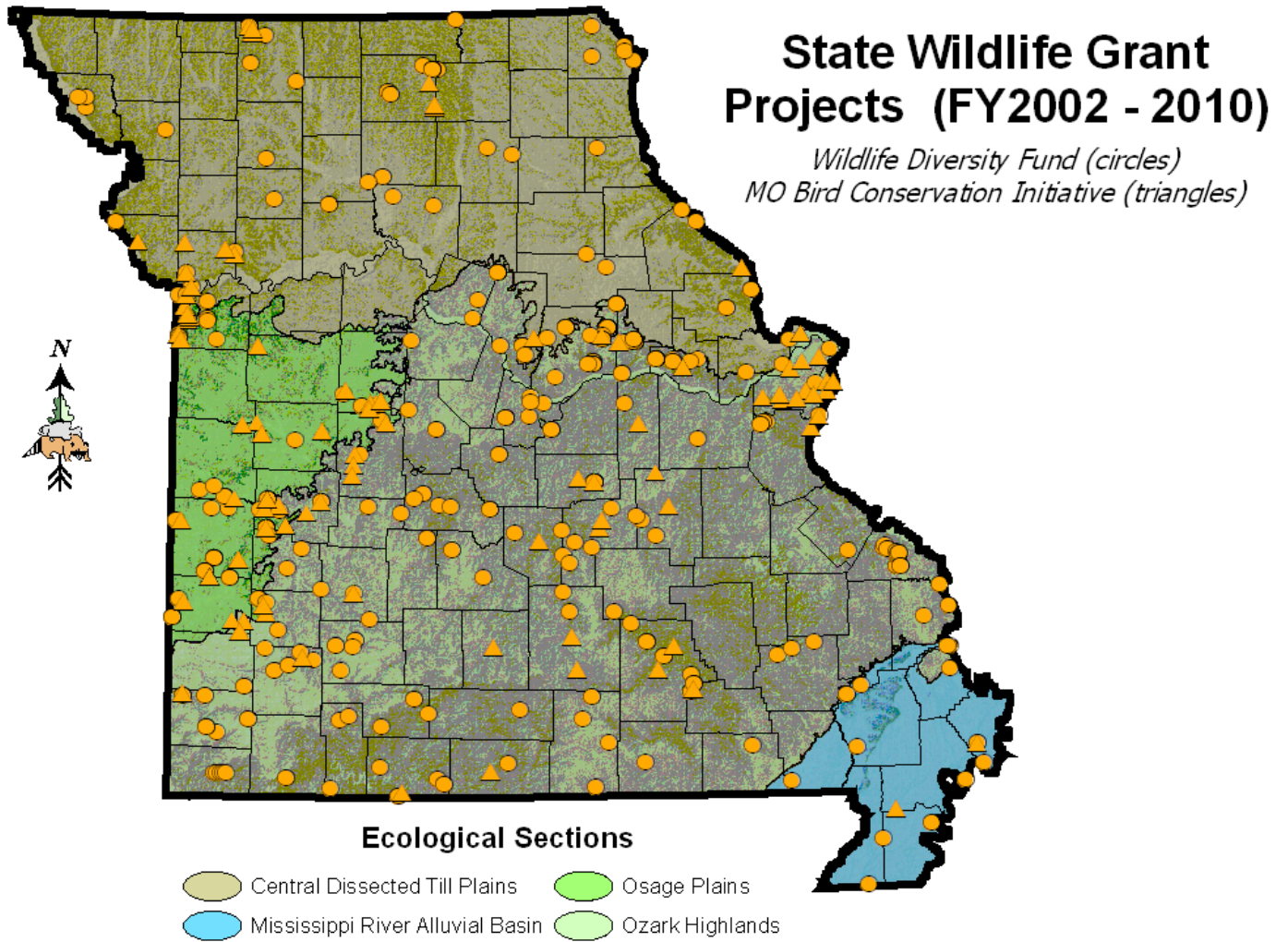
One important state funding source made possible with State Wildlife Grant funding is the **Missouri Bird Conservation Initiative (MoBCI) Grant Program**. MoBCI is a coalition of over 55 organizations and agencies that support bird conservation in Missouri. State Wildlife Grant funding has made the MoBCI Grants program possible each year since 2003. In the past six years, State Wildlife Grant funding provided more than \$600,000 to be available for MoBCI grants which has been matched with over \$1.2 million in partner funds! This investment has made thousands of acres of bird habitat work possible on public and private lands throughout Missouri.

The State Wildlife Grants Program also makes the **Department of Conservation's Wildlife Diversity Fund** possible. This significant funding source is made available to Missouri Department of Conservation employees and partners to accomplish native habitat restoration and research and inventory needs for species of conservation concern on public and private land. Over the past decade, tens of thousands of acres have been improved by conservation practices such as clearing unwanted trees and brush from native prairie, replanting native species, and applying prescribed fire to stimulate natural communities. Practically every habitat type has benefited by projects made possible by State Wildlife Grants, including wetlands, rivers, forests, woodlands, savannas, glades, prairies and caves.

The State Wildlife Grants Program is a major accomplishment of the Teaming With Wildlife Coalition – a network of over 6,000 organizations and businesses nationally (275 in Missouri) that support additional funding for fish, forest and wildlife conservation. Because it is an annually appropriated funding source, the Teaming With Wildlife Coalition must speak up each year to ensure its inclusion in the Department of Interior's budget. **A map and brief summary of selected projects made possible by State Wildlife Grants over the past 10 years is attached.** For more information about State Wildlife Grant projects in Missouri, contact Gene Gardner at 573-522-4115, ext. 3353 or gene.gardner@mdc.mo.gov.

Appendix B

Figure 1. Public, private and non-profit owned land in every region of the state benefited from on-the-ground restoration efforts made possible by State Wildlife Grants in the past decade.



Appendix B

Selected Missouri Success Stories Made Possible with SWG Funding Celebrating 10 Years of State Wildlife Grants



Confluence Wet Prairie Restoration Project

MoBCI Grants (FY06, FY07) –\$20,000; matched with \$23,500

Partners: U.S. Fish & Wildlife Service, Missouri Department of Conservation, private landowners



The Wet Prairie Restoration Project is focused on the Confluence Area, defined as the floodplain of the Missouri and Mississippi Rivers within Pike, Lincoln, St. Charles and St. Louis counties, and is at the heart of one of the most important migration corridors for the suites of wetland dependent birds in North America. Historically annual flooding from these large and diverse river systems created a complex and shifting mosaic of bottomland forest, marshes, wet prairies and sandbars. It is estimated that

more than half of the “bottomlands” were formerly wet and wet-mesic prairies. Through educational workshops, demonstrations and restoration on private lands, the partners involved in this project worked to enhance wetland diversity by restoring prairie cord grass on private land located in the Confluence Focus Area. The project is supportive and adds value to desired outcomes identified in the North American Waterfowl Management Plan, North American Waterbird Conservation Plan, and the U.S. Shorebird Conservation Plan.

Restoration of Urban Natural Communities through the Kansas City WildLands

Program

WDF Grants (FY02 – FY07) – \$152,000; MoBCI Grants (FY05-FY09) - \$94,800; matched with at least \$129,000

Partners: Kansas City WildLands, Bridging the Gap, Missouri Department of Conservation, etc.

Over the span of nearly a decade, Kansas City WildLands has sponsored volunteer-based ecological restoration activities in the Kansas City area. Volunteer activities have included large-scale removal of invasive bush honeysuckle and cedar, prescribed burns, seed collection and reseeding and tree planting.



Appendix B

Restoration of Lake Sturgeon Populations in Missouri's Big River Ecosystems

WDF Grants (FY05-FY10) – totaling \$230,000

Partners: Missouri Department of Conservation, U.S. Fish & Wildlife Service, U.S. Geological Survey



The Missouri Department of Conservation has been working to restore the state-endangered lake sturgeon into the Missouri and Mississippi Rivers since 1984. Today, state and federal fisheries management biologists, private aquaculturalists, and U.S. Geological Survey staff are collaborating on efforts to expand a propagation program outlined in the *Lake Sturgeon State Recovery Plan*. Stocking of lake sturgeon in these “Big Rivers” throughout the years have recently resulted in fish mature enough to serve as brood fish. The State Wildlife Grant Program has provided funding toward lake sturgeon population restoration,

including the development of a simple blood test that can determine sexes in lake sturgeon. This test allows biologists and aquaculturalists to determine the sex of fish being held in captivity. This determination is critical, since female lake sturgeon spawn only once every two or three years and may have to be held in a hatchery facility for up to three years. **Restoring lake sturgeon in Missouri helps ensure its survival nationwide, thereby keeping this fish off the endangered species list and saving taxpayer money.**

Apple Creek Conservation Area Bottomland Hardwood and Giant Cane Restoration

WDF Grant (FY05) – \$39,000

Partners: Missouri Department of Conservation

A total of 8 acres of wetlands were constructed at Apple Creek Conservation Area to provide habitat for migrating water birds, herpetiles, and native fishes. These wetlands are also providing additional waterfowl hunting and birding opportunities on the area. A 15 acre bottomland hardwood restoration was also accomplished. The tree planting eliminated a flood prone agricultural field of questionable value to wildlife management on the area. This project began the conversion of this site to a more natural condition with the planting of select tree species and giant cane.



Before



After

Appendix B

Missouri River Hills Forest and Woodland Restoration

WDF Grant (FY05-FY10) – \$127,000; **MoBCI Grants (FY06-FY11)** - \$81,000; **Match** - \$164,000

Partners: Ruffed Grouse Society, Missouri Department of Conservation, U.S. Fish & Wildlife Service, private landowners

The Missouri River Hills project is an public and private-lands initiative to maintain 10-15% of a 300,000-acre area in east central Missouri in a regenerating oak-hickory forest condition. Dense young forest and edge habitat benefits local birds such as ruffed grouse and Northern bobwhite as well as migratory songbirds, including American woodcock, Bell's vireo, Bewick's wren, Brown Thrasher, Blue-Winged Warbler, Eastern Towhee, Field Sparrow, Great-Crested Flycatcher, Prairie Warbler, White-Eyed Vireo and Yellow-Breasted Chat. Funds made possible with State Wildlife Grants have led to landscape-scale forest and woodland management on public and private land.



Smithville Lake Native Grassland Revitalization Project

MoBCI Grants (FY06, FY07, FY08, FY10) – totaling \$46,500; matched with \$184,451

Partners: Clay County Department of Parks, Recreation and Historic Sites; Missouri Department of Conservation; U.S. Army Corps of Engineers; Missouri Prairie Foundation; National Wild Turkey Federation; Burroughs Audubon Society



From 2005-2010, State Wildlife Grants helped fund grassland and savanna restoration activities at Smithville Lake Park, a 5,400-acre tract located two miles northeast of Smithville, Missouri, and the Rocky Hollow Lake Park, located two miles northwest of Excelsior Springs, Missouri. This multi-year project implemented a public lands management agreement between the Missouri Department of Conservation and the U.S. Army Corps of Engineers. Other partners include the Missouri Prairie Foundation, the National Wild Turkey Federation, and the Clay County Parks

Department. Successful management actions included converting row crop fields and rank fescue pastures to native grasses and forbs, eradicating invasive serecia lespedeza and Johnson grass, and utilizing controlled fire and livestock grazing to maintain restored and recreated grasslands and savannas. Traditional activities such as hunting and fishing are enjoyed by many at Smithville Lake, while others enjoy hiking, biking, photography, and watching wildlife on other areas of these parks. In some cases, families have reported they moved to the Smithville communities because they provide greenways and wildlife areas for their citizens. **The project has helped fulfill the growing need for habitat improvements on public recreational lands and provided a positive impact to the Missouri economy.**

Appendix B

Diamond Grove Prairie Natural Area Improvement

WDF Grant (FY06) – \$15,200



In many areas of southwest Missouri, prairie remnants have become disconnected by overgrown wooded draws. In this photo, trees at Diamond Grove have been cut to open the prairie vistas for grassland wildlife.

To better approximate the original natural community of Diamond Grove Prairie Natural Area, a contractor removed invasive tall trees from prairie draws. Small hickory, black jack and elm trees were marked by MDC staff and cut by the contractor, who used herbicide to treat

the stumps to prevent resprouting. The treatment reduced the canopy in the woodland area, allowing sunlight to reach the ground, and beneficial wildlife cover is beginning to be reestablished.

Avian predator perches were effectively removed and native prairie grasses and forbs are beginning to fill in where the trees were. Future burning served to reduce the woody fuel on the ground and prevent fire intolerant tall tree species from invading.



Crevice Cave Baseline Biological Census, Perry County

WDF Grant (FY08) – \$5,800

Partners: Missouri Department of Conservation, Cave Research Foundation



Crevice Cave is the longest cave system in Missouri and had never been systematically surveyed for biological elements. New species recorded for this cave included both species of *Eurycea* salamander, the *Meta* spider, and *Armadillidium* isopod, the herald moth, *Gammarus* amphipods and eastern pipistrelle bats.

Appendix B

Utilizing AmeriCorps Teams to Restore Glades and Woodlands in the Current River Conservation Opportunity Area

WDF Grant (FY06, FY08, FY09, FY10) - totaling \$157,000

Glades and woodlands in Missouri's Ozarks require periodic fire to maintain healthy habitat for species of conservation concern. With the help of State Wildlife Grants, AmeriCorps Teams have prepared fire lines and completing prescribed burns for thousands of acres of glades and woodlands on several Conservation Areas in the Ozarks. They have also worked to remove invasive cedar trees. This habitat management is benefiting Bachman's sparrows, pine warblers, Northern bobwhite quail and other species of conservation concern, and helps accomplish goals in Missouri's State Wildlife Action Plan.

Partnering with the AmeriCorps program is a cost-effective way to increase plant and animal diversity and improve habitat vital to Ozark wildlife. Missouri resource management agencies also use AmeriCorps



crews to accomplish habitat restoration and management in several other locations in Missouri.

Another accomplishment of this project was AmeriCorps' assistance in cutting and hauling away cedars that were shading out a colony of the Showy Lady-slipper orchid (*Cypripedium reginae*), pictured above. This is a species of conservation concern that inhabits a fen on Angeline Conservation Area. In 2005 this colony produced 32 stems and 30 blooms. In 2006 this colony produced 43 stems and 46 blooms, thanks to the removal of the encroaching cedars.



Forest Inventory of Donaldson Point Natural Area

WDF Grant (FY08) - \$4,200; matched with \$3,500

A local contractor conducted a forest inventory of the entire Donaldson Point Natural Area (2,066 acres). This information has been invaluable in selecting management activities to promote species of conservation concern, including Swainson's warbler and swamp rabbit.



Appendix B

Ridge Conservation Area Woodland/Savanna Thinning

WDF Grant (FY07, FY08, FY09, FY10) - ~\$80,000



This project used a combination of Timber Stand Improvement (TSI) and prescribed burning to significantly advance the restoration of the savanna and woodland communities in a proposed natural area. Contractors removed invasive trees (primarily cedar, shingle oak, hickory and ash), that had proven too large to remove with prescribed fire—the area had been burned 4 times previously. These thinnings have greatly increased the light in the communities, and the ground flora—native grasses, wild quinine, rattlesnake master, rough blazing star, numerous legumes, and others—are responding vigorously.

Tumbling Creek Karst Partnership

WDF Grant (FY06) - \$20,000; matching funds - \$80,000

In 2004, Mark Twain Elementary School discovered that their aging water treatment lagoon was leaking raw sewage into Tumbling Creek Cave – known as the most biologically diverse cave west of the Mississippi River and home to the Tumbling Creek Cavesnail, a federally endangered species. Funding was the biggest issue and a Wildlife Diversity Fund grant helped spur a conservation partnership to raise the additional \$80,000 needed to replace the sewage lagoon.



Restoring Fish Passage Barriers on the Niangua River

WDF Grant (FY08, FY09) - \$40,000



Low water crossings in the Niangua River basin impede movement of fish between bridges, including the Niangua darter and other fish, mussels, and crayfish of the Ozarks. In 2007 and 2008, several low water crossings in the Little Niangua River were replaced with clear-span bridges, recovering access to many more miles of stream habitat for Niangua darters. Subsequent monitoring revealed that Niangua darter numbers increased after bridge replacement and fish diversity increased upstream of all crossings. Maintaining healthy populations of Ozark fish means healthier waters overall, ultimately benefiting people as well.