



2008-2009 Annual Report

MISSOURI DEPARTMENT OF CONSERVATION



Serving nature and you™

Annual Report



Missouri Department of Conservation
Fiscal Year July 1, 2008 to June 30, 2009

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This summary of the Annual Report highlights the Missouri Department of Conservation's accomplishments and expenditures from July 1, 2008, through June 30, 2009. These accomplishments are based on the nine goals established in *The Next Generation of Conservation*.



PLANTS & ANIMALS

Quail and grassland bird habitat

In FY09 we completed about 103,000 acres of quail and grassland bird habitat work on conservation areas throughout the state. On conservation areas designated as Quail Emphasis Areas, more than 19,000 acres of quail and grassland bird habitat was completed. In addition, we have established 34 private-land quail focus areas throughout the state in places where landowners are managing their property for quail.

Natural communities

At the end of FY09 there were 181 natural areas totaling 70,677 acres. These areas represent the best examples of healthy natural communities within the state.

Endangered species

Three species were removed from the state endangered-species list because they were no longer threatened with extinction: bald eagle, barn owl and Western fox snake.

CLEAN WATER

Taum Sauk Dam research and monitoring

MDC evaluated aquatic habitat availability and monitored water quality in the East Fork Black River. This work was



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conducted in preparation for the Federal Energy Regulatory Commission's relicensing of the Taum Sauk Pumped Storage Project. The information will be used to understand and minimize the potential effects of Taum Sauk Project operation on the aquatic life of the East Fork Black River.

Stream Team celebrates 20 years

The Missouri Stream Team Program celebrated a 20th birthday and signed on its 4,000th team. Last year volunteers spent 137,488 hours working on their adopted streams.

Stream Stewardship Trust Fund

The Stream Stewardship Trust Fund is available to restore, enhance and/or protect stream systems and associated riparian habitats. The Missouri Conservation Heritage Foundation administers the program and funds, and MDC applies for grants. In FY09, 15 projects costing \$1.1 million were approved to protect 83.2 acres of stream channel and 615.8 acres of riparian corridor.



COMMUNITY CONSERVATION

Volunteer fire departments

MDC, in cooperation with the U.S. Forest Service, provided \$381,886 in grants to 178 volunteer fire departments. These grants help fund protective clothing, equipment and training. We also provided equipment to fire departments through two federal programs. With the Federal Excess Property Program, we obtained equipment valued at \$316,695. The new Fire Fighter Program obtained equipment valued at \$11,591,225.

Community Assistance

Through the Community Assistance Program and the closely related Corporate and Agency Partnership Program, MDC enters into agreements (usually 25-year) with cities, counties, state and federal agencies, businesses, foundations, schools and colleges. Under these agreements, MDC provides fisheries management at existing lakes and ponds, and cooperatively develops and maintains facilities for anglers and boaters at lake and stream areas. MDC has agreements with 116 partners for the cooperative management of 166 public lakes, 42 stream access areas, four lake access areas and six aquatic resource education ponds.

Venison donation

MDC coordinates the Share the Harvest program with the Conservation Federation of Missouri, local charitable organizations and local meat processors. During FY09, 4,465 hunters donated 249,156 pounds of venison.



HEALTHY FORESTS

Wildfire prevention

By way of endorsing a third-party U.S. Forest Service Hazard Mitigation grant to the Southwest Resource Conservation and Development Program, MDC supported a two-year effort beginning in FY08 to promote wildfire prevention in southwestern Missouri. This area was hit severely by the January 2007 ice storm, and the resulting heavy, woody debris in the forests makes wildfire suppression more difficult and hazardous to firefighters.

Forest health

The Forest Health Program is a cooperative effort among MDC and other state and federal agencies to conserve Missouri's forest resources by monitoring and evaluating forest health and providing forest-health management information to Missouri residents. Monitoring activities document and evaluate ongoing threats to forest health.

Timber harvesters

The Missouri Forest Products Association and MDC jointly sponsor logger training courses aimed at educating loggers about forest-management principles, introducing new techniques and concepts, and enhancing the safety of timber-harvesting operations. Thus far, 308 loggers have been through the program in Missouri.



OUTDOOR RECREATION

New hunters and anglers

We provided more than 2,400 programs with instruction in hunting, fishing, trapping and shooting sports. More than 126,000 people took part in these programs. We offered about 900 Hunter Education classes, certified 24,733 students and began an online Hunter Education training module. More than 130,000 visitors attended programs or practiced firearms and archery shooting at our five staffed ranges.

Missouri National Archery in the Schools Program

MDC—in collaboration with the Conservation Federation of Missouri—is the Missouri coordinating agency for the NASP. In FY09, 13,776 students from 82 schools experienced this international-style target-archery program taught in fourth- to 12th-grade physical education classes.

Urban fishing

In FY09, more than 60 urban lakes were managed for fishing. More than 158,000 keeper-sized fish were stocked in these

lakes; this included almost 97,000 channel catfish, more than 46,000 rainbow trout and 15,000 brown trout.



CONSERVATION EDUCATION

Discover Nature—Schools

More than 30,600 Missouri children were connected with nature through Discover Nature—Schools instructional units and grants. The middle school aquatic unit was adopted by 72 schools. The elementary unit, Nature Unleashed, was piloted by 21 schools. Grants supporting the two school units totaled \$114,000. Conservation field trip grants helped 20,273 students get outdoors. Outdoor classroom grants were awarded to 34 schools. Conservation grants to schools exceeded \$238,500.

Citizens enjoying nature

About 900,000 visitors explored the trails, programs and exhibits at our conservation nature centers and education centers throughout the state.

Grow Native!

Grow Native! is a program of the Missouri departments of Conservation and Agriculture, with help from the Missouri Botanical Garden's Shaw Nature Reserve. A focus in FY09 has been the education of civil engineers and contractors in St. Louis, where an emphasis is being placed on the ability of native plants to slow stormwater runoff and improve water quality. Also, a survey shows sales of native plants in Missouri increased 70 percent between 2003 and 2008.



LANDOWNER ASSISTANCE

Financial assistance

Nearly \$1 million in cost-share funds went to 523 private landowners to implement beneficial habitat management practices for fish, forest and wildlife resources. The funds helped install 921 individual conservation practices, impacting nearly 12,000 acres.

Technical assistance

MDC provided timely and responsive service through 63,986 rural and urban landowner contacts, including more than 16,171 on-site visits. We also answered 4,488 requests for wildlife nuisance assistance, including 1,038 on-site visits.

Partnerships

We developed about 35 partnerships with federal, state and non-governmental organizations. These relationships helped

MDC enhance technical, financial and equipment support to landowners interested in improving fish, forest and wildlife. For example, MDC assisted Missouri USDA with developing and applying \$150 million in Farm Bill conservation programs, including more than \$2 million in staff time.



PLACES TO GO

Forest and woodland improvements

We conducted forest and woodland habitat improvement on 21,078 acres of state land. This included thinning young trees on 3,052 acres, post-sale work on 1,048 acres, prescribed fires on 10,922 acres and harvest of 6,056 acres.

Land management

MDC conducted habitat management on approximately 187,000 acres of public land, with an additional 120 miles of edge habitat. We spent nearly 460,000 hours on area and equipment maintenance.

Adopt-A-Trail

Volunteers monitored, maintained and helped to enhance trails. In FY09, 44 volunteers or groups of volunteers reported spending 1,130 hours on conservation area trails.

ACCOUNTING FOR DEPARTMENT OPERATIONS

Listened to Missourians

We conduct a variety of scientifically sound, unbiased and representative efforts each year to understand public opinions, expectations and recreation participation. This information guides decisions about regulations and fish, forest and wildlife management. In FY09 there were 62 activities that involved 87,226 people. These included public surveys, focus groups, public meetings and ombudsman contacts.

Internal audit reports

Internal auditors issued six internal audits to ensure that public funds were expended in a responsible manner. There were no major findings.

Strategic plan accomplishments

FY09 was the third year of tracking accomplishments of The Next Generation of Conservation, MDC's strategic plan. The plan identifies nine goals, 28 results we want to achieve and 61 specific actions. For each of the action items, performance measures and staff responsible for reporting are identified.

What the Money Bought—Fiscal Year 2009

County Assistance Payments—\$1,453,573 Included payments to Missouri’s counties for levee and drainage district taxes, forest cropland payments, payments in lieu of real estate taxes and county aid road trust payments. Since 1980, more than \$13.79 million has been paid to Missouri counties in lieu of real estate taxes.

Capital Improvements—\$21,777,980 Work included fish hatchery improvements, river access development, wetland renovations, shooting range construction, nature center improvements, land acquisition transactions and renovation and repair of facilities statewide.

Fisheries—\$12,563,006 Maintained and improved sport fish populations, aquatic biodiversity and aquatic habitats. Managed 902 impoundments and stream areas for public fishing, and provided stream and lake management assistance to almost 8,600 private landowners. Stocked approximately 5 million fish in public lakes and streams.

Forestry—\$16,051,758 Fostered a healthy and growing forest resource. Examples include distributing about 4.5 million seedlings for planting to nearly 12,000 landowners, provided forestry assistance on over 100,000 acres and facilitated EQIP projects totaling over \$725,000 on private land, managing 438,700 acres of public forest land, monitoring insect and disease threats and facilitating development of the state’s forest industry.

Wildlife—\$16,338,979 Worked toward ensuring wildlife populations are in harmony with habitat and human enjoyment. Managed more than 525,000 acres of public land and implemented programs to maintain and restore natural communities and wildlife diversity across Missouri’s landscape.

Outreach and Education—\$15,186,325 Sustained Missourians’ connection to the outdoors through more than 1 million visitors to conservation nature centers and shooting-range/outdoor-education centers, nearly 500,000 subscribers to the *Missouri Conservationist* magazine, web-based information, grants to schools exceeding \$238,500, conservation curriculums for schools, outdoor skills programs and hunter education.

Private Land Services—\$7,630,877 Helped private landowners to achieve long-term natural resource conservation objectives. Provided service through 63,986 rural and urban landowner contacts; affected 327,181 acres through technical assistance to landowners; provided habitat management workshops to 34,959 attendees; assisted USDA with enrolling 14,000 acres in the Conservation Reserve Program SAFE practice; and assisted 4,488 private landowners in controlling nuisance wildlife.

Protection—\$13,505,810 Paid for law enforcement in every county as well as resource management, information, education and public service contact activities conducted by conservation agents who directly contacted more than 675,000 people. Coordinated the Share the Harvest Program where close to 5,000 deer hunters donated 249,156 pounds of venison to less fortunate Missourians. Conservation agents, along with 1,788 volunteer instructors, conducted 937 hunter education classes, certifying nearly 25,000 students.

Resource Science—\$11,392,711 Provided the science-based information needed to effectively manage Missouri’s natural resources. Resource Science monitors the status of Missouri’s fish, forests, plants and wildlife, recommends conservation actions, evaluates these actions and reports the results. In addition to surveys of fish and wildlife, tens of thousands of Missourians were contacted to determine their outdoor activities and opinions about conservation programs.

Regional Public Contact Offices—\$3,583,989 Provided regional public contact offices.

Administrative Services and Human Resources—\$30,661,827 Paid for human resources, federal reimbursement administration, hunting and fishing permit point-of-sale system, fiscal services, distribution center, print shop, fleet management, vehicle and equipment maintenance centers and information management and technology. Also includes other agency appropriations, Department-wide equipment and other essential services.

Design and Development—\$12,134,219 Provided engineering, architectural, surveying and construction services for conservation programs and maintenance of conservation areas and facilities.

Administration—\$3,349,974 Paid for audits, legal counsel and the coordination of strategic planning, environmental policy development, cultural resource reviews, public involvement and river basin management.

RECEIPTS

Conservation Sales Tax	\$96,571,218
Permit Sales	\$32,056,614
Federal Reimbursements	\$24,165,283
Sales and Rentals.....	\$8,601,439
Other Sources	\$6,530,587
Interest	\$1,049,928
Total Receipts	\$168,975,069

DISBURSEMENTS

County Assistance Payments	0.88%
Capital Improvements.....	13.15%
Fisheries	7.58%
Forestry	9.69%
Wildlife	9.87%
Outreach and Education	9.17%
Private Land Services.....	4.61%
Protection	8.15%
Resource Science	6.88%
Regional Public Contact Offices	2.16%
Administrative Services & Human Resources	18.51%
Design and Development	7.33%
Administration	2.02%

MISSOURI STATE BUDGET

Health & Social Services	37.8%
Education	27.3%
Government Services.....	21.2%
Transportation	10.2%
Natural & Economic Resources.....	2.9%
Conservation.....	0.6%
<i>MDC represents less than 1% of the total state budget</i>	
Total State Budget	\$24,014,896,988

Missouri State Constitutional Language

Section 40(a). Conservation commission, members, qualifications, terms, how appointed-duties of commission-expenses of members.—The control, management, restoration, conservation and regulation of the bird, fish, game, forestry and all wildlife resources of the state, including hatcheries, sanctuaries, refuges, reservations and all other property owned, acquired or used for such purposes and the acquisition and establishment thereof, and the administration of all laws pertaining thereto, shall be vested in a conservation commission consisting of four members appointed by the governor, by and with the advice of and consent of the senate, not more than two of whom shall be of the same political party. The members shall have knowledge of and interest in wildlife conservation. The members shall hold office for terms of six years beginning on the first day of July of consecutive odd years. Two of the terms shall be concurrent; one shall begin two years before and one two years after the concurrent terms. If the governor fails to fill a vacancy within thirty days, the remaining members shall fill the vacancy for the unexpired term. The members shall receive no salary or other compensation for their services as members, but shall receive their necessary traveling and other expenses incurred while actually engaged in the discharge of their official duties.

Source: Const. of 1875, Art. XIV, Sec. 16 (as adopted November 3, 1936). (Amended August 8, 1972)

Section 40(b). Incumbent members.—The members of the present conservation commission shall serve out the terms for which they were appointed, with all their powers and duties.

Section 41. Acquisition of property-eminent domain.—The commission may acquire by purchase, gift, eminent domain, or otherwise, all property necessary, useful or convenient for its purposes, and shall exercise the right of eminent domain as provided by law for the highway commission.

Source: Const. of 1875, Art. XIV, Sec. 16.

Section 42. Director of conservation and personnel of commission.—The commission shall appoint a director of conservation who, with its approval, shall appoint the assistants and other employees deemed necessary by the commission. The commission shall fix the qualifications and salaries of the director and all appointees and employees, and none of its members shall be an appointee or employee.

Source: Const. of 1875, Art. XIV, Sec. 16.

Section 43(a). Sales tax, use for conservation purposes.—For the purpose of providing additional moneys to be expended and used by the conservation commission, department of conservation, for the control, management, restoration, conservation and regulation of the bird, fish, game, forestry and wildlife resources of the state, including the purchase or other acquisition of property for said purposes, and for the administration of the laws pertaining thereto, an additional sales tax of one-eighth of one percent is hereby levied and imposed upon all sellers for the privilege of selling tangible personal property or rendering taxable services at retail in this state upon the sales and services which now are or hereafter are listed and set forth in, and, except as to the amount of tax, subject to the provisions of and to be collected as provided in the “Sales Tax Law” and subject to the rules and regulations promulgated in connection therewith; and an additional use tax of one-eighth of one percent is levied and imposed for the privilege of storing, using or consuming within this state any article of tangible personal property as set forth and provided in the “Compensating Use Tax Law” and, except as to the amount of the tax, subject to the provisions of and to be collected as provided in the “Compensating Use Tax Law” and subject to the rules and regulations promulgated in connection therewith.

(Adopted November 2, 1976)

Section 43(b). Use of revenue and funds of conservation commission.—The moneys arising from the additional sales and use taxes provided for in section 43(a) hereof and all fees, moneys or funds arising from the operation and transactions of the conservation commission, department of conservation, and from the application and the administration of the laws and regulations pertaining to the bird, fish, game, forestry and wildlife resources of the state and from the sale of property used for said purposes, shall be expended and used by the conservation commission, department of conservation, for the control, management, restoration, conservation and regulation of bird, fish, game, forestry and wildlife resources of the state, including the purchase or other acquisition of property for said purposes,

and for the administration of the laws pertaining thereto, and for no other purpose. The moneys and funds of the conservation commission arising from the additional sales and use taxes provided for in S 43(a) hereof shall also be used by the conservation commission, department of conservation, to make payments to counties for the unimproved value of land for distribution to the appropriate political subdivisions as payment in lieu of real property taxes for privately owned land acquired by the commission after July 1, 1977, and for land classified as forest cropland in the forest cropland program administered by the department of conservation in such amounts as may be determined by the conservation commission, but in no event shall amount determined be less than the property tax being paid at the time of purchase of acquired lands.

Source: Const. of 1875, Art. XIV, Sec. 16. (Amended November 2, 1976) (Amended November 4, 1980)

Section 43(c). Effective date-self-enforceability.—The effective date of this amendment shall be July 1, 1977. All laws inconsistent with this amendment shall no longer remain in full force and effect after July 1, 1977. All of the provisions of sections 43(a)–(c) shall be self-enforcing except that the general assembly shall adjust brackets for the collection of the sales and use taxes.

(Adopted November 2, 1976)

Section 44. Self-enforceability-enabling clause-repealing clause.—Sections 40–43, inclusive, of this article shall be self-enforcing, and laws not inconsistent therewith may be enacted in aid thereof. All existing laws inconsistent with this article shall no longer remain in force or effect.

Source: Const. of 1875, Art. XIV, Sec. 16

Section 45. Rules and regulations-filing-review.—The rules and regulations of the commission not relating to its organization and internal management shall become effective not less than ten days after being filed with the secretary of state as provided in section 16 of this article, and such final rules and regulations affecting private rights as are judicial or quasi-judicial in nature shall be subject to the judicial review provided in section 22 of article V.

Section 46. Distribution of rules and regulations.—The commission shall supply to all persons on request, printed copies of its rules and regulations not relating to organization or internal management.

The Conservation Commission and Director

In 1936, the people of Missouri, through the initiative petition process, placed on the ballot and passed language that would create a non-political Conservation Commission with broad authority. The Conservation Commission is vested by the state constitution with responsibility for proper management of the state's fish, forest, and wildlife resources. The four Conservation Commissioners are appointed by the Governor. Their term of office is six years. The Commission is also responsible for hiring the Director.



Mr. Don R. Johnson
Festus
Term: 7/18/2007 to 6/30/2013
Party Affiliation:
Democrat



Mr. William F. McGeehan
Marshfield
Term: 7/11/2005 to 6/30/2011
Party Affiliation:
Republican



Mr. Lowell Mohler
Jefferson City
Term: 7/09/2003 to 6/30/2009
Party Affiliation:
Republican



Mrs. Becky L. Plattner
Grand Pass
Term: 8/7/2007 to 6/30/2013
Party Affiliation:
Democrat

Director



Mr. John Hoskins

Our Mission

To protect and manage the fish, forest, and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy, and learn about fish, forest, and wildlife resources.

Conservation at a Glance

- ▲ We Listen to Missourians
- ▲ What Missourians Say About Conservation
- ▲ The Economics of Conservation in Missouri
- ▲ Wildlife Recreation
- ▲ Hunting and Fishing
- ▲ Forestry and Wood Products



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We Listen to Missourians

The Missouri Department of Conservation believes that all Missouri citizens are important and we want to listen and act to earn their trust. Our job is to listen, understand, and personally deliver programs and services in a manner that benefits all Missourians and the fish, forest, and wildlife resources in Missouri.



To accomplish our mission we must listen to Missourians.

We do this in a variety of ways.

- The Conservation Commission meets regularly and anyone may contact the Conservation Commission with comments or request to appear at a Commission meeting.
- The Director of the Conservation Department may be personally contacted at Department headquarters in Jefferson City, by telephone, or electronic mail.
- The Department Ombudsman works with citizens to resolve conflicts and answers a wide variety of questions by mail, telephone, and electronic mail.
- The Department conducts a wide variety of statistically accountable mail surveys, telephone surveys, and focus groups to determine the opinions and attitudes of Missourians about conservation and the Department of Conservation. The Department has conducted attitude, opinion, satisfaction, and participation surveys for over 30 years.
- The Department has eight regional service centers with staff available to assist Missourians with their conservation requests and needs.
- The Department's monthly magazine, free to Missourians who request it, includes a letter-to-the-editor section and an "Ask the Ombudsman" column.
- The Department maintains an extensive internet web page with conservation information, how to contact the Department, and an online comment form.
- The Department conducts frequent public forums to obtain interactive feedback from all Missourians at locations throughout the state.
- Department regulations are formed and discussed in a public setting that invites citizen participation.



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What Missourians Say About Conservation

The majority of Missourians feel the Department of Conservation is doing an excellent or good job of providing services to themselves (64%), their families (63%), the community (61%), and the state (67%).

Most Missourians say they are either very familiar (21%) or somewhat familiar (65%) with the Missouri Department of Conservation.

Information from the Missouri Department of Conservation and the 2003 Conservation Opinion Survey, University of Missouri.



- Most Missourians report they are interested in Missouri's fish, forests, and wildlife (93%).
- Most Missourians (73%) agree that land should be acquired for fish, forest, and wildlife conservation.
- Most Missourians agree that "It is important for outdoor places to be protected even if you don't plan to visit the area" (91%).
- Most Missourians (79%) agree that the Department of Conservation should make an effort to restore animals that once lived or are currently very rare in the state.
- Most Missourians (82%) agree that the Department of Conservation should help private landowners who want to restore native communities of plants and animals.
- Over three-quarters agree that the Department "should assist communities that want to include trees and green spaces in housing, business, and shopping developments" (79%).
- Almost all Missourians (88%) approve of hunting for food.
- About one-half of Missourians (51%) approve of cutting down trees to make lumber, furniture, or other wood products.
- The majority of Missourians (55%) agree that trapping is OK as long as it is regulated.
- Missourians are outdoor-oriented, with households having one or more participants that enjoy watching television or outdoor programs (82%), read about nature and wildlife (76%), feed birds and wildlife at home (64%), garden (66%), use Conservation Areas (62%), fish (58%), go boating (40%), hunt (34%), target shoot (37%), or volunteer in environmental or conservation groups (15%).
- Time is mentioned as the biggest obstacle to the enjoyment of outdoor activities by Missourians.
- Missourians are a uniquely outdoor-oriented citizenry, with a majority preferring outdoor recreational activities (56%) over reading or watching TV (34%), or structured sports (9%).



The Economics of Conservation in Missouri

The amount of state sales tax revenue generated from fish, forest, and wildlife recreation spending is about the same amount of sales tax revenue received by the Department of Conservation from the one-eighth of one percent Conservation Sales Tax—

Conservation pays its way in Missouri.

Information from the Missouri Department of Conservation, the Missouri Forest Products Association, and the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

- In Missouri, the total economic impact of fish and wildlife recreation and the forest products industry is \$11.4 billion dollars annually.
- Since 1980, the Department has paid more than \$13 million dollars to Missouri counties in lieu of taxes. In fiscal year 2009, over \$1.45 million was paid to Missouri counties for forest cropland payments, levee and drainage district payments, in-lieu-of-property-tax payments, and county aid road trust payments.
- The forestry and wood products industry in Missouri is an over \$5.7 billion dollar activity and supports 31,700 jobs.
- Missourians and non-residents spend over \$3.3 billion dollars annually related to fish, forest, and wildlife recreation. These expenditures generate \$5.7 billion dollars annually of economic impacts in Missouri.
- The annual expenditures related to fish, forest, and wildlife recreation support 64,186 jobs in Missouri.
- Fish, forest, and wildlife recreation spending generates \$382 million dollars annually of state and local tax revenue.
- In Missouri, 2.9 million residents and nonresidents, aged 16 years and older, participated in fishing, hunting, or wildlife-associated recreation.
- Resident anglers spend 15.3 million days afield, resident hunters 9.2 million, and resident wildlife-watchers 13.4 million days in away-from-home activities, in Missouri. Nonresident anglers add 1.3 million days and nonresident hunters 544,000 days.
- Nonresident expenditures for fishing and hunting in Missouri are well over \$211 million each year. Each nonresident angler and hunter spends an average of \$617 dollars each year in Missouri.
- Deer hunters in Missouri, age 16 years and older, spend \$690 million each year.
- Deer hunting in Missouri generates \$1.1 billion dollars of business activity annually. This results in \$83 million in state and local tax revenue each year.
- Deer hunting expenditures annually support over 11,824 jobs in Missouri.

MISSOURI

hunting and fishing

Hunters	608,000
Anglers	1.1 million
Total Expenditures	\$2.4 billion
Total Jobs Supported	45,939
Earnings from Expenditures	\$1.2 billion
State and Local Tax Revenue	\$269 million
Total Business-Generated Revenue	\$4.2 billion



STATE TAX REVENUE INFORMATION

Hunters and anglers in Missouri generate \$269 million annually in state and local taxes.

JOBS

Hunters and anglers support 45,939 jobs each year.

TAKE A CLOSER LOOK

- More Missourians hunt or fish than the number who attend St. Louis Rams or Kansas City Chiefs games.
- One of every four Missouri residents hunts or fishes.
- Annual spending by hunters and anglers is more than the cash receipts for cattle production, the state's most valuable agricultural commodity.
- The amount of sales tax revenue generated by fish, forest, and wildlife recreation is about the same amount of sales tax received by the Department of Conservation from the one-eighth cent sales tax—in other words, conservation pays its way in Missouri.

CONSERVATION PAYS ITS WAY IN MISSOURI



Information from the Missouri Department of Conservation and the U.S. Fish and Wildlife Service 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

MISSOURI

wildlife recreation

Wildlife-Watchers	2.2 million
Total Expenditures	\$869 million
Total Jobs Supported	18,247
Earnings from Expenditures	\$493 million
State and Local Tax Revenue	\$113 million
Total Business-Generated Revenue	\$1.5 billion



STATE TAX REVENUE INFORMATION

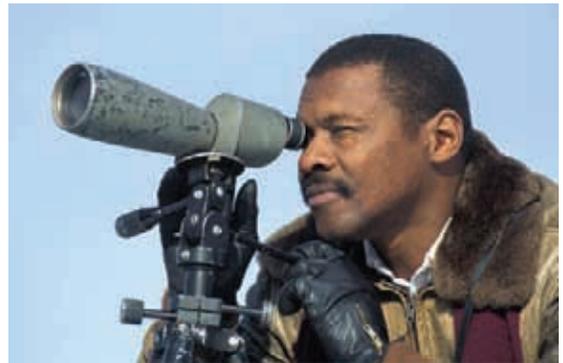
Wildlife-watchers in Missouri generate \$113 million annually in state and local taxes.

JOBS

Wildlife-watching activities in Missouri support 18,247 jobs each year.

TAKE A CLOSER LOOK

- In Missouri, adults involved in wildlife watching would fill Arrowhead Stadium in Kansas City more than 28 times.
- Missourians are outdoor-oriented—each year they spend 13.4 million days in wildlife watching activities away from their home. Two million enjoy observing, feeding, and photographing wildlife near their homes.
- The amount of sales tax revenue generated by fish, forest, and wildlife recreation is about the same amount of sales tax received by the Department of Conservation from the one-eighth cent sales tax—in other words, conservation pays its way in Missouri.



CONSERVATION PAYS ITS WAY IN MISSOURI



Information from the Missouri Department of Conservation and the U.S. Fish and Wildlife Service 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

MISSOURI

forestry and wood products

Total Forested Acres	14 million
Privately Owned Acres	85 percent
Publicly Owned Acres	15 percent
Wood-Using Industry Dollars	\$5.7 billion
Total Jobs Supported	31,700
Wood-Using Industry Labor Income	\$1.2 billion



STATE TAX REVENUE INFORMATION

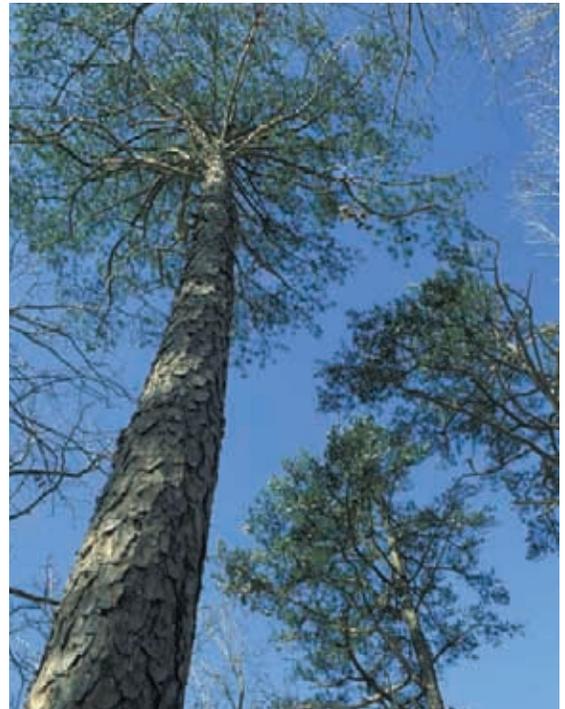
Forestry and the wood-using industries in Missouri generate \$57 million each year in state sales tax.

JOBS

Wood industry firms and activities in Missouri support more than 31,700 jobs each year.

TAKE A CLOSER LOOK

- Each year about 6 million tree seedlings are planted.
- More than 1 million acres of forests have been added to Missouri's landscape in the last 30 years.
- Forests in Missouri are increasing faster than they are being harvested.
- Most of the forests in Missouri are privately owned.
- Forests are important to Missourians who enjoy outdoor recreation such as camping, sightseeing, watching birds, canoeing, photographing nature, hunting or fishing. Many Department of Conservation areas have campsites or are open for primitive camping.
- Forests in Missouri are essential for healthy streams, clean water, wildlife habitat and environmental stability.



CONSERVATION PAYS ITS WAY IN MISSOURI



Information from the Missouri Department of Conservation and the Missouri Forest Products Association.



Our Pledge to Serve Missourians

The Missouri Department of Conservation's mission, vision and goals communicate our never-ending pledge to serve Missourians and to meet the requirements of the Missouri Constitution (Article IV, Section 40(a) through 46).

Our Mission

To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy and learn about fish, forest and wildlife resources.

Our Vision

- ▲ To have healthy, sustainable plant and animal communities throughout the state of Missouri for future generations to use and enjoy, and to have fish, forest and wildlife resources in appreciably better condition tomorrow than they are today.
- ▲ To have all Missourians understand the relationship and value of plant and animal communities to our social and economic well-being.
- ▲ To have citizens and government agencies work together to protect, sustain, enhance, restore or create sustainable plant and animal communities of local, state and national significance.

Our Goals

A new strategic plan, *The Next Generation of Conservation*, leads the Conservation Department's staff and resources into the future with nine goals. Like the strategic plans that preceded it, *The Next Generation* outlines how the Conservation Department will fulfill its constitutional mandate to serve Missourians by protecting the state's fish, forest and wildlife resources.

The new strategic plan gives our generation of conservationists a path to success. Through partnerships, sound scientific data, respect for public opinion and a dedication to public service, we can fulfill our obligation to protect and manage our natural resources for the benefit of future generations.

The Next Generation Goals

- ▲ Conserving Plants, Animals and Their Habitats
- ▲ Protecting Clean and Healthy Waters
- ▲ Promoting Healthy Trees and Forests
- ▲ Preserving Missouri's Outdoor Recreation Heritage
- ▲ Teaching Missourians About Fish, Forest and Wildlife Resources
- ▲ Supporting Conservation in Our Communities
- ▲ Helping Private Landowners Advance Conservation
- ▲ Serving Nature and You on Conservation Areas
- ▲ Accounting for Department Operations

Bringing the Goals to Life



Conserving Plants, Animals and Their Habitats

Enforced resource protection laws

MDC enforces wildlife laws to maintain compliance with the *Wildlife Code*, as well as other state laws for the safe public use of MDC-owned lands. Conservation agents contacted 182,636 hunters and anglers in FY09 to ensure compliance and provide regulation information. During these contacts, agents noted 26,244 resource violations, issued 3,733 written warnings and made 7,896 arrests. This resulted in a 94 percent conviction rate, which indicates the high-quality work by agents in the area of resource law enforcement.

Quail and grassland-bird habitat managed, monitored and evaluated

MDC continues to find solutions to declining populations of northern bobwhite, greater prairie chickens and other grassland birds. The status of quail and grassland-bird populations and efforts to reduce their decline remain top MDC priorities. In FY09 MDC completed approximately 103,000 acres of quail- and grassland bird-friendly habitat work on conservation areas throughout the state. Biologists are using prescribed burning, light disking, food plots, natural-community restoration, woody-cover enhancement and invasive-plant control to improve habitat conditions on public lands. On conservation areas designated as Quail Emphasis Areas, more than 19,000 acres of quail and grassland bird-friendly habitat was completed, and biologists are closely monitoring quail and songbird responses to our management efforts.

We continue to assist private landowners by providing technical and financial assistance on a variety of natural-resource projects, including quail- and grassland bird-habitat management. In addition, we have established 34 private-land quail focus areas throughout the state in places where landowners are actively managing their property for quail. Two Missouri counties are also the first in the nation to be recognized as having achieved habitat goals identified in the Northern Bobwhite Conservation Initiative. Landowners and con-

servation partners have been working together in Scott and Cass County to restore thousands of acres of quail- and grassland bird-friendly habitat by using cost-share funds through United States Department of Agriculture (USDA) conservation programs, MDC cost share and non-governmental organization (NGO) grants.

Greater prairie chicken recovery efforts continue

MDC and its Missouri Grasslands Coalition (GC) partners continued to implement the prairie chicken recovery plan. Donated funds from the Wade and June Shelton Memorial Trust were used to acquire 320 acres of native prairie in Dade County, Missouri. This important tract already provides nesting and brood-rearing habitat to prairie chickens within the Stony Point/Golden Grasslands Conservation Opportunity Area (COA). Existing long-term agreements, including ongoing USDA program contracts, protected more than 3,500 acres. GC private- and public-grassland management accomplishments for FY09 include:

- 1,319 acres of prairie reconstruction and diverse native-grass plantings established.
- scattered trees removed from 1,188 acres.
- 14 miles of hedgerows or other tree lines removed.
- invasive plants controlled on 13,910 acres; total includes acres that were spot-treated for exotic species such as sericea lespedeza and cutleaf teasel, as well as native invasive species such as sumac.
- prescribed fire implemented on 6,031 acres.
- 3,161 acres patch/burn grazed.
- 842 acres high-clipped to improve nesting habitat.
- 90 acres of private pasture idled in return for incentive payments, and 337 acres were enrolled in Conservation Reserve Program/State Acres for Wildlife Enhancement (CRP/SAFE) for prairie chickens.

We also count the following among our accomplishments:

- During the course of the MDC Prairie Chicken Recovery Program (FY07–FY09), every MDC dollar invested has leveraged an additional \$1.84 from federal, state or private-foundation grants or investments by other GC partners.

- Staff and volunteers translocated 27 prairie chicken hens and 24 chicks from north-central Kansas, and also translocated 50 more male prairie chickens to The Nature Conservancy's (TNC) Wah'Kon-Tah Prairie.
- Many media contacts featuring prairie chicken recovery and associated benefits to quail and other grassland birds were made during FY09. These included radio features on multiple National Public Radio affiliates and the MissouriNet stations, newspaper articles that ran in St. Louis, Kansas City, Joplin and Salina, Kan. Work with MU agriculture journalists to publicize CRP/SAFE produced stories that were picked up by the Associated Press and run in newspapers throughout the Midwest, as well as in the Missouri Ruralist and High Plains Journal.
- Work with MU agricultural economists included updating Profitmeter® economic models for 2009 and initiating work with MU agriculture marketing faculty to submit grant proposals to fund the Missouri Nature Friendly Beef Market Feasibility Study.

Building both fish habitat and angler relationships

When the Commission approved the purchase of 437 acres along 1.2 miles of Mill Creek in Phelps County in 2006, MDC managers knew there were opportunities to improve fish habitat in this Blue Ribbon Trout Area. What local staff did not see coming was the tremendous amount of labor support from private fishing groups. More than 50 anglers from five different organizations volunteered their time to help MDC with instream fish habitat improvement in 2008; that volunteer enthusiasm continued in 2009.

In addition to more instream habitat improvement structures added to Mill Creek this past year, a massive tree planting project also took place. On a soggy Sunday morning in April, 18 anglers from Ozark Flyfishers, Roubidoux Flyfishers, Mid-Missouri Trout Unlimited (TU) and Heart of America Flyfishers congregated along this spring-fed trout stream. During a rain-filled day, they hand planted 4,000 trees along the banks and fields bordering Mill Creek. These kinds of projects involving private volunteers working on a resource they care about go a long way—not only in good resource stewardship—but in building relationships with our stakeholders.

Wildlife Damage Management Program continued active role

The Wildlife Damage Management Program provides technical advice to landowners experiencing wildlife conflicts. This is done through an extension-type program with phone calls, mailings, workshops and on-site visits. Training is also provided to MDC staff. This program directly serves more than 4,000 Missouri landowners annually.

The Wildlife Damage Management Program maintains relationships and partners with other agencies and organizations concerned with wildlife-damage issues. These include the Missouri Trappers Association, USDA/Animal and Plant Health Inspection Service-Wildlife Services, Missouri Department of Agriculture, Missouri Department of Natural Resources and the USDA Forest Service.

Internally the program continues to assist the Outreach and Education Division with the Cable Restraint Program, the Resource Science Division with otter and black bear research, and other special projects. It also represents the MDC on committees such as the Nuisance Urban Goose Implementation Team, River Otter Task Force, Feral Hog Task Force and Mountain Lion Response Team.

Evaluating and refining feral hog-control techniques in Missouri

Feral hogs are known to occur in approximately 40 counties in Missouri, with established populations in 19 counties. Feral hogs directly and indirectly damage natural communities, destroy agricultural crops, compete with native wildlife and serve as reservoirs of disease. Virtually no ecological data on feral hogs has been collected in the Midwest, so the goal of this project is to provide the movement, survival and reproduction data necessary to implement more efficient feral hog control measures in Missouri.

We are using GPS technology to acquire data on movement and habitat use of adult female hogs before and after control measures. We will gather data on the most efficient control methods, and also collect information on survival and reproduction from trapped hogs. Information will be used to create a management model that can be adapted by area managers to make decisions about how to address feral hog eradication on their property. The specific objectives of the project are to:

- describe how movement patterns of adult female feral hogs change in response to five specific control measures on public lands in Missouri by comparing utilization distributions before and after each type of control measure.
- measure control efficiency, in man-hours, of five control methods: trapping, snaring, Judas pigs, hunting with dogs and aerial gunning.
- measure survival and fecundity of female feral hogs captured on public lands by MDC staff.
- describe resource selection and movements by adult female feral hogs in Missouri.

The project will involve personnel from Resource Science, Private Land Services, Forestry and Wildlife divisions. Biologists will submit data on trap efficiency, survival and fecundity to Resource Science for analysis. Once movement, survival, reproduction and trap efficiency are measured, we can effectively forecast how fast hog populations are growing and what measures will be needed to stabilize, reduce or eliminate regional and statewide hog populations, assuming that illegal releases can be stopped. Information from this project will be used to more efficiently and effectively eradicate feral hog populations in Missouri. Managers will be able to use the information to predict where hogs are located after initial control efforts and forecast how much effort is necessary to control or eradicate populations. More effective eradication efforts also will reduce or eliminate the damaging effects of feral hogs on natural communities and agricultural land.

We continue to work with partners such as the Missouri Department of Natural Resources, U.S. Army Corps of Engineers, U.S. Forest Service and U.S. Department of Agriculture—Animal and Plant Health Inspection Service.

Governor’s Feral Hog Task Force—In the fall of 2007 Gov. Blunt created a special task force to address the concerns associated with feral hogs. The task force, co-chaired by MDC and the Missouri Department of Agriculture, was composed of eight additional members, including other state, federal and private organizations. The task force completed a report in 2008 which outlined a response to the feral hog population in Missouri. This task force continues to provide oversight in implementing recommendations of the report. For example, a public-awareness campaign was launched, dedicated state and federal funds for feral hog eradication were sought, penalties were

increased for illegally releasing feral hogs, and a public- and private-land eradication program was developed.

Natural communities benefited from programs and management

At the end of FY 2009 there were 181 natural areas totaling 70,677 acres within the Natural Areas Program. These areas represent the best examples of healthy natural communities within the state. The increase of 4,725 acres over last year is due to the designation of two new natural areas.

New natural areas added are:

Regal Tallgrass Prairie Natural Area—3,646 acres at Prairie State Park in Barton County. This natural area incorporates four smaller, previously designated natural areas into one large landscape-scale prairie natural area. Owned and managed by the Missouri Department of Natural Resources, Regal Tallgrass Prairie Natural Area reflects more than 30 years of prairie restoration and management at Prairie State Park. Regal Tallgrass Prairie Natural Area features the largest contiguous piece of publicly owned remnant prairie in Missouri. The area contains large, high-quality examples of dry-mesic sandstone/shale prairie, hardpan prairie, prairie swale, wet-mesic bottomland prairie, and prairie headwater creek natural communities.

The natural area supports 19 species of conservation concern, including Mead’s milkweed, prairie mole cricket, regal fritillary and the greater prairie chicken. East Drywood Creek, which flows through the center of the area, has been recognized as an Outstanding State Resource Water by the Clean Water Commission.

Regal Tallgrass Prairie is a keystone tract within the Western Cherokee Grasslands Conservation Opportunity Area. Management of the prairies includes prescribed fire, tree removal, brush-hogging, exotic species control (especially of *Sericea lespedeza*) and patch-burn grazing using bison and elk. The full suite of grassland birds and 385 native plants have been documented from the area.

Spring Creek Ranch Natural Area—1,769 acres at Union Ridge Conservation Area in Sullivan and Adair counties. This landscape-scale natural area lies at the center of the profiled Union Ridge Conservation Opportunity Area and conserves high-quality, critically imperiled dry-mesic loess/

glacial till savannas and a prairie headwaters stream system. Years of active restoration by MDC's northeast region have restored 1,092 acres of dry-mesic loess/glacial till savanna, including 150 acres of very high-quality savanna natural community. More than 250 native-plant species have been documented from this site and the list continues to grow. Characteristic prairie and savanna species such as leadplant (*Amorpha canescens*), pale purple coneflower (*Echinacea pallida*), and purple prairie clover (*Dalea purpurea*) occur across hundreds of acres. This is one of the few remaining natural landscapes in north Missouri.

Approximately two miles of ecologically intact prairie headwater streams course through this natural area and support 21 native fish species, including the brassy minnow (*Hybognathus hankinsoni*), a species of conservation concern. Eighty percent of the watershed of this aquatic natural community is contained within MDC lands. Unusual for north Missouri, more than 90 percent of the watershed of this stream system is covered by natural communities. This stream system is one of the top three sites for consideration of re-introduction of the federally endangered Topeka shiner (*Notropis topeka*).

In addition to the streams, the brassy minnow and savannas, this natural area supports six other species of conservation concern and dry-mesic loess/glacial-till woodland natural communities, as well. The protection of a biologically significant stream system in north Missouri, along with the type, size and combination of natural communities, makes this one of the most significant natural landscapes in north Missouri. Continued focus on the restoration of this natural area will result in an outstanding example of the prairie/savanna/landscape that historically covered north Missouri.

Developed a management plan for black bears in Missouri

Black bears are becoming an increasingly significant wildlife resource in Missouri and represent an integral part of our native ecosystems. However, most historical records suggest that formerly abundant bear populations were considered extirpated by the 1950s. A few black bears likely dispersed into Missouri following reintroductions by Arkansas during the 1960s. During the past 50 years, reports of bear sightings and reproduction have become commonplace in south Missouri.

MDC has primary responsibility to ensure that a viable black bear population is developed and maintained. In addition, some bears can become a nuisance or public hazard, requiring various types of corrective measures to be taken by MDC personnel. In an effort to proactively address bear issues, resource personnel from the MDC, U.S. Forest Service, Missouri Department of Natural Resources and the National Park Service outlined goals and strategies to ensure that bears are managed in ways that minimize conflicts with humans, while encouraging population expansion into compatible habitats. This plan was prepared to provide guidelines for black bear management decisions with the long-term intent of managing bears as a game species.

The group identified the following key information needs for black bear management in Missouri: population and habitat assessment, increased understanding of movement patterns, dissemination of information about bear biology and nuisance problems, control of unacceptable mortality and continual review and update of management needs.

An important first step in this plan is to establish a baseline of bear abundance and inventory approaches for future monitoring efforts. Our plan to estimate statewide bear demographics is to use non-invasive sampling of hair to obtain genetic tags that are unique to the individual throughout its lifetime and can be used to reveal crucial characteristics about a population such as relative size, sex ratio, genetic diversity and, potentially, the age of individual animals.

Data collected from the study will be used to estimate bear numbers and sex ratios for the state. We will consider implementing a bear harvest season when our mark-recapture analysis suggests a population of greater than 500 bears.

Indiana bat study underway in northeast

The federally endangered Indiana bat is being studied at Deer Ridge, Fox Valley and Charlie Heath conservation areas (CAs) in northeast Missouri, where researchers are looking at bat abundance associated with various timber management practices. The study uses a variety of methods to monitor occupancy and determine home range, foraging and bat-roost locations. In 2001 and 2002 the largest summer aggregation of Indiana bats in Missouri was discovered at Deer Ridge CA.

Since then, small clear cuts, uneven-aged management with small group openings, and retention of snag trees were the dominant practices used to manage the timber resource and create additional habitat for Indiana bats. These same practices will be used at Charlie Heath and Fox Valley CAs in the future. Documenting bat use of the area prior to and after active timber-management practices are put in place will provide important information about the changes in bat use as a result of timber management.

This year telemetry work at Deer Ridge CA allowed researchers to locate one roost tree where 150 bats were recorded during an exit count. Fifteen roost trees were located at Charlie Heath CA and 49 bats counted on eight different trees. No Indiana bats were captured during trapping efforts at Fox Valley CA. Home range, flight corridors and foraging areas were determined for individual bats at Deer Ridge and Charlie Heath CAs. The study will continue through 2014, covering post-timber management at Deer Ridge CA and pre- and post-management years at Fox Valley and Charlie Heath CAs.

Perryville Karst/Grotto Sculpin Project completed

The Perryville Karst area contains the highest density of caves and sinkholes in Missouri, as well as some of the most biologically diverse caves in the state. Working closely with a number of federal, state, local and other non-governmental partners, MDC has lead efforts to understand and protect this unique resource. This past year we completed a four-year project on the population size, habitat, movement and re-colonization of the grotto sculpin. Information from these studies will allow us to monitor and maintain these unique populations of fish found only in five known cave systems in Perry County. A report on the conservation of the grotto sculpin also was completed, and that will be used to describe the taxonomic status of the sculpin. The sculpin is not the only species that is of interest in these caves. A morphological study was completed on the cave-dwelling digger crayfish that is found in only two cave systems. This study showed significant divergence from surface digger crayfish and that further genetic analysis is needed.

As part of a four-year water-quality study, staff continued to monitor water quality at 18 locations in the Perry County Karst area. Part of this study includes the delineation of the recharge areas of

the five major cave systems. A pilot project also was conducted with one landowner to clean out one trash-laden sinkhole. This project enabled MDC to acquire funding from the Fish and Wildlife Service that will help additional landowners to clean out their sinkholes in the future. Working with the Cave Research Foundation, we conducted radio telemetry work in two cave systems to provide accurate locations of the caves to the surface topography. Staff also made presentations to schools, landowners, spelunking and cave research groups, and other agencies.

Endangered-species conservation continues

Three species were removed from the state endangered-species list because they were no longer threatened with extinction: bald eagle, barn owl and western fox snake. Through recovery efforts, the bald eagle breeding population increased from a few pairs in the early 1990s to more than 150 nesting pairs in 2008. While barn owls continue to be sparsely distributed in Missouri, their overall status remains secure, and they are not likely to be vulnerable to extirpation given that the species has adapted so well to using human-altered habitats. Based upon the increased number of county records, a moderate percentage of animals captured per site and the establishment of wetland restoration projects, fox snake populations are stable in Missouri.

With the assistance of U.S. Fish and Wildlife Service (USFWS) Section 6 Endangered Species Funds, six research projects targeting declining species were completed: propagation of endangered native mussels for research and recovery; population response of Mead's milkweed to management and precipitation; determination of the population size, movement, growth and habitat for the grotto sculpin in Perry County; species identification and population genetics of Hine's emerald dragonfly; and delineation and control of invasive feral-hog threat to the Mead's milkweed population at St. Francois Mountains Natural Area.

In addition, two projects were ongoing: spatial and temporal dynamics of habitat use and seasonal movements by Niangua darters, and recharge delineation of Kinney Cave and Poor's Well: two new Ozark cavefish locations in Newton County. One new project was initiated: relationship between forest management and summering Indiana bats. Using USFWS Section 6 Recovery

Land Acquisition funds, the Burnt Mill CA was purchased to conserve habitat for grey and Indiana bats, and Niangua darters.

Field staff in southwest Missouri continued to reach landowners living in recharge areas of Ozark-cavefish caves to provide information on the conservation and management of this imperiled species and the karst habitats upon which they depend. More than six cost-share projects were implemented to enhance and protect this unique species. Projects were funded with the assistance of the USFWS Landowner Incentive Program.

A new program was initiated to provide funds to land-conservation organizations to assist their efforts to conserve species of conservation concern in Conservation Opportunity Areas as outlined in the Comprehensive Wildlife Strategy. Recipients include the Missouri Prairie Foundation, Ozark Regional Land Trust, American Land Conservancy, The Nature Conservancy, Open Space Council and Ducks Unlimited. Projects were funded with the assistance of the USFWS Landowner Incentive Program.

Bagnell Dam barrier-net preliminary results encouraging

The Bagnell Dam barrier net, made of space-age materials, is designed to prevent fish from Lake of the Ozarks from becoming either stuck on the trash racks or pumped through the turbines at Bagnell Dam during power generation. Historically, fish kills resulting from these two actions have been well documented at Bagnell Dam. Although paddlefish were the primary species of concern that prompted the development of the net, individuals of most other species exceeding 9 to 10 inches in length will receive protection, as well. Installation of the fish barrier net was completed last December—the result of several years of consultation between staffs from the MDC, Missouri Department of Natural Resources, U.S. Fish and Wildlife Service and AmerenUE.

One of the largest nets of its kind in the United States, it extends approximately 800 feet from the middle of the dam to an attachment point on the north shore of the lake. It also spans the entire water column, from the surface to depths up to 115 feet. The size of the mesh opening is 2 x 2 inches. The net is held in place by an extensive array of buoys at the surface and massive concrete weights on the bottom. Evaluation of the efficiency of the net is ongoing in 2009 and will

continue into 2010. Preliminary results of the net's performance are encouraging. Unlike pre-net surveys, only limited numbers of small fish have been observed passing through the turbines during generation.

Freshwater mussel production and management continued

A greater proportion of freshwater mussels are on the U.S. threatened and endangered species list than any other group of animals in North America. For the past nine years, MDC staff has worked in partnership with Missouri State University in the production of freshwater mussels. MDC and Missouri State University staffs refined propagation techniques for black sandshell, Neosho mucket, pink mucket, fat mucket and snuffbox mussels. In FY09, 1 million of these mussels were produced in MDC facilities. The final destination for mussels produced in MDC facilities is one of three areas: stocking, research or culture (grow-out). Using techniques developed at Missouri State University to raise the juvenile mussels to a larger size, MDC staff has the capability to produce several mussel species for reintroduction purposes. With the completion of a mussel management plan, and future population assessment efforts, the stage is set for reestablishing some of the freshwater mussel populations that have been declining.

Reservoir habitat improvements continue

Working with a variety of partners, MDC continued efforts to enhance reservoir fisheries habitat at several locations during FY09. Working with Bass Pro Shops, the Arkansas Game and Fish Commission and the National Fish and Wildlife Foundation, MDC is continuing to implement habitat enhancement projects in Table Rock Lake, Lake Taneycomo and their watersheds. As a part of these efforts, 600 tons of rock were used to construct 17 structures in the form of rock piles and reefs at Table Rock. At Bull Shoals, MDC crews placed 117 tons of rock to construct a number of rock piles and two rock veins. Large trees were added to the 15 brush piles on Thomas Hill Reservoir, and 70 cedar trees were used to construct 22 new brush piles in Lake of the Ozarks near the Larry Gale Access. The rock portion of the Smithville Lake Section 1135 project was completed with the construction of seven rock wave breaks on the highly erodible main lake points.

Vegetation planting also continued at Smithville Lake and in other reservoirs throughout the state in an effort to establish stands of desirable aquatic plants and enhance fish habitat. MDC staff also continues working with the U.S. Army Corps of Engineers at Mark Twain, Pomme de Terre, Stockton and elsewhere to better manage reservoir water levels to the benefit of fish and wildlife. MDC staff has been instrumental in efforts to form a Reservoir Fisheries Habitat Partnership designed to enhance funding for habitat improvement projects on reservoirs nationwide. As an early step in this process, MDC and Bass Pro Shops hosted 35 members of the partnership from throughout the United States. They represented various state and federal agencies and private partners involved in this important effort. MDC's Web site has more information concerning the location of brush piles and other habitat structures in Missouri reservoirs.

Aquatic conservation opportunity area management continued

MDC staff has been actively involved in managing many of the 158 aquatic conservation opportunity areas (COA) of Missouri. Last year, MDC staff completed stream-community and aquatic-habitat work on the Union Ridge Aquatic Conservation Opportunity Area in Adair and Sullivan counties. Spring Creek and its watershed, a portion of which is in the Union Ridge CA, have been targeted for stream-habitat restoration. The reach within the COA has 80 percent of the watershed in MDC ownership, and is home to the brassy minnow, a species of special conservation concern. As a result of working within this COA, a 1,769-acre Natural Area has been designated that contains an 8.1-mile stream. Other work assessing fish, crayfish, mussel communities, stream geomorphology, aquatic habitat and cooperation with adjacent private landowners also has occurred on the South Fabius, Middle Meramec, Dry Fork and Lower Bourbeuse aquatic conservation opportunity areas.

These actions enhance MDC's capacity to manage aquatic conservation opportunity areas and aquatic biodiversity elsewhere in Missouri.

Best Management Practices (BMPs) to guide industry in woody-biomass harvesting

In FY09 BMPs for woody-biomass harvesting were printed and distributed to the public. When implemented, these BMPs will prevent adverse results from woody-biomass harvesting.

These BMPs address forest-management issues, wildlife, soils, aesthetics, and roads and skid trails. Soil productivity, wildlife habitat, forest health and soil stability will be protected when the practices are implemented by forest-products harvesting companies.

Genetics program enhances conservation of rare and common species

The Statewide Conservation Genetics Program uses the principle that there is genetic diversity throughout Missouri's animal and plant species that determines their productivity and survival. By identifying this diversity, often through analysis of DNA, rare animal and plant species can be protected, sport fishing can be improved, hatchery strains can be selected and species can be restored. DNA "typing" often can be used to identify species, sources and sometimes "parents" of animals and plants in the wild. Species studies involve walleye, several darters and crayfish, black bass, shortleaf pine and hellbenders.

Long-term resource monitoring program on Mississippi River

This program is a cooperative effort among the U.S. Army Corps of Engineers, U.S. Geological Survey and states in the upper Mississippi River basin, including Missouri. Long-term trends in fisheries, water quality, invertebrates, forest resources, land use and land cover for the entire upper river system are monitored through a network of state-operated field stations.

Missouri's contribution is the Big Rivers and Wetlands Systems Field Station, which began operation in 1991 and monitors conditions in the 25 river miles both north and south of Cape Girardeau. Water-quality data are collected year 'round and fisheries data are collected from June through October each year. This information is used by several agencies in and outside Missouri. The program also is involved in answering specific research or management questions that come to light from analysis of the monitoring data, and these questions involve issues ranging from small invertebrates to birds.

Largemouth bass recruitment in White River lakes

Largemouth bass recruitment is a complex process affected by multiple lake-related factors. Recruitment in fisheries is normally defined as both successful reproduction and survival to a certain size or age of fish—normally one year of age.

By sinking brush in shallow water of Bull Shoals Lake, MDC began a study that attempts to mimic the beneficial environment created for small fish during high-water conditions. After brush placement, we monitored largemouth bass nests in the spring and juvenile largemouth bass in the summer and fall to determine if brush is beneficial to young largemouth bass. We also monitored large predatory fish within these brush areas to determine their effect on recruitment of young largemouth bass. Information from this study may increase survival of young black bass in White River reservoirs during periods of normal or below-normal water levels. This will result, ultimately, in increased population numbers and improved fishing.

Missouri's crayfish bait industry helps to protect aquatic resources

The introduction of exotic crayfish is a serious problem in freshwater ecosystems in North America and Europe. Negative impacts include loss of native crayfish, amphibian and reptile populations, habitat changes, disruption of food chains and collapse of prized fisheries. The live-bait trade is a primary source for the introduction of these invasive crayfishes.

In response, some states have banned the use of live crayfish as bait. Missouri's policy allows legal sales of four native crayfish species and prohibits crayfish taken from the wild to be sold as bait. In 2002, all known bait vendors in Missouri (370 shops) were telephoned to determine if they sold crayfish. In 2003 and 2004, conservation agents visited 105 bait shops throughout Missouri and collected crayfish for identification. The majority of bait shops surveyed were conducting legal sales, but three illegal species were found, including the invasive rusty crayfish. In addition, two legal species—the White River crayfish and the Red Swamp crayfish—were prevalent in samples and were sold at multiple locations throughout the state where these species never were found historically.

Working side by side with bait-shop owners, MDC inspected sales records which revealed that crayfish were supplied by commercial sources in Missouri and six other states, and that they also were obtained illegally from the wild. In a follow-up telephone survey of Missouri bait shops that sell crayfish, 98 percent of shop owners admitted that they do not know what species they are selling. The final report from this study has been prepared. Subsequent management efforts have focused on removing illegal species from bait shops and educating bait vendors on bait regulations and invasive species.

We recently published and distributed a crayfish identification guide for bait-shop owners at their request. Additional changes to policies regarding several invasive species are under consideration. In addition, the preliminary work with bait-shop owners has provided us an opportunity to develop a working relationship with an important stakeholder in the fishing industry.

Coordinated and implemented interstate and intrastate river-basin management

Staff represented the state's fish, forest and wildlife interests in various interstate working groups to implement ecosystem-based management necessary for the conservation and enhancement of natural and recreational resources of the Missouri, Mississippi and White rivers. They helped direct the implementation of \$42 million available through the Missouri River Fish and Wildlife Mitigation Project for habitat restoration, \$17.7 million available through the Mississippi River Environmental Management Program (EMP) for biological monitoring and habitat restoration, and \$9 million available for planning efforts within the proposed Mississippi River Navigation and Ecosystem Restoration Program. A strategic and operational plan for the Long Term Resource Monitoring Program was approved to guide the program for the next five years.

One EMP action on Department land included continued development on the Ted Shanks Conservation Area wetland-enhancement project. Staff provided input to the Lower Mississippi River Resource Assessment, a \$250,000 study by the Corps of Engineers to identify opportunities to improve habitat and river-related recreation in the river. This study could lead to a new federal cost-share program to design and construct projects.

White River basin coordination focused on the completion of the forebay diffuser study at Table Rock Dam. A second study has been initiated to address low dissolved oxygen concern during non-generation periods. These studies are under the umbrella of the White River Comprehensive Study, under which projects can be conducted and funded to the benefit of basin stakeholders. Results of the studies will guide implementation of measures to improve dissolved oxygen levels in the tailrace at the upper end of Lake Taneycomo.

Worked with industry, state and federal regulators to protect state's resources

Staff responded to outside requests for information regarding Missouri's species and communities of conservation concern—helping more than 1,000 projects needing federal permits or using federal funds to comply with provisions of the Endangered Species Act. Staff also coordinated MDC's participation and response to federal and state environmental review processes from those seeking to comply with the National Environmental Policy Act, Clean Water Act and other federal and state laws, rules and regulations. Additionally, in order to comply with state and federal environmental laws and the National Historic Preservation Act, staff reviewed and adopted plans for all MDC construction and resource-restoration activities. These actions ensured that requirements were met for compliance, and necessary permits and clearances obtained. They provided helpful information to manage for Species of Concern. Most input was provided in planning phases, thereby reducing surprises and project delays once construction began.

Agency staff continue to participate in the environmental review and coordination of several licensing proposals to develop hydropower within the Mississippi River. Applicants submitted to the Federal Energy Regulatory Commission proposals to develop traditional hydropower at Locks and Dams 20, 21, 22, 24, 25 and 26, and to develop hydrokinetic projects at 14 locations in the portion of the river below St. Louis and at 27 locations in the Missouri River. Staff worked with the Missouri Department of Natural Resources, state agencies from Illinois, Tennessee and Kentucky, and several federal agencies to consider impacts to fish, forest and wildlife resources, including public lands. Coordination with the multiple agencies and applicants to ensure adverse natural resource

impacts are avoided, minimized and mitigated, as appropriate, will require multiple years, depending on the complexity of the proposed project.

Conserving all wildlife in Missouri with the Comprehensive Wildlife Strategy

The Comprehensive Wildlife Strategy (CWS) is guiding conservation action for all wildlife, with emphasis on proactive conservation that will reduce the need for additional listing of declining species of fish, wildlife and plants. The Missouri strategy has become an effective tool for conservation planning and implementation, integrating priority projects and initiatives with partners and other agencies. During the last year there have been more than 50 conservation opportunity area (COA)-hosted planning/implementation meetings. Some of the ones that included participation from the CWS coordinator include Current River COA, Hi Lonesome/Green Ridge COA, Middle Meramec COA marketing meeting, Roaring River COA meeting, Niangua River COA, Springfield Utilities meeting with regional staff, Grand River Grasslands COA, Mississippi River Initiative and Ozark Regional Land Trust.

LaBarque Watershed revised its action plan profile and reprinted it for wide distribution in the watershed. During the last year we evaluated eight COAs that demonstrated little or no progress related to habitat conservation during the last three years. Two of the COAs (Wakenda and Bonne Femme Karst) have been removed from the directory and no longer will be included in future versions of the spatial layer of conservation opportunity. This evaluation, along with the Conservation Federation of Missouri (CFM) mini-grant program to promote stakeholder participation in the COAs, is expected to reinvigorate the other six COAs.

Invasive-species work continues

Wildlife-diversity funding was approved for us to begin a project to evaluate spotted knapweed bio-control using two insects. A grant from the United States Department of Agriculture APHIS Plant Protection and Quarantine also was approved to fund approximately 50 percent of the project costs. Spotted knapweed stem-density surveys were completed, and both insect species were released during 2009.

We assisted with obtaining the Aquatic Nuisance Species (ANS) grant and created a budget for prioritizing how the grant funds would be used to implement Missouri's ANS grant.

Two hands-on watercraft inspection and decontamination training sessions were held in Camdenton and Chillicothe. Personnel from several agencies and staff from two marinas attended. Evaluations for these trainings indicated that these sessions were valuable.

A proposal for an invasive-species intern was written and approved, and she began work in May. She has contributed greatly to the invasive species efforts during the last few months.

Text and photos for two of the 13 highest-priority invasive plants were submitted to the Outreach and Education for design of color posters. Drafts of the other 11 are completed and waiting review.

An invasive-plant workshop was hosted by Missouri Western State University (MWSU) and organized by MDC. MDC staff and an MWSU professor presented information about several invasive plants to 131 attendees. Evaluations indicated that participants were pleased by the content and types of presentations.

MDC continued participating on the emerald ash borer (EAB) team. Radio ads targeting firewood movement were played on 61 stations throughout Missouri. These paid ads were purchased out of the invasive species coordinator's budget. Survey work continues on EAB.

The invasive-species coordinator gave the keynote address at the Burr Oak Woods Conservation Nature Center's native-plant day, presented at Runge Conservation Nature Center's native-plant day, presented a program on forest invasive species to the Missouri Forest Keepers and presented at the Missouri Aquaculture Association's biosecurity conference.

Land acquired to benefit habitat and species

Approximately 2,455 acres of land in 13 counties were acquired by purchase and donation. Acquisitions included native prairie that provides nesting, brood-rearing and escape cover for prairie chickens; land providing watershed protection to LaBarque Creek and the Jacks Fork, Niangua and St. Francis rivers; mesic bottomland forest providing habitat to swamp rabbits and containing a grey-bat maternity cave, springs and fens; land containing old-growth forest with shortleaf and white oak trees that are approximately 400 years old; and land providing additional outdoor recreational opportunities and programs to residents of the Kansas City metropolitan area.



Protecting Clean and Healthy Waters

Stream Team celebrates 20 years

The Missouri Stream Team Program celebrated a 20-year birthday and signed on its 4,000th team this past year. A celebration weekend was held in Waynesville June 13–14 near the mouth of Roubidoux Creek where Stream Team #1 began. The celebration included a cleanup and float, barbecue, live music, camping and a cake. The Stream Team excitement continues to grow; last year teams engaged in activities in their local watersheds volunteered 137,488 hours. In the last 20 years they have reported nearly 1.5 million hours of efforts.

Efforts made streams better understood

In FY09, MDC staff successfully helped a wide range of citizens better understand how rivers and streams function. We provided short courses to groups such as county road and bridge crews, Missouri Association of County Transportation Officials, Morgan County landowners and Master Naturalist students. In every case, MDC staff witnessed immediate positive results as attendees used the newly acquired knowledge to better manage our rivers and streams.

Stream Stewardship Trust Fund

The Stream Stewardship Trust Fund is an in-lieu fee program created in 1999 to mitigate the loss of Missouri's stream resources. It is available to restore, enhance and/or protect stream systems and associated riparian habitats. From its inception in 1999 until the end of FY09, more than \$4.0 million had been collected through the program. The program and funds are administered by the Missouri Conservation Heritage Foundation, and MDC staff apply for grants to use toward protecting Missouri stream resources. In FY09, 15 projects costing \$1.1 million were approved to protect 83.2 acres of stream channel and 615.8 acres of riparian corridor.

Best Management Practices employed for forest management

We implemented and maintained soil and water conservation Best Management Practices (BMPs) for all forest-management practices on conservation areas. Each MDC sale administrator monitors and documents BMP compliance on all MDC timber sales. In addition, approximately 10 percent of these sales are audited each year. In FY09 we reviewed 169 sites on 9,352 acres for proper BMP implementation and effectiveness.

Taum Sauk Dam research and monitoring

In FY09, MDC staff evaluated aquatic habitat availability and monitored water quality in the East Fork Black River. This work was conducted in preparation for the Federal Energy Regulatory Commission's relicensing of the Taum Sauk Pumped Storage Project. The current license for this hydroelectric facility in Reynolds County, expires on June 30, 2010.

During the summers of 2008 and 2009, staff mapped fish habitats and measured water depths and velocities at several river flows. In addition, we used dataloggers to monitor water temperature and dissolved oxygen during much of each summer. Along with fish-community data collected in previous years, the information gained through this work will be used to understand and, we hope, minimize the potential effects of Taum Sauk Project operation on the aquatic life of the East Fork Black River.

Streambank stabilization techniques studied

The study which examined experimental techniques for streambank stabilization that started in 2004 continued in FY09. All 23 projects were monitored following three-fourths bankfull-or-greater flow events. The project includes five log weir projects, five farm rock weir projects, six farm toe rock projects, five back sloping with revegetation projects, and two gravel roll projects. They are located on nine separate MDC areas (Canaan CA, Fiery Fork CA, King's Prairie Access, Little Indian Creek CA, Lead Mine CA, Mule Shoe CA, Peck Ranch CA, Port Hudson Lake CA, and Union Ridge CA).

Initial results indicate that the two types of weir projects have potential. After the failure of the initial log weir project, the other four were modified—which included strengthening the key.

Three of the four modified projects are working. The fourth project is a partial failure at the lower end of the project due to improper weir spacing during construction. The critical factors in the success of the log weir technique appear to be the strength of the key and the spacing of the weirs along the bank. Farm rock weirs also have potential as a bank stabilization technique; however, consideration needs to be undertaken before choosing this technique over the traditional bend-away weir technique.

Four of the five projects have needed to be repaired, modified or have failed. The reasons for these have varied from site to site, but together have outlined the critical aspects of using a farm rock weir approach effectively. The critical factors in the use of the farm rock weir approach are the stability of the starting point, the size of the shot rock being used, the length of the weirs, the spacing of the weirs, and the mobility of the opposite gravel or sand bar. This technique will work, but proper project design is crucial.

Initial results indicate that both the farm rock toe and the back sloping with revegetation techniques have potential. Only one failure has been associated with the six farm rock toe projects. That failure appears to be due to using shot rock that was inadequately sized. As with the farm rock weirs, the stability of the starting point and the size of shot rock being used seem to be the most critical factors to the success of a farm rock toe project. Four of the five back sloping projects are working; however, none of the projects can be considered stable yet due to the slow establishment of vegetation. Site selection appears to be the most important aspect of using this technique successfully. The technique is not appropriate for tight bends and should be applied in only relatively straight reaches of stream. Soil composition of the bank plays a critical role in the success of the back sloping because the quick establishment of vegetation, particularly trees, will determine whether or not the project is successful in the long term. Also, the potential of back sloping may be limited by the high cost of the technique.

Only the gravel roll with back sloping technique has been eliminated from consideration for use by landowners. This technique is no longer being considered for recommendation to landowners because of the way in which it failed. Both projects failed catastrophically following the first high flow that tested them. The reasons for failure were that the roll does not adjust to area scour

and it does not protect a high enough percentage of the bank. The water simply scoured the area above and behind the gravel roll while it stayed in place. For these reasons we decided not to proceed with any more gravel roll projects and will not recommend it to landowners.

Agencies' cooperation increased effectiveness of contaminant monitoring

MDC initiated discussions with the Missouri departments of Natural Resources, and Health and Senior Services to explore ways to more efficiently collect key fish-contaminant information. Through cooperation on fish collection and sample analysis, we have increased the amount of information collected, with no increase in cost to the public. We also have shortened the time it takes to get this information to the public in the form of fish-consumption advisories.

In addition, we have been better able to define the impacts of lead mining and subsequent remediation activities on Missouri's forest, fish and wildlife resources. This will ensure that, as the contaminated areas are cleaned up, public funds will be expended on the activities that will provide the most natural resource benefits.

Finally, as a result of a new strategic direction, we will perform a comprehensive summary of the fish contaminant data that MDC has collected during the past 25 years. We will use the information—in conjunction with emerging new contaminant issues—to update the program. The first summary was conducted this year on mercury data.

Collaboration seeks to improve aquatic resources at Bagnell Dam

Interagency coordination proceeds for the Osage Project, as MDC continues to work with the other parties to develop plans which will guide the implementation of natural resource-related articles of the project's license. Preliminary work has begun to install a fish barrier net in front of the turbines of Bagnell Dam. There also have been collaborative efforts regarding water-quality enhancement measures to be taken within the operation of Bagnell Dam. Water quality and habitat improvements will be provided for the 82 miles of the Osage River below Bagnell Dam. The Conservation Department and the Missouri Department of Natural Resources also have

assisted AmerenUE in resolving issues related to the natural resources-protection conditions filed in their Shoreline Management Plan.



Promoting Healthy Trees and Forests

New guidelines help MDC manage forests

MDC has revised and refined the way it manages forests. The Forest Land Action Guidelines identify multiple processes for evaluating and managing the diverse woodland and forest communities in Missouri. They are tools that will help natural resource managers develop insights on how to evaluate, understand and sustainably manage Missouri's forest and woodland communities.

The guidelines incorporate adaptive management concepts and provide direction so that environmental, economic and social benefits are derived from sustainable forest management. Together with area plans, the guidelines provide a foundation for implementing the broad goals outlined in *The Next Generation of Conservation*, MDC's strategic plan. These guidelines can be accessed from the Forestry Division public Web page.

Missouri's Forest Resource Assessment and Strategy underway

As required in the 2008 Farm Bill, Forestry Division is developing Missouri's Forest Resource Assessment and Strategy (FRAS) to be completed no later than June 2010. FRAS is comparable to Missouri's Comprehensive Wildlife Strategy, but with the slightly different goals of: 1) conserving working forests; 2) protecting forests from harm; and 3) enhancing public benefits from trees and forests. We are one year into this project and well on our way. To date, much of the assessment has been drafted, our process for establishing Priority Forests and Priority Forest Landscapes is nearing completion, and five stakeholder meetings have been held to obtain ideas and feedback on issues, strategies and priority geographies. These sessions included 120 people (half internal, half external) and 40 partner organizations.

May storm damages timber

On May 8, 2009 a severe storm impacted the southern half of Missouri. From aerial photography we classified 113,308 acres across all ownerships as having moderate to severe blow-down damage. A conservative estimate of 204 million board feet of volume was damaged. At least twice this many acres were affected and had some damage. This is approximately one-third of Missouri's annual forest-products harvest.

On MDC lands, approximately 13,000 acres were impacted, and damaged-timber volume was estimated at 33 million board feet. Timber-salvage sales are in progress and will continue until as much merchantable wood as possible is removed.

An estimated 68,102 acres was affected on private land, resulting in 123 million board feet of timber damaged.

Wildfire prevention promoted in concert with hazard-mitigation grant

By way of endorsing a third-party U.S. Forest Service Hazard Mitigation grant to the Southwest Resource Conservation and Development Program, MDC supported a two-year effort beginning in FY08 to promote wildfire prevention in southwestern Missouri. This area was hit severely by the January 2007 ice storm. The continued clean-up from the storm poses the threat of increased escaped debris fires. Heavy, woody debris in the forests of this area makes wildfire suppression much more difficult and hazardous to firefighters.

Learned lessons from the Missouri Ozark Forest Ecosystem Project

The Missouri Ozark Forest Ecosystem Project (MOFEP) is a landscape-scale, long-term experiment designed to study the impact of even-aged, uneven-aged and no-harvest management on flora and fauna in Missouri oak-hickory forests. Project components include determining the effects of forest management on bird, reptile and amphibian communities, small mammals, insects and vegetation.

MOFEP enables resource managers to use the knowledge gained through experimentation to adjust and improve their management systems during the course of the project. Results thus far suggest that harvesting did not adversely affect bird, amphibian, reptile or small-mammal species, but it reduced insect herbivore diversity. Harvested sites had significantly higher overall

species richness and ground flora cover, including soft mast, than no-harvest sites. Even-aged and uneven-aged management increased soft mast production. Harvesting decreased the amount of carbon stored. Uneven-aged management increased harvest damage. *Armillaria* species (root rot) are major contributors to Ozark forest decline. Economic benefits between even- and uneven-aged management were similar.

Our understanding of the effects of management prescriptions on ecosystem components and the value of the data derived from MOFEP will grow as we continue to monitor studies in the long term.

Effects of even-aged forest management on early successional bird species—

The effects of different clear-cut sizes on species richness, abundance and reproductive success of birds were evaluated on the MOFEP study sites. Species richness was higher in larger clear cuts than in smaller openings, and size had a significant effect on relative abundance of four focal species: yellow-breasted chat, indigo bunting, white-eyed vireo and prairie warbler. There was no observed relationship between clear-cut size and reproductive success, but this study confirmed our observation that the rate of brown-headed cowbird parasitism is low on the MOFEP sites. The results of this study suggest that it is beneficial to have a variety of sizes of openings when designing forest management plans.

Missouri Master Logger Certification Program put in motion

MDC continues to support the Missouri Master Logger Certification program. We awarded a \$20,000 grant to the Missouri Forest Products Association to help start this volunteer program, where a logger agrees to uphold the standards set by the program. Verifiers would review some of the logger's past sales to confirm they were in compliance with Missouri Master Logger Certification Program criteria. The verifiers' findings would go to the certifying board, who would decide if the logger should be in the program. This is a performance-based program from which loggers can be removed if they do not uphold the standards.

The certifying board will be composed of a state legislator, a wildlife professional, a master logger from another state, a soil scientist, a representative from an environmental organization and MDC.

This program gives outstanding loggers an opportunity to be recognized and their skills showcased. Four loggers have signed up to go through the initial audit. It is hoped that landowners would be encouraged to engage these loggers to harvest their timber sales. The state's fish, forest, wildlife, soils, water and air will be better protected when harvesting is done by certified loggers.

Monitoring forest health and responding to invasive forest-pest threats

The Forest Health Program is a cooperative effort among MDC and other state and federal agencies to conserve Missouri's forest resources by monitoring and evaluating forest health and providing forest-health management information to Missouri residents. Monitoring activities document and evaluate ongoing threats to forest health. Among the threats are oak decline and oak wilt, and sporadic events such as insect outbreaks, storms and drought. MDC conducts annual statewide surveys in partnership with other agencies to detect introductions of the gypsy moth, an invasive species capable of causing severe forest losses.

Diagnostic laboratory services are provided on all forms of forest insect-and-disease agents. Forest- and pest-management recommendations are developed based on monitoring and diagnostic activities and provided to private landowners, MDC staff, forest managers, arborists and the green industry. Forest-health information is given to stakeholders through workshops, diagnostic reports, magazine and Web site articles, media releases and the Forest Health Update newsletter.

An infestation of the emerald ash borer, another devastating invasive forest pest, was first detected in Missouri in Wayne County in July 2008. The Forest Health Program staff worked with many state, federal and private cooperators to prepare for the expected arrival of this non-native pest. Technical expertise is provided to cooperators responsible for monitoring and slowing the spread of the infestation. Outreach materials are developed and programs presented at numerous venues to raise public awareness about the threat posed by emerald ash borer and other invasive species that hitchhike in firewood. Forest Health

staff cooperates with MDC to investigate suspected infestations reported by the public through a toll-free phone line and online reporting system on MDC's emerald ash borer Web site.

Timber-harvesters program continues

We work closely with Missouri's forest products industry to monitor the use of our state's forest resource. The Missouri Forest Products Association and Forestry Division jointly sponsor logger training courses aimed at educating loggers about forest-management principles, introducing new techniques and concepts, and enhancing the safety of timber-harvesting operations. Three hundred and eight loggers have been through the program in Missouri.

Assisted with Western fires

MDC employees assisted on the national level with the catastrophic fires of 2008. Through a mutual-aid agreement, Missouri supplies trained firefighters and the U.S. Forest Service reimburses the state for wages and overhead costs. These amounted to \$784,413 in FY09.



Preserving Missouri's Outdoor Recreation Heritage

Study, regulation changes benefit anglers and hunters

Catfish harvest management—The Catfish Harvest Evaluation Project is a five-year statewide study that began in 2005 and is designed to provide information about the population dynamics, harvest, movement and nest success of flathead and blue catfish in selected Missouri rivers. MDC biologists are sampling catfish in segments of eight rivers throughout Missouri, sampling approximately 349 river miles by tagging fish with radio tags and \$25 reward tags that are returned by anglers. We are also studying flathead catfish nest success, spawning behavior and fecundity at one of MDC's hatcheries.

2008 deer season harvest reflects regulation changes

A four-point antler restriction (APR) was tested in 29 counties from 2004 through 2007. Results indicated that in the central group of test coun-

ties, doe harvest increased by an average of 13 percent as a result of the APR; but in the northern group, the APR had no effect on doe harvest. However, the APR increased the harvest of adult bucks in both the central and northern groups of APR counties. Deer hunter input generated by public meetings, Web-based comments and public contacts in 2007–2008 indicated support for the APR. Consequently, in 2008 the counties under the APR expanded to 65, including all northern Missouri and parts of central and west-central Missouri.

This significant expansion of the APR affected the 2008 deer harvest. Based on the APR study, we knew that antlered buck harvest the first year of the antler restriction would be around 35 percent lower in the new APR counties, but that doe harvest might increase as much as 18 percent. Overall harvest could be 5 percent lower in counties with the antler restriction. Statewide harvest in 2008 decreased by 6 percent; however, doe harvest increased by 2 percent and buck harvest decreased by 17 percent.

Much of this change may be attributed to the antler restriction, although a good acorn crop in the Ozarks, fewer deer in some counties and a late opening of the firearms season also may have contributed to the 2008 harvest.

We expect the 2009 harvest, especially that of antlered bucks, to increase in the new APR counties because more legal bucks will be available. Doe harvest should be at least as good. Depending on acorn abundance and weather, statewide harvest should be up somewhat from that in 2008. Overall, hunters should experience good deer hunting in 2009.

Brought wildlife-code violators to justice

Operation Game Thief and Forest Arson—

Operation Game Thief/Forest Arson continue to be successful programs which help catch wildlife poachers and forest arsonists. The programs allow anonymous callers to report violations, and callers are eligible for rewards if arrests are made from their calls. Last year Operation Game Thief (OGT) produced 323 convictions from 1,030 telephone calls. This 31 percent arrest rate based on calls illustrates the high-quality of information from OGT callers and the investigative skills of conservation agents. In FY09, \$7,700 in reward money was paid to callers.

Revocations—Missouri is a participating state in the Interstate Wildlife Violator Compact (IWVC). The compact—a legal organization of 31 member-state wildlife agencies—agrees to reciprocally honor revocations/suspensions of hunting, fishing and trapping privileges for wildlife-related violations.

During the last fiscal year 1,370 people from other states had their privileges revoked in Missouri through provisions of the compact. An additional 164 were revoked for cause by the Conservation Commission in Missouri and submitted to the IWVC. Participation in the compact also benefits Missourians who travel to other compact member states for hunting and fishing activities. If found in violation, they may be given the opportunity to resolve the citation by mail rather than being required to post a bond before leaving the member state. They are subject to revocation by all compact states if the citation is ignored.

Hunting Method Exemption and Group Fishing programs assist disabled

Both the Hunting Method Exemption Program and the Group Fishing Program are designed to assist disabled hunters and provide opportunities for educational or rehabilitation groups to experience fishing. During the last fiscal year, we issued 2,945 hunting-method exemptions to help disabled hunters enjoy Missouri's outdoors. We also issued 308 group-fishing permits to help Missourians who otherwise might not be able to participate and learn about outdoor fishing activities.

Helped thousands learn how to participate in and enjoy fishing

Angler recognition programs—MDC presented a First Fish certificate to 1,574 anglers for catching their first fish. We issued Master Angler awards to 491 anglers who caught large game fish that equaled or exceeded minimum-size requirements. We also issued seven new state records to anglers catching smallmouth buffalo, freshwater drum, river carpsucker, shorthead redhorse, northern hog sucker and yellow perch (twice).

Kids fishing days at the trout parks—For the seventh consecutive year, Kids' Fishing Day (KFD) was held at the trout parks. Based on the number of free daily tags given to youngsters 15 years of age or younger, combined attendance at the May 2009 KFDs held at Bennett Spring, Mar-

amec Spring, Montauk and Roaring River was 4,108. Attendance was down compared to previous years, due mainly to rainy, cool weather and high-water conditions at some of the parks. In spite of the weather, the KFD program remains popular.

Urban-fishing programs remain priority

MDC strives to provide high-quality fishing opportunities for all Missourians, including those living in urban areas. With our current economic conditions, it has become even more important to provide close-to-home fishing opportunities to our urban residents.

During FY09, more than 60 urban impoundments were managed for urban fishing. More than 158,000 keeper-sized fish were stocked in these lakes; this included almost 97,000 channel catfish, more than 46,000 rainbow trout and 15,000 brown trout.

Hatcheries affected by spring floods

Mother Nature handed MDC's trout hatcheries too much of a good thing during FY09. Southwest Missouri experienced the fourth wettest year on record, with as much as 70 inches of rainfall. All the trout parks experienced near record rises in the spring branches. Maramec Hatchery experienced the worst of the flooding, with the second highest flood event ever recorded. At Roaring River, woody material that had accumulated from the previous winter ice storm was carried into the park, causing some major damage to the instream structures and erosion of the stream banks. Bennett Spring experienced a flash flood event that caused the spring branch to rise almost 7 feet in four hours, carrying in a heavy mud and debris load.

The accumulated heavy rainfall events required the Corps of Engineers to spill water from the Table Rock Dam flood gates into Lake Taneycomo, affecting Shepherd of the Hills Hatchery. The repeated flood events and associated poor water quality across the trout hatchery system took their toll on egg, fry and fingerling survival. The remaining trout inventory is still recuperating from the losses experienced from these events, but thanks to a lot of work from a variety of MDC staff, a full rebound is expected for the 2010 trout fishing season.

2008—a record year for paddlefish harvest

Typically, MDC raises paddlefish at Blind Pony Hatchery, but it had been out of production for several years. Last year was the first full year Blind Pony got back into paddlefish production, and it is definitely back! Staff at Blind Pony produced a record number of paddlefish fingerlings in 2008—265,539 of them. This is an 80 percent return from hatched eggs (15–20 percent is typical). Why the boost in efficiency? Hatchery managers were not sure; spring plankton—the starter food of young paddlefish—was low, so we should have expected a small harvest. For whatever reason, an anticipated bad production year turned into a record production year.

By sharing our bountiful harvest with Arkansas, supplementing the Missouri River paddlefish population and stocking two years' worth in Missouri's paddlefish lakes (where fish will not be stocked in 2009), we found homes for all the extra fish. Adding to the problem was that every single paddlefish stocked in the Mississippi basin had to be tagged with coded wire tags. A tagging project this huge was quite an undertaking; however, employees from all divisions volunteered for three weeks last fall and helped with tagging every fish stocked. Blind Pony is undergoing some further renovation, and hatchery staff's capability to manage oxygen in production ponds will be greatly enhanced.

Hatcheries have banner year for warm-water fish production

MDC's warm-water hatchery system produced enough fish to meet stocking needs in Missouri and provide fish for trading to other states in 2008. By the end of 2008, 3.6 million fish were stocked in public and private waters.

Among some of the highlights of this past production year, Lost Valley Hatchery exceeded expectations in fathead minnow and golden shiner forage production for feeding 12- to 14-inch musky. Blind Pony Hatchery produced a remarkable 265,539 8- to 12-inch paddlefish. Blind Pony also stocked 4,508 lake sturgeon and 4,466 pallid sturgeon.

Chesapeake Hatchery produced more than 600,000 channel catfish, some of which were sent to other hatcheries for grow out; others were sent to Iowa in exchange for musky.

Hunnewell Hatchery produced more than 350,000 walleye fry. Paho Fish Rearing station also contributed stocking-sized channel catfish for public waters.

Several hatchery improvement projects continue to span multiple years. These projects include the completion of the installation of new kettles and aerators at Blind Pony Hatchery, and new underliner drains in the production ponds at Lost Valley Hatchery.

Walleye thrive in state's waters

Walleye are a popular sport fish species for Missouri anglers. However, without supplemental stockings, the natural recruitment of walleye in Missouri lakes is insufficient to maintain walleye populations at a level to provide acceptable catch-and-harvest rates for anglers. We depend on wild stocks to provide the brood stock fish for hatchery production; the annual collection of brood stock walleye is an integral part of Missouri's walleye management program. This year mature walleye were captured from Bull Shoals and Lake of the Ozarks and transported to Lost Valley Hatchery and Chesapeake Hatchery. The quality of these brood fish was excellent and hatcheries had a good year of walleye production. We also sent 747,000 surplus fertilized eggs to Arkansas Fish and Game Commission. More than 2 million walleye fingerlings were stocked into 12 Missouri lakes and one river.

Walleye populations in several lakes appear to be growing; our spring sampling shows that capture rates have increased during the past several years. The most notable lakes are in the Kansas City and northwest regions. Biologists are receiving positive reports from anglers in these regions regarding their higher success in catching walleye. Biologists continue to evaluate stockings, growth and angler exploitation through fish surveys, OTC markings and tagging studies. This year MDC will finalize the statewide Walleye Plan, which will guide the future management of the species in Missouri. Once finalized, the plan will be available on the MDC Web site.

GO FISH! Program chalks up another good year

GO FISH!, the MDC angler recruitment and education program being tested in the St. Louis area, enjoyed another successful year in fiscal year 2009, which included some program additions. A monthly GO FISH! newsletter was launched, and

a program manual providing "how to" information for volunteer educators was completed and printed. Finally, as state and national interest in GO FISH! mounts, efforts to copyright the GO FISH! logo and publications are underway.

The GO FISH! Winter Trout Program was a successful addition, which provided 10 programs to 94 young anglers eager to catch a trout. The regular GO FISH! spring/summer programs ran April through September at the four local Conservation Fishing Centers—August A. Busch Memorial Conservation Area, Bellefontaine Conservation Area, Forest Park Hatchery and Suson Park Rearing Pond. The seven GO FISH! program "hooks" were provided at each fishing center, while revamped urban fishing camps took place at Forest Park with children from the St. Louis City Parks and Recreation summer program. In all, GO FISH! reached more than 2,041 contacts during 138 programs this past year, thanks to MDC staff and the help of 61 volunteers who provided 1,134 hours of service.

Fishing clinics get diverse

MDC employees and volunteers provide many programs with instruction in hunting, fishing, trapping and shooting sports. Hundreds of MDC fishing clinics provide opportunities for attendees to learn the basics, and advanced training is available to those who want to learn more. But some of these events are different from others. Several times this past year, MDC staff has held fishing clinics for disabled anglers—last fall in Columbia through Rock Bridge High School and this past spring in the northwest, where MDC staff helped co-sponsor a Wheelin' Sportsmen's Fishing Event.

Staff also gave lessons on fishing and other aquatic activities at events in West Plains (floating, fishing and building cane poles), and at Mark Twain Lake, where girls in the Girls Exploring Nature Program learned to fish, canoe and become hunter-education certified. A course in catfishing through Discover Nature—Families was held at the Rebels Cove CA. Of course, traditional fishing clinics abound: thousands attended these clinics throughout the state, with MDC staff offering fishing instruction to a wide audience. Not atypical was one MDC staffer who instructed senior citizens aged 84 to 97 one day and children aged 6 to 11 the next.

More Community Assistance Program agreements executed

Through the Community Assistance Program (CAP) and the closely related Corporate and Agency Partnership Program (CAPP), MDC enters into agreements (usually 25-year) with cities, counties, state and federal agencies, businesses, foundations, schools and colleges. Under these agreements, MDC provides fisheries management at existing lakes and ponds, and cooperatively develops and maintains facilities for anglers and boaters at lake and stream areas. MDC has agreements with 116 partners for the cooperative management of 166 public lakes (9,655 acres of water), 42 stream-access areas, four lake-access areas and six aquatic resource education ponds.

MDC and its partners constructed fishing and motorboat-access facilities at Benton Park Lake (St. Louis City), Valley Water Mill Lake (Watershed Committee of the Ozarks, Greene County), LaPlata City Lake (LaPlata, Macon County), Spring Fork Lake (Sedalia Water Department, Pettis County), Rockford Beach Access (Jefferson County) and Van Buren Riverfront Park (Van Buren, Carter County). MDC executed new CAP and CAPP agreements with four partners (one including eight lakes in the Liberty area) and renewed or amended existing agreements with five partners (usually to provide new programs or facility development).

Missouri National Archery in the Schools Program (MoNASP) expanded

MoNASP flourished in 2009 as the number of participating schools doubled for the second year in a row. Eighty-two schools are enrolled in this international-style target-archery program taught in physical-education classes from fourth through twelfth grades. Many of these schools received reimbursement grants up to \$500 toward NASP-approved archery equipment, and 13,776 Missouri children benefit from this successful program. Linn State Technical College hosted the first MoNASP state tournament at which 274 student archers from 17 schools competed. Also, for the first time, five MoNASP teams competed at the NASP national tournament in Louisville, Ky., where a fifth grader from Fenton won second place in her division.

Encouraged and mentored new hunters and anglers through many programs

Employees and volunteers provided more than 2,400 programs with instruction in hunting, fishing, trapping and shooting sports. More than 126,000 people took part in these programs, which were aimed at increasing participation in and knowledge of traditional outdoor recreation. We offered about 900 Hunter Education classes, certified 24,733 students and began an on-line Hunter Education training module. The module, coupled with a five-hour field day, provides an alternative to the traditional 10 hours of lecture. It offers flexibility to busy people who want to meet the Hunter Education requirements. More than 130,000 visitors attended programs or practiced firearms and archery shooting at our five staffed shooting ranges.



Teaching Missourians About Fish, Forest and Wildlife Resources

Internships encouraged diversity, aided students and MDC

Our stewardship of Missouri's fish, forests and wildlife carries the responsibility of sustaining these natural resources not only for current generations, but for future ones, as well. It also carries the need to recognize that future generations likely will represent a vastly different population which reflects many cultures and backgrounds. MDC has a long-standing commitment to understanding the needs of Missouri citizens and accepts the challenge of staying in tune with our diverse stakeholders. One way to remain focused is through various diversity outreach programs.

MDC began its sixth year of an internship program which creates experiences for students in the area of conservation, while addressing recruitment needs of MDC. Objectives are threefold: expose students to a variety of professional tasks and MDC's culture; mentor promising students in disciplines in which job candidates are scarce; and attract students with diverse cultural backgrounds to contribute to MDC's workforce and mission accomplishment. Internships are provided at both the undergraduate and graduate levels, and length of internships typically run concurrently with college semesters or summer breaks. Acceptance for an internship requires a minimum of a 2.8

GPA for undergraduates and a 3.0 for graduates, and the successful completion of MDC's interview process.

In FY09, 21 male and female students worked in a variety of internship positions, which were diverse in both location and job responsibilities. The students represented 14 colleges and universities and had a combined 3.3 GPA.

Missouri forests aided by volunteers

Missouri Forestkeepers Network—MDC collaborated with Forest ReLeaf of Missouri to support statewide recruitment and coordination of volunteers participating in the Missouri Forestkeepers Network. The Forestkeepers program is a volunteer, self-driven network of those interested in forest and forest monitoring. More than 2,000 Forestkeepers are enrolled in the program, and they worked more than 9,963 hours on a variety of activities.

Wildland fire-suppression training and the Midwest Wildfire Training Academy—MDC supports volunteer fire departments in many ways. One way in particular is by providing annual wildland fire-suppression training to fire departments throughout the state. We conducted 23 sessions and trained more than 655 local firefighters in fire behavior, suppression techniques and safety at no cost to the fire departments or the volunteers. In addition, we also provided instructors and logistical support for the Midwest Wildfire Training Academy held in Jefferson City each year. This academy draws thousands of participants from throughout the state and the Midwest.

More students in nature through Discover Nature—Schools

In 2009, more than 30,600 Missouri children were connected with nature through various Discover Nature Schools instructional units and grants. Seventy-two schools adopted the middle-school aquatic unit, allowing 7,700 to benefit from this engaging, hands-on approach to aquatic education. The elementary unit, *Nature Unleashed*, was piloted by 21 schools. *Nature Unleashed* will be available for the 2009–2010 school year. The high-school ecology unit will be piloted during the 2009–2010 school year, and a kindergarten through second-grade unit is in development.

Grants supporting the middle- and elementary-school unit classroom materials and field investigations totaled \$114,000. Conservation field-trip grants provided 20,273 students with outdoor experiences. Thirty-four schools were awarded outdoor-classroom grants. Conservation grants to schools exceeded \$238,500 and provided multiple opportunities for Missouri students to enjoy and learn about nature *in nature*.

Free trees promote forests

In conjunction with the Missouri Department of Transportation, we provided free trees to many non-profit groups. Scout troops, stream teams, school groups, conservation groups and communities used them for tree-planting projects in both urban and rural areas. This program enhances the ability of both agencies to promote an awareness of Missouri's forests and to increase citizens' understanding of the many benefits trees provide.

For Arbor Day 2009, we distributed redbud seedlings to more than 109,000 fourth-grade students throughout the state.

Helped citizens discover and enjoy Missouri's nature

About 900,000 visitors explored the trails, programs and exhibits at our conservation nature centers and education centers throughout the state. Discover Nature programs for women and for families provided special opportunities for Missourians to learn new ways to enjoy the outdoors—whether it's how to fish, how to attract bluebirds or how to find your way through the woods.

Grow Native! roots grow deeper

Grow Native! is a program of the Missouri departments of Conservation and Agriculture, with help from the Missouri Botanical Garden's Shaw Nature Reserve. Workshops for the general public and landscape professionals continue to be an important part of the program. However, an emphasis this year has been the education of civil engineers and contractors in metropolitan St. Louis, where an increased emphasis is being placed on the ability of native plants to slow storm-water runoff and improve water quality. Also noteworthy is the completion of an industry survey that shows sales of native plants in Missouri increased 70 percent in the five years between 2003 and 2008.

Missouri Master Naturalist program continues growth

The Master Naturalist program conducted six training courses last year, adding another 200 participants to this community-based, volunteer service program that totals 680 people and 11 chapters. With a new chapter starting in Franklin County, the program has what's considered its first regional chapter association in the St. Louis area. A new chapter also started at the Lake of the Ozarks. Volunteers participated in more than 5,000 hours of advanced training and donated more than 20,000 hours of volunteer service.



Supporting Conservation in Our Communities

Grants and equipment help volunteer fire departments

MDC, in cooperation with the U.S. Forest Service, provided \$381,886 in grants to 178 volunteer fire departments. These grants help fund protective clothing, equipment and training.

We also provided equipment to fire departments through two federal programs. With the Federal Excess Property Program, which we are phasing out, we obtained equipment valued at \$316,695. The new Fire Fighter Program obtained equipment valued at \$11,591,225.

Helped Missourians help others through meat-donation program

Conservation agents coordinate and support the Share the Harvest program with the Conservation Federation of Missouri, local charitable organizations and local meat processors. Together these groups have supported the donations of more than 254 tons of meat during the last two years. During FY09, approximately 4,465 hunters donated 249,156 pounds of venison to less fortunate Missourians. Since the inception of the program, nearly 1.9 million pounds of deer meat have been donated to Missouri citizens. Hunters who wish to donate their entire deer may receive a \$40 reduction in the processing price. The \$40 is paid by the Conservation Federation of Missouri. Hunters also may designate part of their deer to be donated to the Share the Harvest program.

Urban-sprawl training assists foresters and Private Land conservationists

A competitive grant from the U.S. Forest Service to improve forest conservation in the transition zone between areas served by traditional urban- and rural-forestry programs aided MDC foresters and Private Land conservationists. They attended a day-long training session designed to enhance their knowledge of urban sprawl and its causes, and of potential strategies for minimizing the impact of development. Topics covered included: development projections for Missouri, the planning and zoning process, explanations of the various type of governance in the state, the regional planning process, non-regulatory techniques to integrate natural-resource conservation into regional planning, and Smart Growth concepts.

Also, five workshops were held throughout the state to expose local officials to conservation-development concepts, resources MDC can provide to help them understand the value of natural-resource conservation, and how MDC can assist in the regional planning process.

Agents continued outreach efforts

Conservation agents represented MDC at 5,354 meetings to civic groups, schools, church groups and a wide variety of other organizations. Agents completed 6,092 radio and television programs, published 3,088 newspaper articles and conducted 1,338 public exhibits. As part of their community relations efforts, agents contacted more than 469,000 citizens and answered 112,993 telephone calls.

Birds aided by conservation partnerships

A variety of conservation partners, who are promoting "all bird" conservation in Missouri, have established common goals and strategies for data collection, monitoring and evaluation. By providing matching funds, the Missouri Bird Conservation Initiative (MoBCI) Grant program funded projects from many different organizations and partners. MoBCI represents a broad range of interests which have a common goal to provide habitats suitable for a wide range of bird species. Forty-eight conservation-oriented organizations and four private citizens have contributed funds to this voluntary partnership of diverse groups.

An All-Bird Conservation Team helped coordinate bird-related initiatives such as Partners in Flight, Northern Bobwhite Conservation Initiative,

North American Waterbird Conservation Plan, North American Waterfowl Management Plan and the U.S. Shorebird Conservation Plan. MDC helped Audubon Missouri develop Important Bird Areas, which is the National Audubon Society's part of an international effort to identify and conserve the areas that are the most important for sustaining bird populations.

MDC continues to work with the Avian Conservation Alliance of the Americas, or ACAA, and the Missouri Conservation Heritage Foundation (MCHF) in an international bird conservation project. The ACAA was formed by nine National Audubon Society chapters who raised funds for a land-acquisition project in Honduras, where habitat is beneficial for many Missouri birds. Both neotropical migrant birds that breed in Missouri and breeding habitat for resident Honduran bird species find common ground there.

The partnership uses funds for land restoration and acquisition in Pico Bonito National Park near Olanchito, Yoro, Honduras. This area is used by more than 60 migrant bird species that spend the winter there before departing on the trans-Gulf of Mexico spring migration.

Community conservationists help communities create high-quality habitat

Missouri's fish, forests and wildlife face the loss of important habitats due to increased development. Only when conservation needs are a key part of planning for community growth can we protect these valuable resources and improve the quality of life for present and future Missourians.

Following the long MDC tradition of offering conservation information and technical assistance to people, community conservationists (CCs) work with local governments, partnerships, community organizations and the public to foster land-use planning, design practices and cutting-edge technologies to conserve and protect natural systems. These alternatives reduce habitat fragmentation, restore and preserve natural landscapes, protect watersheds and create opportunities for urban citizens to use, enjoy and learn about wildlife, forest and aquatic resources within their own communities.

CCs maintain partnerships with organizations involved in development issues. Among them are regional councils of government, professional organizations such as the American Planning Association, American Society of Landscape Architects, American Society of Civil Engineers

and community organizations such as St. Louis Earth Day and the Watershed Committee of the Ozarks. CCs also represent MDC on committees which address development-related environmental issues. CCs made 2,561 contacts with community organizations, partnerships and local governments, attended 146 meetings and handled an additional 1,496 general inquiries. They reviewed and provided input on 107 development projects, provided plans or recommendations for 1,003 acres in urban and suburban communities, and assisted with implementation of plans on 32 acres.

Programs developed by CCs addressed issues such as stormwater best-management practices and urban-habitat management. They presented 31 programs that drew 1,567 participants. Another 22 special events for which CCs provided expertise and support drew more than 30,000 people to learn about the conservation of Missouri's forest, fish and wildlife resources in developed and developing areas.

CCs provided technical and financial support to a broad range of constituents and projects. The following projects were completed with help from CCs: the City of Springfield turned a maintenance headache into a green infrastructure asset by installing a bioretention area on a flood-buyout property; the City of Weldon Springs passed an ordinance requiring conservation development in critical areas of the municipality; partners joined to develop the *Metropolitan St. Louis Sewer District Landscape Guide for Stormwater Best Management Practice Design*, which guides development and redevelopment in the City of St. Louis and most of St. Louis County; participants at a workshop at Pine Ridge Presbyterian Church in Platte County learned about native plants and bio-infiltration and installed native vegetation in a parking island and stormwater basin; and ENTECO, a company in the Upper Blue River Conservation Opportunity Area, converted turf grass next to its facility to native grass and forbs.

Outreach program brings attention to forestry resources

MDC and the Missouri Community Forestry Council jointly sponsored the Missouri Arbor Award of Excellence program. This program recognizes communities throughout the state that act as good stewards of their tree resources. Award categories include municipalities/governments, organizations, businesses and individuals.

Severe weather results in renewed interest in trees

Missouri towns have experienced a string of devastating weather events, beginning with straight-line winds in the summer of 2006 and continuing with multiple massive ice storms in January 2007 and 2008. Almost every part of the state has been affected.

We worked steadily in storm-damaged areas to provide assistance to municipalities, schools, counties and homeowners. These contacts have resulted in increased interest in the Tree Resource Improvement and Maintenance (TRIM) cost-share program.

In response, our Conservation Commission allocated an additional \$250,000 for the TRIM program to be spent in the counties which were part of either ice storm federal-disaster declaration. Those funds will be spent in the next fiscal year. This is the second year in a row that the commission has doubled the funds for this cost-share program.

St. Louis Community Conservation Stewardship grants awarded

The Community Stewardship Grant Program (CSGP) received 18 grant applications, requesting \$218,994.95. The CSGP Advisory Committee comprised six people from area agencies and organizations that did not submit grant proposals. This year, the CSGP awarded six grants worth \$55,707 to these projects:

Ferguson-Florissant School District. *Little Creek Watershed Restoration.* \$15,000. Funds will continue the honeysuckle-removal effort on Little Creek Nature Area, and the subsequent replanting with native trees and shrubs. Restoration on the area is supported by school staff, students and a strong collaboration of agencies and community organizations who have committed more than \$300,000 in funds for various aspects of the restoration project.

St. Charles County Parks—Harvester/Mid-Rivers Optimist Club. *Spring Bend Restoration.* \$14,000. St. Charles County Park staff is leading this effort to remove invasive species, re-vegetate with native plant species on eight acres of forest land, and restore fire ecology to a 50-acre prairie reconstruction in the recently acquired Spring Bend County Park. The park department is part-

nered with a local school, the Optimist Club, a Missouri Master Naturalist chapter and Ozark Regional Land Trust to accomplish restoration with the help of volunteers.

Rockwood School District. *Selvidge Middle School Nature Area Restoration.* \$5,592. A collaboration of school staff, parents and students are using funds to remove mature bush honeysuckle from a 12-acre forested area on school grounds, revegetate with native trees and shrubs, and use the area as an outdoor-learning space.

River des Peres Watershed Coalition. *Invasive Species Removal and Native Plant Establishment.* \$11,550. The objective of this project is to remove invasive species along an urban stream corridor, while educating the public about riparian ecosystems and enhancing the recreational opportunities associated with urban streams. Using extensive volunteer support, the River des Peres Watershed Coalition will restore at least a half mile of urban stream corridor through St. Louis County.

The College School/Webster Groves Parks Department. *Woodland Restoration in Lockwood Park.* \$1,225. The collaboration of school staff and parents, local business partners and the municipal parks department is using the grant funds and donated resources to remove honeysuckle from and replant in a Webster Groves park. While the scope of this project is small, partners are enthusiastic and volunteers committed to expanding the effort into other areas of Lockwood Park.

St. Louis County Parks. *Cliff Cave Gate Construction.* \$8,340. Owned by St. Louis County Parks, Cliff Cave is one of the largest functional cave resources left in the St. Louis area. The impetus for this project was the discovery in May 2008 of state-and-federally listed Indiana bats occupying the cave. The cave has two main entrances with insufficient fencing and significant human disturbance by trespassers. With support from Bat Conservation International and St. Louis County, the grant funds will supplement the construction of permanent steel cave gates at both entrances, essential to the long-term viability of the cave. County Parks will continue to lead educational tours and allow access for research and inventory after the gates are constructed.

Kansas City WildLands active in habitat restoration

Kansas City WildLands (KCWL) conducted on-the-ground volunteer habitat-restoration work on six remnant natural-community sites in the greater Kansas City area. More than 1,050 citizen volunteers from throughout the country, as well as corporate volunteer groups, participated in three multi-site community-restoration workdays. An additional 13 single-site workdays occurred throughout the year.

The KCWL Seed Team, a specially trained group of volunteers, remained active identifying, collecting and sorting seed from conservative plants on KCWL sites. Seed was processed by the team at the Wah-Kon-Tah prairie-seed processing facility, and some of this seed was dispersed back on the sites (Ernie Miller, Blue River Glades, Rocky Point Glades, Jerry Smith Prairie) in late winter. Powell Gardens grew more than 2,500 seedlings with the remaining seed, which were planted on three sites by volunteers during the May 2009 workday.



Helping Private Landowners Advance Conservation

Nursery helps reforest state

The state forest nursery annually grows and distributes approximately 4.5 million seedlings of more than 60 species. The seedlings include trees and shrubs suitable for reforestation and wildlife-habitat restoration activities. The seedlings are planted on both public and private land throughout the state.

Provided financial assistance for landowners to improve state's resources

Approximately 523 private landowners received nearly \$1 million in cost-share funds to implement beneficial habitat-management practices for fish, forest and wildlife resources. The funds helped install 921 individual conservation practices, impacting nearly 12,000 acres.

Small-acreage landowners encouraged to manage forests

Landowners owning between 10 and 60 acres in 13 targeted counties were mailed information to encourage them to join the Missouri Forestkeep-

ers Network (FKN). Efforts were focused on counties that are experiencing rapid forest parcelization. Development of resources, materials and a recognition program were initiated to motivate these landowners to actively manage their forests.

Partnerships strengthen support to landowners

Staff developed approximately 35 partnerships with federal, state and non-governmental organizations. These relationships helped MDC enhance technical and financial assistance and equipment support to landowners interested in improving fish, forest and wildlife resources. Through the partnerships, we assisted Missouri USDA with developing and applying \$150 million in Farm Bill conservation programs, including more than \$2 million in staff time. We also leveraged staffing, equipment and enhancement funds with conservation-habitat organizations.

Technical assistance provided to landowners

Field staff provided timely and responsive service through approximately 63,986 rural and urban landowner contacts, including more than 16,171 on-site landowner visits. Staffers offered technical assistance to landowners who wanted help with habitat-management plans toward achieving their land-use objectives. Staffers also answered 4,488 requests for wildlife nuisance and/or damage assistance, including 1,038 on-site visits. A survey completed in 2008 indicated that 86 percent of our cooperators were very satisfied with the assistance they received.

Conservation agents provide technical assistance, as well. They inspect ponds up to three acres in size, which are stocked free throughout Missouri. During FY09, agents made 18,815 resource-management contacts. They delivered 73,019 pounds of food-plot seed to 2,011 Missouri landowners in the MDC-administered Missouri Seed program. Agents also assisted with controlled burns, fish stocking and a variety of other management duties on public lands.

Call Before You Cut program initiated

Call Before You Cut, a voluntary forest-landowner information program, was initiated in May 2009. Landowners are urged to call a toll-free telephone number, or visit a Web site, to receive information about the benefits of involving a professional

forester in the management of their forest lands. Nearly 60 landowners who control more than 4,300 acres of forest were sent information in the first two months of the program.

Habitat-management workshops were popular with landowners

MDC staff conducted or participated in more than 547 individual events involving private-landowner habitat-management workshops. More than 34,959 people attended the workshops that focused on management techniques to benefit early successional wildlife species such as bobwhite quail, rabbit and grassland-bird species. Wildlife damage biologists gave 76 public programs on trapping and damage prevention to 4,188 participants. In addition to providing programs on conservation-related topics, the biologists regularly interact with statewide media.

Assisted with wetland-restoration efforts

Since 1992, MDC has assisted the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service in restoring critical wetland habitat back into the agricultural landscape. The primary impetus has been wetland teams composed of MDC and USDA employees who complete restoration aspects of the Wetland Reserve Program and other conservation programs. To date, Missouri has recorded 940 easements through the Wetland Reserve Program, which cover 135,525 acres. These restored wetlands not only provide critical habitat, but also store water during flood events. As a result, this alleviates pressure downstream on levies, communities and agricultural crops.

Bobwhite Quail Challenge Grant Initiative yields funding requests

The Bobwhite Quail Challenge Grant Initiative was created in May 2007 by the Conservation Commission. The goal of the initiative is to challenge conservation organizations interested in establishing bobwhite quail habitat to form partnerships with private landowners throughout the state. In FY09, \$140,000 in Bobwhite Quail Challenge grants was provided to Quail Unlimited, Quail Forever and the National Wild Turkey Federation. These organizations provided matching funds to produce \$280,000 to improve bobwhite quail on private land.

Participated in major ag conferences

In an effort to connect with key agricultural leaders and agri-business in the state, MDC participated in each of the major agricultural conferences and trade shows throughout FY09. In addition to events such as the Farm Bureau Annual Conference, Governors Conference on Agriculture, Missouri State Fair and the Missouri Cattle Industry Annual Convention, MDC also supported technical efforts in partnership with agricultural commodity organizations.

Provided private lake- and stream-management assistance

We responded to 6,861 requests for watershed-, floodplain-, riparian corridor-, and stream- or lake-management information and technical assistance on streams or lakes. We made 1,460 on-site visits and wrote 268 recommendation letters or management plans. On-site work included 248 fish-population surveys, 270 stocking inspections, 14 renovations and 48 fish-kill investigations. Staff conducted 37 stream- or lake-management workshops attended by 1,008 people. We also coordinated or participated in 40 active watershed-focused resource-management projects.

Program results in landscape changes for landowners and wildlife

Between 2003 and 2008, the federal Conservation Security Program has brought about landscape-level changes in some of the most intensive agricultural landscapes in the state. More than 15 million linear feet of native-grass field borders and more than 50,000 acres of crop-field reflooding are being installed through the program, especially in southeast and north-central Missouri. Field staff and landowners in these areas report frequent sightings of quail in and near the new buffers, and waterfowl in the flooded crop fields.

MDC collaborated with the USDA-Farm Service Agency, USDA-Natural Resources Conservation Service, Missouri Department of Natural Resources, Missouri Department of Agriculture and the Missouri Association of Soil and Water Districts to establish the Conservation Reserve Enhancement Program (CREP) that has helped landowners take erosion-prone crop and pasture land out of production for 14 to 15 years. In return, landowners received cost-share, annual rental payments and sign-up incentives.

Through CREP, more than 25,000 acres of habitat was seeded and established to native warm-season grasses in parts of 79 counties. Many of the acres were enrolled in west-central and northeast Missouri. In fact, these additional acres helped Cass County become only the second county in the nation to achieve habitat goals identified in the Northern Bobwhite Conservation Initiative. The first county recognized to achieve its goal was Scott County in southeast Missouri.

Conservation Reserve programs benefit northern bobwhite and grassland birds

Through the CP33, or Habitat Buffers for Upland Birds, more than 31,000 acres of native-grass field borders have been established along crop field edges. Under CP33, landowners receive cost share for establishing vegetative cover and an annual rental payment. Approximately 1,600 acres of Missouri's allocation remains, proving the popularity of this program. As a part of a national monitoring project, MDC staff are sampling quail and songbirds on 60 fields enrolled in CP33 and 60 fields not enrolled. Nationwide, the CP33 practice has shown a positive response by quail and several songbirds compared to crop fields without buffers. Many of the field borders are 3 years old and finally are providing favorable habitat for quail and songbirds.

In 2008, the USDA Farm Service Agency announced the State Acres for Wildlife Enhancement (SAFE) practice of the Conservation Reserve Program (CRP), which will bring an additional 19,200 acres of quail-friendly habitat to Missouri. This new practice provides cost share, incentives and annual rental payments for landowners interested in creating habitat for quail, prairie chickens and other declining wildlife. SAFE or CP38 already has resulted in almost 14,000 acres of quail- and grassland bird-friendly habitat. The practice is also targeting greater prairie chicken focus areas in southwest and northwest Missouri and sand prairie restoration efforts in southeast Missouri.

Farm Bill conservation programs benefit Missourians and natural communities

The USDA Natural Resource Conservation Service held statewide sign-ups for the Environmental Quality Incentive Program (EQIP) and Wildlife Incentive Program (WHIP). Since 2002, more than \$4.9 million in cost share has been provided

to Missouri landowners to improve habitats for wildlife. In fact, a record \$1.4 million in cost share was allocated to new WHIP contracts in 2008. Through both programs, field staff provide technical assistance to private landowners and USDA staff responsible for implementing prairie, glade, savanna and woodland restoration projects, developing forest stewardship plans and enhancing quail habitat. Since 2002, more than 10,000 acres of prairie, glade, savanna and woodland have been restored through EQIP and WHIP on private land.

Grants target susceptible habitats

In 2009, MDC received four Cooperative Conservation Partnership Initiative (CCPI) grants from the USDA Natural Resources Conservation Service. They will target quail and grassland-bird habitat improvements in Cass, Howell, Scott, Mississippi, New Madrid and Pemiscot counties, and stream-bank restoration in Shannon County on Mahans Creek. CCPI targets watersheds of special significance and other geographic areas of environmental sensitivity by addressing local resource problems.



Serving Nature and You on Conservation Areas

Wetland rehabilitation continues

An interdisciplinary team of wetland experts continues to develop plans for rehabilitation of the five oldest wetland-management areas—Fountain Grove, Duck Creek, Montrose, Schell-Osage and Ted Shanks.

Ted Shanks CA restoration is nearing completion and Fountain Grove CA is one-third of the way through the second of two phases. The construction bid has been awarded at Montrose CA and is awaiting permits in order for work to begin. Duck Creek CA is in the design phase of the project and is using new technology called LiDAR (Light Detection and Ranging), which is a remote-sensing system used to collect topographic data. This will aid in locating historical wetland features, recreating natural water flow and placement of water-control structures. Schell Osage CA will be the last area renovated and work is expected to begin in FY2014.

Made habitat improvements to state's forests and woodlands

We conducted forest- and woodland-habitat improvement on 21,078 acres of state land. This included thinning young trees on 3,052 acres, post-sale cultural work of 1,048 acres, prescribed fires on 10,922 acres and harvest of 6,056 acres. The table below shows the acres and volume by harvest type.

Type Cut	Acres	Percent	Thousand of board feet	Percent
Regeneration	973	16	3,159	24
Shelterwood	1,056	17	3,243	25
Intermediate	2,183	36	3,990	31
Unevenaged	1,844	31	2,680	20
TOTAL	6,056	100	13,072	100

Assessing sericea lespedeza control methods and impacts on non-target forbs

Sericea lespedeza (*Lespedeza cuneata*) is a long-lived introduced legume that invades both introduced and diverse native plant communities. It can form dense monocultures that reduce wildlife-habitat value through competitive exclusion of other preferred plants. Grassland structure and forage for wildlife and cattle also are degraded in the presence of sericea. Biologists and agronomists throughout the Midwest recognize the need for research on sericea lespedeza because of its invasive nature and subsequent negative effects on plant and wildlife communities.

Objectives of our study were to determine the relative effectiveness of four control methods to reduce stem densities of sericea lespedeza, and to determine the impacts of those control methods on selected forb species. Study sites involved native prairie remnants or planted grasslands, and were selected based on forb abundance and density of sericea lespedeza. Sites consisted of abundant populations of forb species—in particular, those forbs that are believed to be most physiologically similar to sericea (slender lespedeza [*Lespedeza virginica*] and other legumes). Our four treatments included: May application of Pature-Guard™, June application of Remedy™, September application of Escort™ and summer (August) fire. Treatments were applied in 2005 and 2007. Pre-

treatment and post-treatment vegetative data were analyzed to detect differences in sericea stem density and frequency of forb species.

Data showed that herbicide treatments significantly reduced stem density when compared to the background and summer fire. There were no differences in stem density among the herbicide treatments. Seventeen forb species were analyzed to detect proportional differences between pre-treatment and post-treatment. Only flowering spurge (*Euphorbia corollata*) and black-eyed Susan (*Rudbeckia hirta*) were found to be significantly different. Escort reduced the frequency of flowering spurge, and black-eyed Susan decreased in the background plots and increased in the summer plots following treatment application.

Results indicate that spot application of these herbicides has effectively reduced stem density of sericea without impacting most non-target forb species. These results will be used in conjunction with existing information to develop sericea control recommendations for MDC managers, non-governmental land managers and Missouri landowners. Information from this study also will be used by public and private managers in surrounding states, as well as in Missouri.

Horse-trail study conducted

In Spring 2008 MDC conducted a survey of more than 5,000 randomly selected horse owners in Missouri. Survey results—as well as previous surveys of area managers, focus groups of riders and on-site trail counts—provided the following recommendations: provide good, consistent signage; maintain cooperation among agencies to minimize expense and duplication of efforts; enforce agency policies; and provide a clear understanding of how management decisions are reached. Also, if cost were a limiting and deciding factor, respondents suggested closing trails which were least used or those for which extensive repairs were needed.

The survey results helped inform MDC's Multi-Use Trail Committee as it crafted new trail regulations adopted this year, as well as energized cooperation opportunities with other agencies that manage trails on public lands.

Active management continues on MDC-owned and -managed lands

MDC has maintained a high level of active management in the last few years on MDC lands—especially for quail and grassland birds. During FY09, MDC staff conducted habitat-management activities on approximately 187,000 acres of public land, with an additional 120 miles of edge habitat. Staff spent nearly 460,000 hours department-wide on area and equipment maintenance; a portion of this time was spent repairing vandalism to signs and structures.

Wigwam School Access opens

Wigwam School Access, the sixth MDC access developed on Lake of the Ozarks, opened in March for public use. On the Osage River Arm, near Laurie on the north side of Lake Ozark at mile marker 66.2, the access was named for a small country school that was located near the site prior to the creation of Lake of the Ozarks. The access includes a concrete entrance road and parking area large enough to handle 59 vehicles with trailers, an overflow lot for another 30 vehicles with trailers, a two-lane concrete boat ramp, courtesy dock, floating fishing dock, fish-weighing platform, privy, concrete walkways and security lighting.

Federal Aid in Sport Fish Restoration Program funded three-fourths of the project costs. The timing of the opening was perfect; it was just prior to the opening of paddlefish snagging season and the usual early spring interest in crappie and bass fishing. A dedication ceremony was held June 3, and approximately 45 people attended, including Chamber of Commerce members, Morgan County commissioners, the contractor, anglers, local residents and MDC staff. Conservation Commissioner Chip McGeehan, Director John Hoskins and Fisheries Division Chief Bill Turner all gave short presentations. We also heard from a couple that witnessed the lake filling in 1931! After the presentations, the traditional ribbon was cut... with a fillet knife!

Adopt-A-Trail program continues

The Adopt-A-Trail program began in the fall of 2003 and provides opportunities for hikers, bicyclists and equestrians to assist conservation-area staff. Volunteers may monitor, maintain and help to enhance trails and trailheads.

In FY09, 44 volunteers or groups of volunteers reported spending 1,130 hours on conservation-area trails. Since the program's inception, volunteers have contributed 7,123 hours on their adopted trails.



Accounting for Department Operations

Listened to Missourians

The Department of Conservation believes that all Missouri citizens deserve respect, and that part of delivering excellent public service is to listen and understand what Missourians say about conservation programs and services.

We conduct a variety of scientifically sound, unbiased and representative efforts each year in an effort to understand public opinions, expectations and recreation participation. This information guides decisions about regulations and fish, forest and wildlife management.

In FY09 there were 62 activities that involved 87,226 people. These included public surveys, focus groups, public meetings and contacts with MDC's ombudsman. In addition, the staff of *Missouri Conservationist* magazine received a wide variety of questions and comments throughout the year.

Provided staff and equipment assistance in disaster relief/response situations

MDC's promise to serve the public extends beyond our traditional goal to provide exceptional customer service. Equally important are our activities instrumental to the safety of our stakeholders and employees, and our responses to catastrophes within and outside our state borders. During FY08, we assisted in five Missouri disaster relief/response situations, including three ice storms, one tornado and three floods.

At the request of Missouri's State Emergency Management Agency (SEMA), MDC employees provided a variety of services to affected communities. They used heavy equipment and chainsaws to clear roads of downed, ice-covered trees and limbs. They also used heavy equipment, ATVs, and boats and vehicles to maintain levees, transport sandbags and assist with water rescue.

Staff provided security details and traffic control when needed, and coordinated shelter efforts for citizens stranded by events in their areas.

Forestry Division establishes forestry technical-training academy

To provide a consistent standard of training to new Forestry Division employees, a forestry-training academy was initiated in January 2009. All new Forestry Division employees are required to attend this academy within the first two to three years of employment. This academy also is offered to all MDC employees to provide staff from other divisions training in forest-management technical skills and management procedures. During FY09, 12 academy training courses were offered, with 210 students in attendance. Eight of these training courses were held at the University of Missouri's University Forest Environmental Education Center.

Tracked strategic plan accomplishments

Fiscal year 2009 was the third year of tracking accomplishments of *The Next Generation of Conservation*, MDC's strategic plan approved by the Conservation Commission in March 2006. The plan identifies nine goals, 28 results we want to achieve and 61 specific actions that MDC will work with Missourians to achieve. For each of the action items, performance measures and staff responsible for reporting are identified. An automated, web-based data-entry program facilitates accomplishment tracking.

The Next Generation of Conservation is available online at www.mdc.mo.gov/about/next_gen

Issued six internal-audit reports

MDC employs two full-time internal auditors who perform regular, independent audits to ensure that public funds are expended in a responsible manner. During the year ended June 30, 2009, MDC internal auditors reviewed various aspects of operations and issued six internal-audit reports. There were no major findings noted with the business practices reviewed.

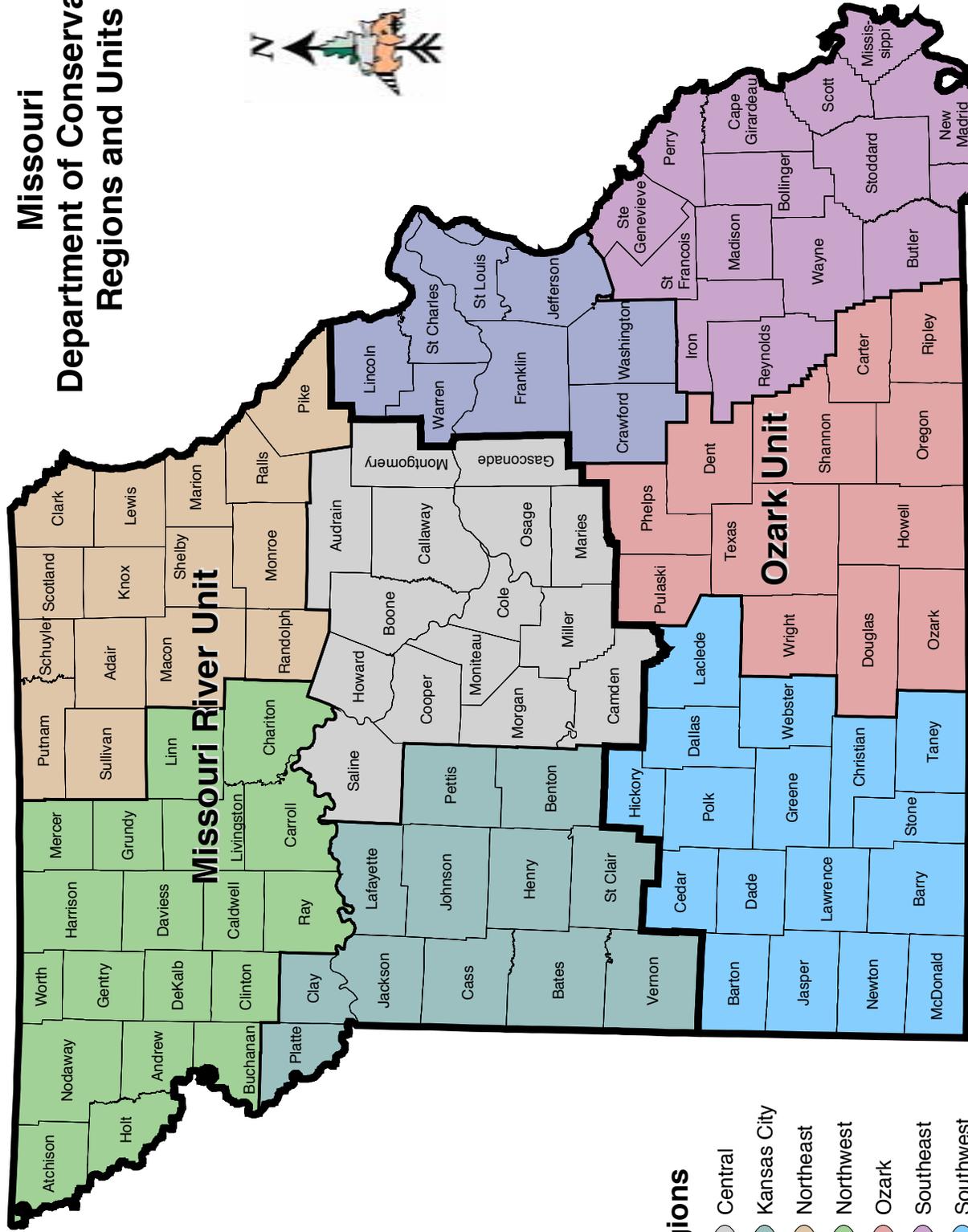
Missouri Forest Resource Advisory Council provides forum

The Missouri Forest Resource Advisory Council (MoFRAC) moved into its second year with Dave Murphy, executive director of the Conservation Federation of Missouri, assuming the duties of chairman. The group, with representatives from throughout the state, provides an excellent forum for communication and coordination among Missouri's various forestry interest groups. MoFRAC also provides an excellent way for MDC to interact with a group of its stakeholders.

Organization and Administrative Descriptions

- ▲ Department Regions and Units
- ▲ Department Organizational Chart
- ▲ Director's Office and Department Divisions

Missouri Department of Conservation Regions and Units



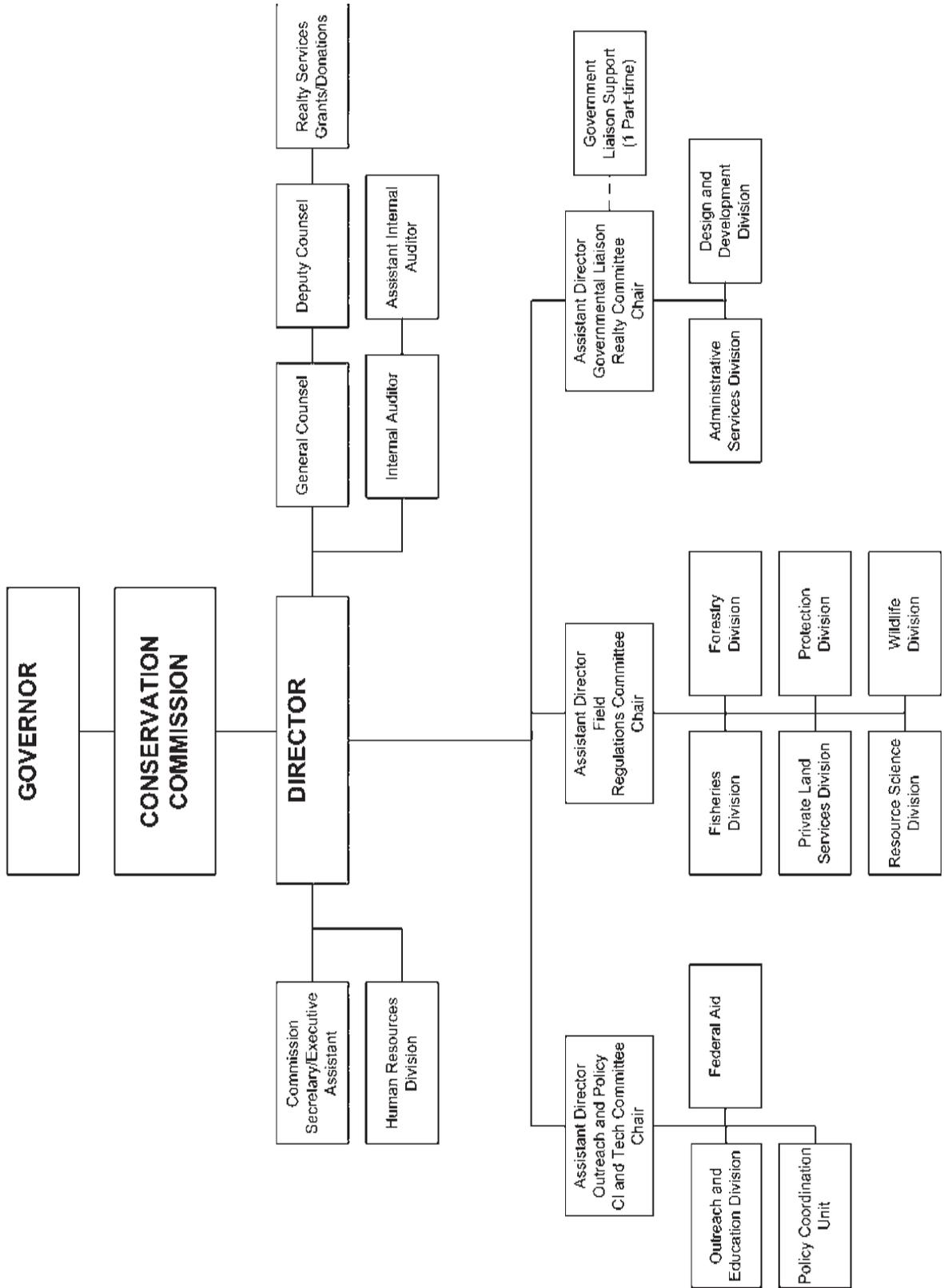
Regions

- Central
- Kansas City
- Northeast
- Northwest
- Ozark
- Southeast
- Southwest
- St. Louis
- Unit Boundaries

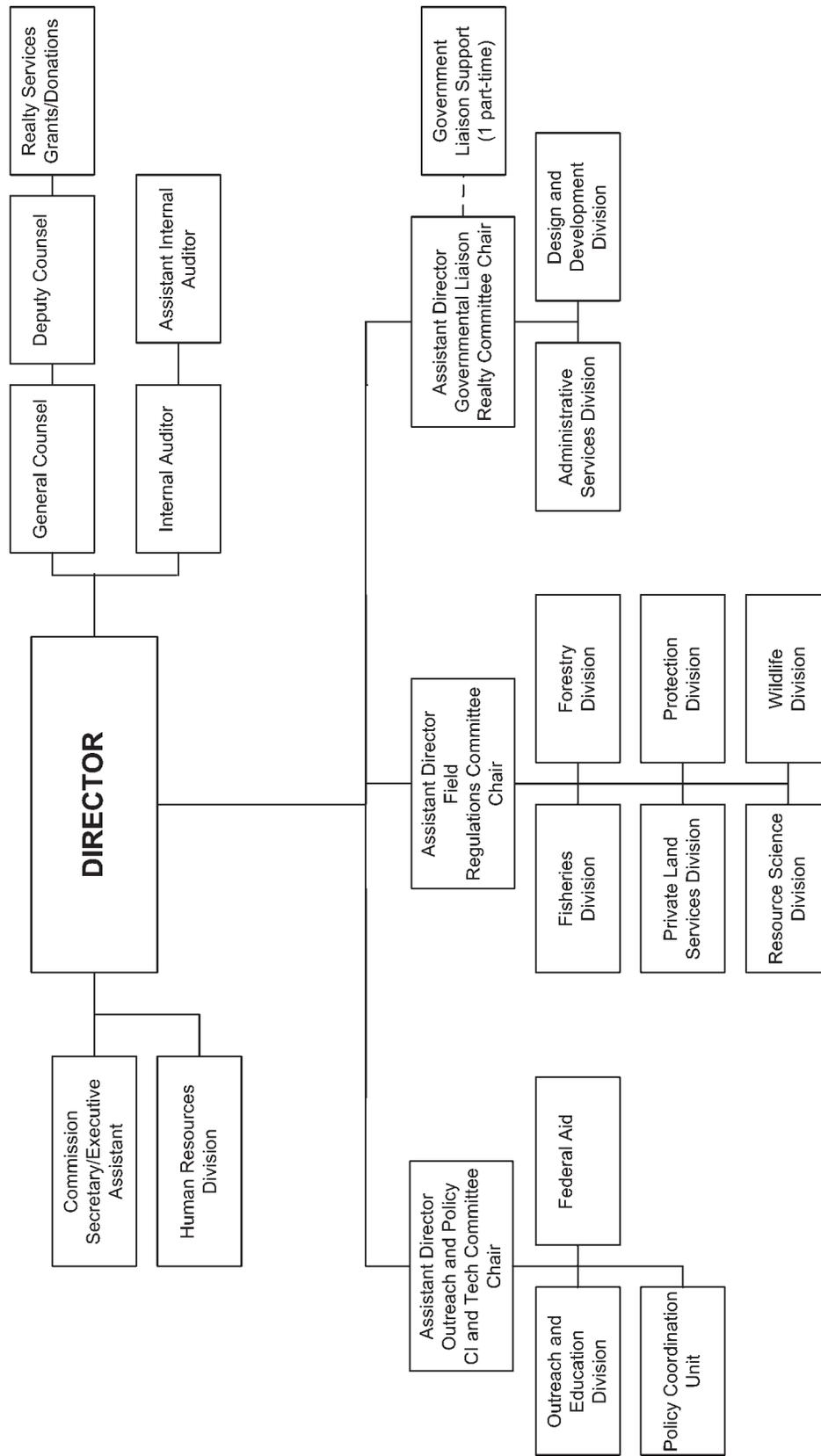


Cartography by: Kevin Borisenko, January 2003 | N:\MAPS\RegionUnitsNoShade.pdf.

MISSOURI DEPARTMENT OF CONSERVATION



Director's Office



Director's Office

John Hoskins, Director

Director John Hoskins, appointed by the Conservation Commission, is the administrative officer of the Department of Conservation and directly oversees the three assistant directors, general counsel, internal auditor and the Human Resources Division administrator.

Dave Erickson, Assistant Director

Assistant Director Dave Erickson administers field operations for MDC and directly oversees division administrators of Fisheries, Wildlife, Forestry, Private Land Services, Protection and Resource Science. He is also chair of the Regulations Committee, a standing committee that recommends statewide wildlife regulations to the Conservation Commission.

Tim Ripperger, Assistant Director

Assistant Director Tim Ripperger is the MDC liaison with the Missouri congressional delegation and federal agencies, and directly oversees Outreach and Education Division, Policy Coordination Unit and the Federal Aid program. He also chairs the Capital Improvements and Information Technology Committee.

Bob Ziehmer, Assistant Director

Assistant Director Bob Ziehmer is the MDC liaison with the state legislature, state agencies in the executive branch and the governor's office staff. He directly oversees the Administrative Services Division, the Design and Development Division, and serves as chair of the Realty Committee. He also represents MDC on the Land Reclamation Commission.

Tracy McGinnis, General Counsel

General Counsel Tracy McGinnis is legal adviser to MDC staff, the director and Conservation Commission. She oversees the Deputy Counsel, who manages Realty Services and the Grants and Donations program.

Nancy Dubbert, Internal Auditor

Internal Auditor Nancy Dubbert serves MDC by independently analyzing MDC operations, policies, procedures, records and compliance with laws and regulations to ensure effectiveness and accountability. The internal auditor also is custodian of records and oversees the assistant internal auditor.

Policy Coordination Unit

The Policy Coordination Unit serves the director's office and the agency by managing agency-wide, statewide, complex or sensitive issues. Examples of services include:

- Coordinating intra- and inter-state fish, forest and wildlife resources associated with the Missouri, Mississippi and White rivers.
- Coordinating additions or revisions to the Area and Resources Management Policy and Procedures Manual.
- Obtaining necessary state and federal environmental regulatory permits and cultural-resources clearances for statewide MDC construction and land-management activities.
- Representing public fish, forest and wildlife interests by coordinating and providing comments or recommendations to federal agencies authorized to conduct environmental reviews and approve project permits.
- Responding to public requests for site-specific information regarding species and communities of conservation concern by providing comments or recommendations to minimize impacts.

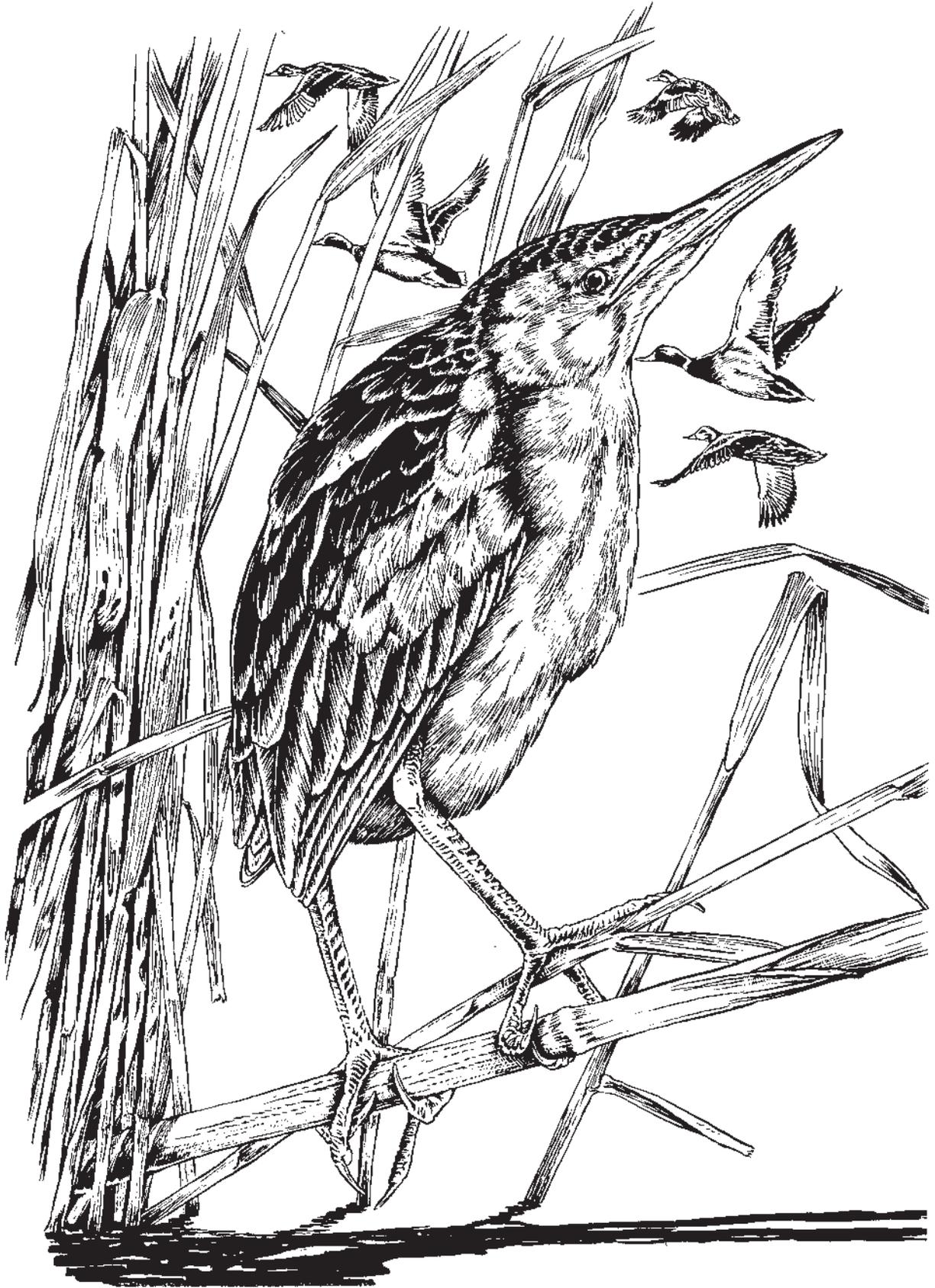
- Coordinating public involvement activities including social and economic survey analysis, public-use surveys and regional citizen forums.
- Guiding MDC's strategic-planning process.

Realty Services

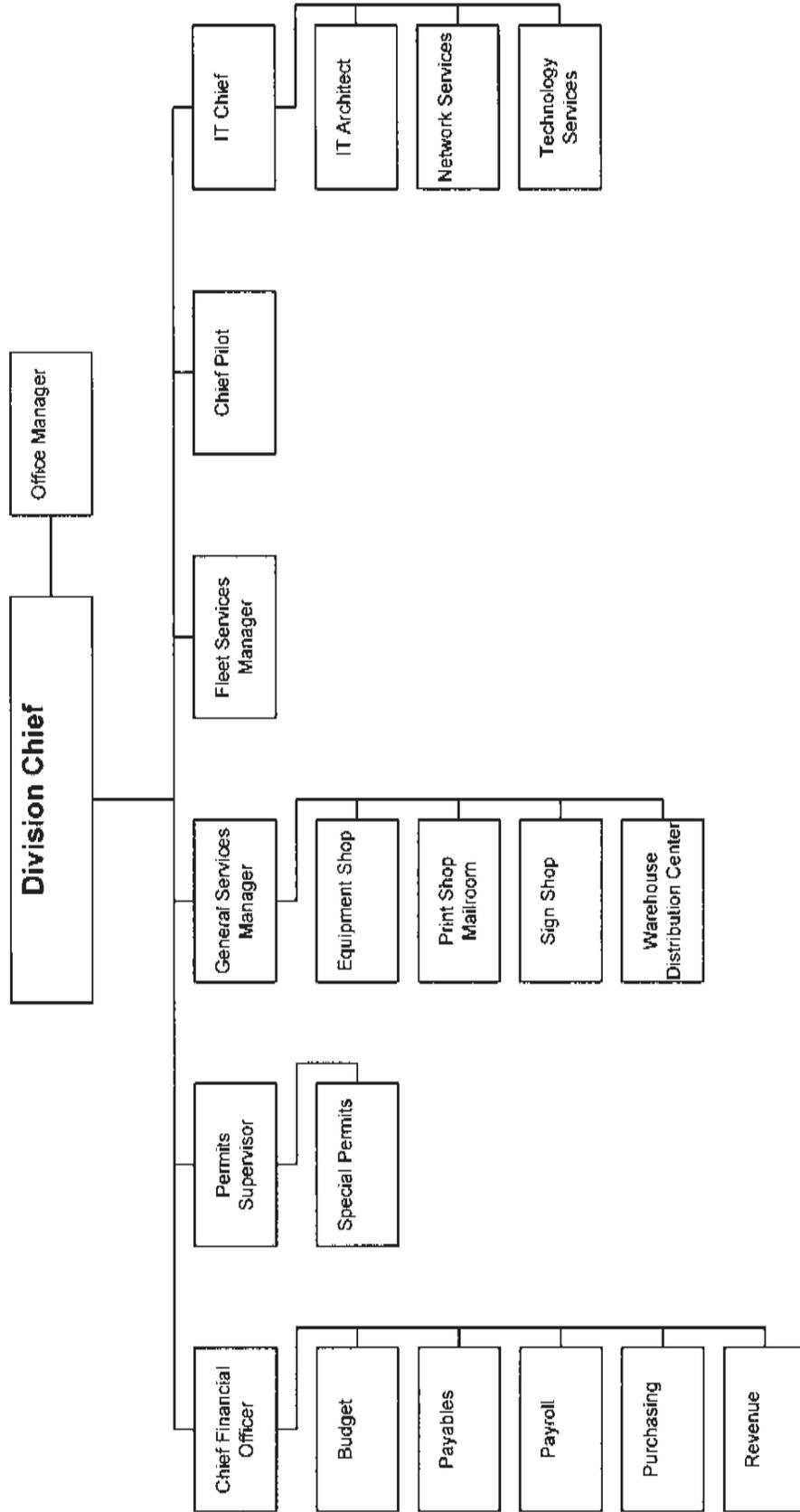
Realty Services is responsible for handling the acquisition of all land and land rights for MDC; resolving boundary, encroachment, trespass or access issues on MDC areas; handling easement requests; maintaining records of MDC's real estate inventory; and distributing annual in-lieu tax payments to Missouri's 114 counties.

Federal Aid

The federal aid staff is MDC's primary administrator of federal-aid granting opportunities. Some of the agencies in which federal-aid monies are obtained and managed include the U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency and Natural Resource Conservation Service. MDC's federal-aid staff administers approximately 85 federal grants, with the most significant of these being the Sport Fish and Wildlife Restoration grants.



Administrative Services Division



Administrative Services Division

Mission: *Serving MDC staff to provide agency-wide support and expertise in a manner that ensures financial accountability; promotes wise use of assets; provides ancillary services; and offers technological solutions for satisfying Department responsibilities and needs that meet public expectations.*

Administrative Services Division fulfills its mission by serving MDC's internal and external stakeholders through the following sections that comprise this division.

Programs

Financial Services—This section provides a broad range of financial functions that support MDC's operations, while carefully managing the agency's assets, which have been entrusted to its care. Revenue projections and management, internal and executive budget management, financial analytical support, agricultural crop management, accounts payable and MDC's payroll are the functions this unit oversees.

Permit Services—This section is responsible for the distribution and management of point-of-sale automated permits, managed hunt/special permits, and commercial and landowner permits.

Fleet Services—The unit is responsible for ordering department vehicles and fixed-asset inventory. We seek ways to improve and minimize the traveling performed with state vehicles.

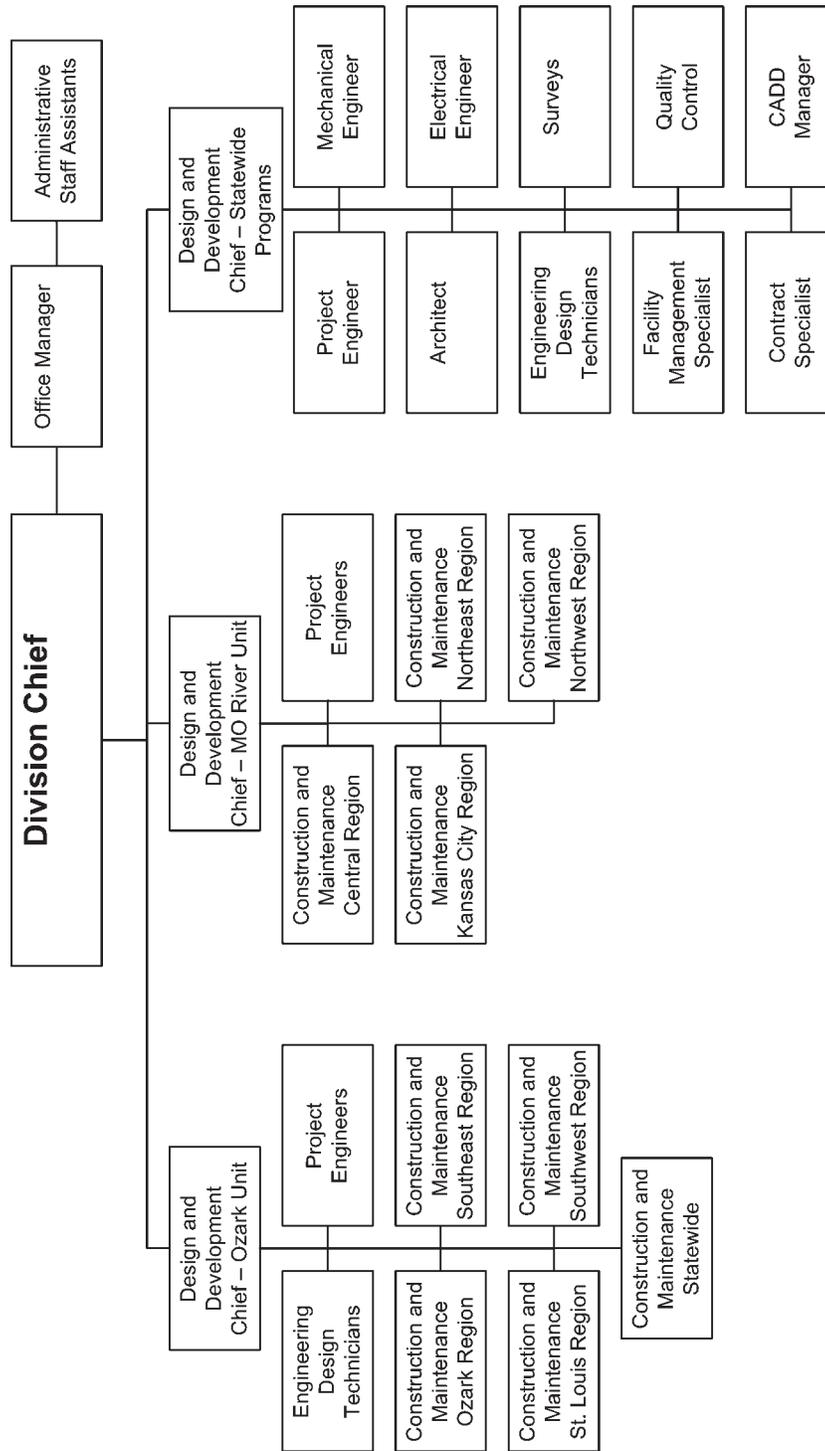
Information Technology Services—Communication responsibility for the entire agency is entrusted to this section. Better known as IT, employees provide a wide range of services which include data, telecommunications and radio system management, helpdesk operations, software support, network operations and application-development functions.

General Services—This section oversees equipment management and maintenance, sign production, distribution center operations, and printing and mailing functions.

Flight Services—This unit provides flight services for MDC resource functions such as wildlife management, fire control and enforcement. Flight Services is responsible for the upkeep and maintenance of MDC-owned aviation equipment.

Administrative Services Division makes every effort to achieve its mission by maintaining the financial integrity of MDC and ensuring prudent and frugal use of its assets. We provide a broad range of high-quality support services to MDC's staff and programs. Not only do we lead and facilitate the effective use of technology in MDC operations, but we also acquire and maintain MDC equipment.

Design and Development Division



Design and Development Division

Mission: *To provide high-quality professional engineering, architectural, surveying and construction/maintenance services to assist MDC in carrying out its mission.*

Goals

- Support MDC by designing and constructing public-use facilities that are in harmony with the environment and enhance public use of our natural resources
- Provide sound conservation engineering assistance to other MDC divisions and outside partners (communities, counties, landowners)
- Provide high-quality maintenance to MDC facilities and conservation areas
- Provide excellent and timely customer service

Organization

The division is organized into three units, with administrative and design staff located in the central office, and construction and maintenance staff located in each of the eight regions.

Programs

Engineering and Architecture—The division provides engineering and architectural designs to implement capital improvement/construction development (CI/CD) budget. Staff handles all aspects of design and development on projects which may include: performing investigations, conducting feasibility studies and/or environmental assessments; and preparing design drawings with associated contract specifications. Types of projects include boat accesses, docks, roads, parking areas, office and storage buildings, fish hatcheries, fishing lakes and ponds, nature centers, shooting ranges, trails and wetlands.

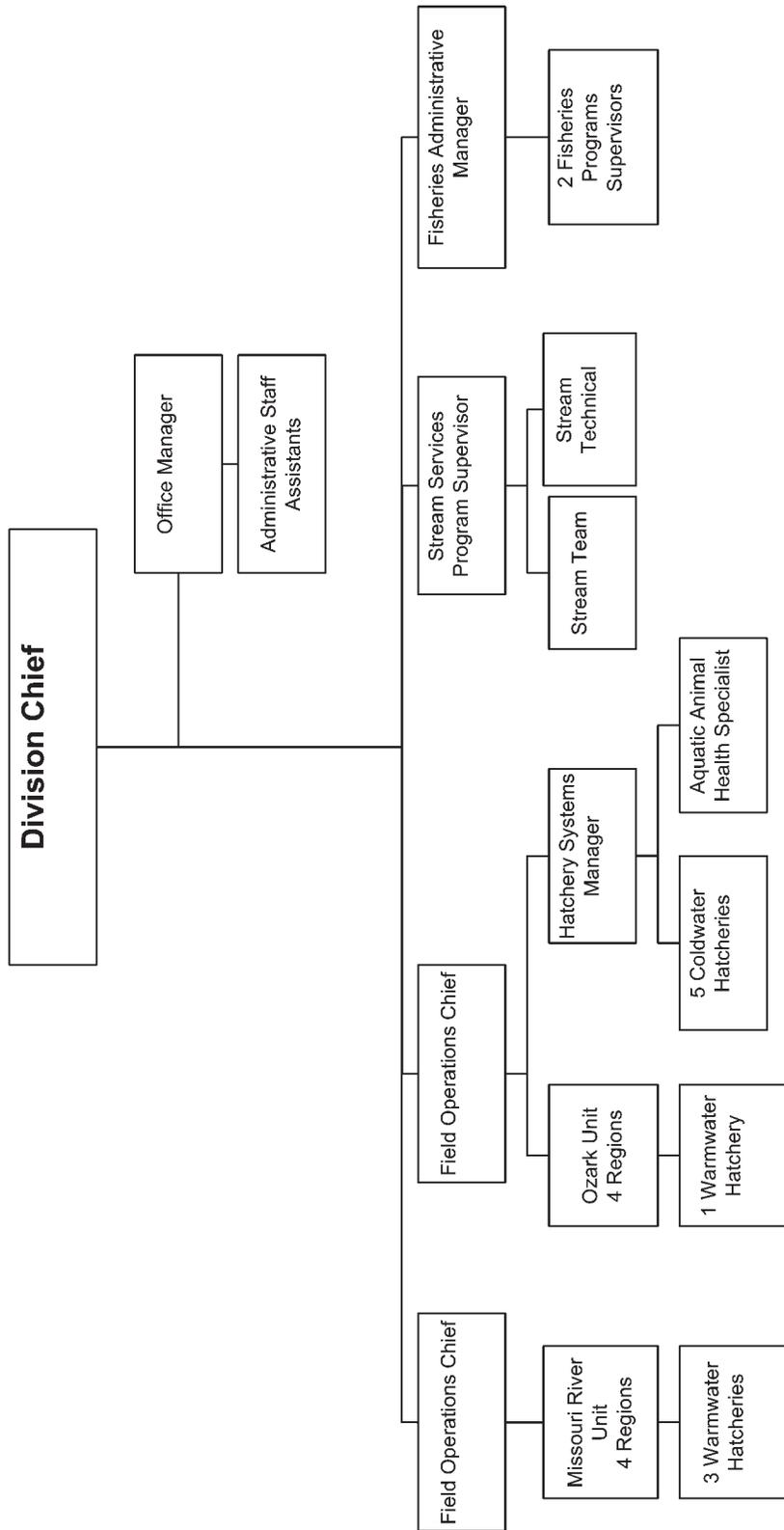
Technical Support—In addition to handling the CI/CD projects, engineering staff also provides support and design expertise on non-capital improvement projects to MDC divisions. Staff also provides design drawings and estimated quantities on MDC's repair and renovation projects; these efforts support our regional construction and maintenance superintendents and field resource staff.

Surveys—Employees in this unit are responsible for engineering and construction surveys and land boundary surveying for property boundary delineation.

Construction and Maintenance—In each region, the division maintains superintendents, carpenters, equipment operators and facility maintenance technicians. This staff is responsible for the construction of capital-improvement projects assigned to it, as well as small construction projects, and repair and renovation projects needed by other MDC divisions. They provide facility maintenance to nature centers and regional offices, and perform routine maintenance at unstaffed department areas. Other maintenance tasks include mowing grass, grading parking areas and entry roads, cleaning boat ramps and performing minor maintenance on privies, docks and pavilions.

County Aid Road Trust (CART)—The division administers the department's CART Program which involves cost sharing of roadway maintenance with counties and other governmental subdivisions to help ensure that roads accessing department areas are properly maintained and provide adequate access.

Fisheries Division



Fisheries Division

Mission: *To professionally manage the fish and associated aquatic plants and animals of Missouri for the use and enjoyment of the people.*

Goals: To maintain aquatic biodiversity, reduce the effects of aquatic nuisance species, provide enjoyable fishing trips, protect aquatic habitat, and inform and educate the public about Missouri's aquatic resources.

Missouri's aquatic resources are vast and diverse. Missouri has almost 17,000 miles of permanent rivers and streams and another 39,000 miles of intermittent streams. The state also has about 780,000 acres of lakes (36 percent public). Each year, millions of people use and enjoy our waters, and fishing continues to be one of our most popular outdoor activities. About 22 percent of our residents aged 16 and older fish sometime during the year. During 2008, MDC sold 1,396,717 fishing permits and tags of all types. Fishing is big business and very important to the state's tourism industry.

Organization: To carry out its mission and achieve its goals, the division has fisheries management staff deployed in MDC's eight regions. Management efforts are supported by four warmwater fish hatcheries, one fish-rearing station, five coldwater fish hatcheries, an aquatic animal health specialist, the Stream Unit and central office staff.

Programs

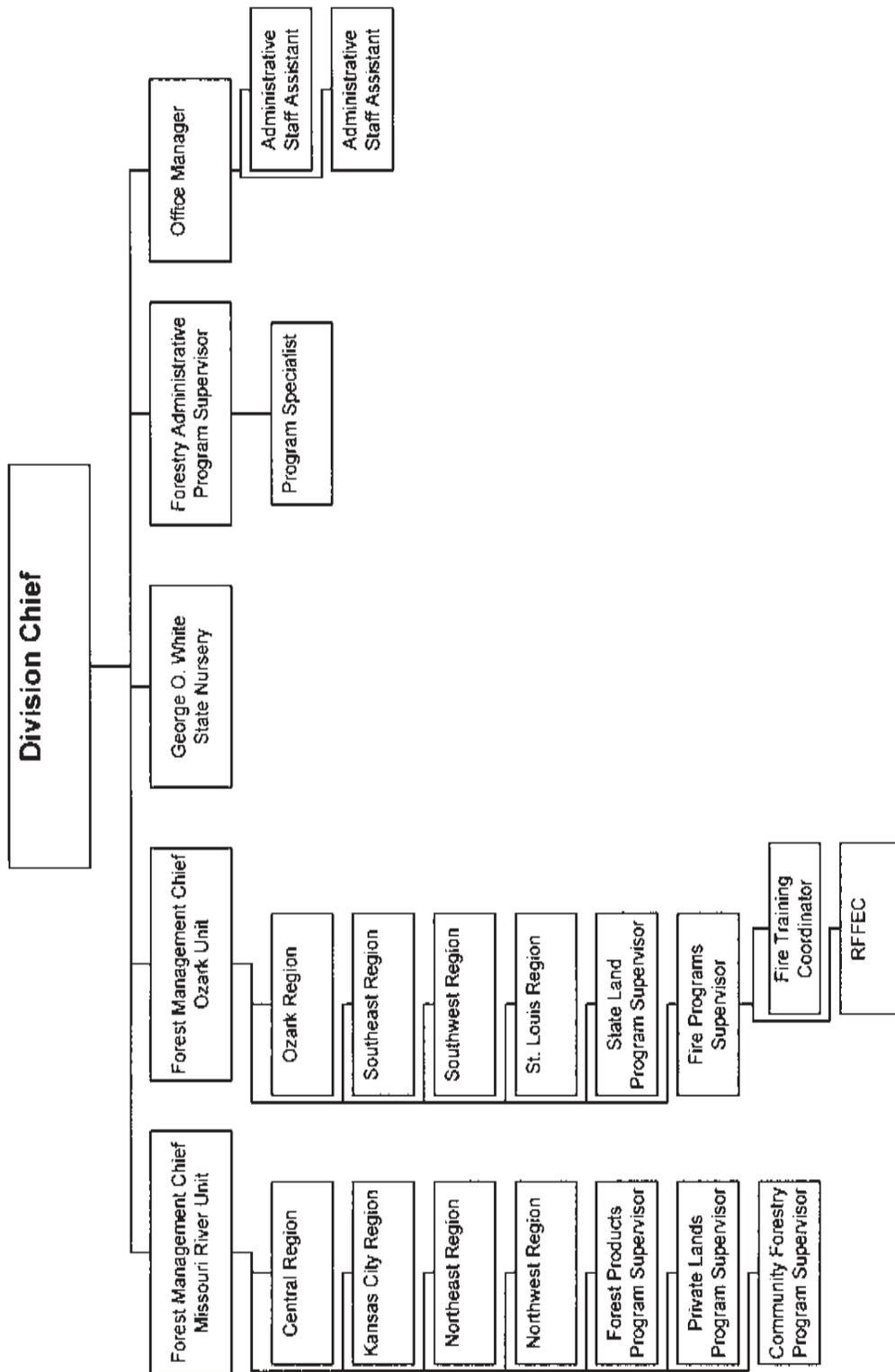
Regional staff is responsible for monitoring and maintaining the quality of the aquatic resources, managing the public fisheries resources, providing technical guidance in lake and stream management to private landowners and other state and federal agencies, providing and assisting with public information and education, and representing the division and MDC on matters pertaining to the aquatic resources of their region.

The staffs of the four warmwater hatcheries and the fish-rearing station are responsible for rearing the fish needed to stock public waters, waters used for special fishing events and aquatic resource education, and private lakes that qualify for initial stocking of fingerling fish. They also play a vital role in our efforts to restore state and federally endangered species. The five coldwater hatcheries rear the trout needed to stock public waters. Their employees are also responsible for stocking and managing the four trout parks that are enjoyed by more than 400,000 anglers each year.

The Streams Unit is responsible for stream public-involvement programs. It also oversees a Stream Technical Unit, which provides technical stream services to MDC staff, other state and federal agencies and private landowners. Public-involvement programs include the Missouri Stream Team and Volunteer Water Quality Monitoring programs, which consist of 85,000 citizen volunteers. Both are cosponsored by the Missouri Department of Natural Resources and the Missouri Conservation Federation.

Central office staff directs and administers division programs, works on the acquisition and development of public fishing and boat access areas, coordinates angler recognition programs, coordinates the production of technical and popular written materials and provides administrative support for division and MDC staff and programs.

Forestry Division



Forestry Division

Mission: *To protect and manage the forests of the state for long-term resource health and sustainability, and for the use and enjoyment of Missouri's citizens.*

Goals

- Conduct public-land management activities that are scientifically based and aimed at developing and maintaining healthy forest and woodland ecosystems
- Engage private-forest landowners, communities and homeowners in sound, scientifically based tree and forest management through education, technical service and the development of partnerships with other agencies, organizations and forest products industry

Organization: To fulfill its mission, the division is organized into seven main program areas as described below. Administrative staff members are assigned to specific program areas, while field staff work across all program areas.

Programs

Private Land—Foresters assist Missouri landowners with forest management through one-on-one contacts. Foresters often use the Tree Farm program, Forest Stewardship program, state and federal cost-share programs, and offer technical advice to assist landowners. We help more than 3,000 landowners with management on 30,000-plus acres annually.

Public Land—The division manages more than 440,000 acres of public forest land. Foresters also provide technical assistance on lands managed by the Wildlife Division. We annually complete more than 45,000 acres of active management. This includes forest inventory, tree planting, timber sales, forest-stand improvement, wildlife-management practices, and glade and savanna management.

Fire—We have statutory responsibility for the state's wildfire suppression. Last year, 3,337 fires burned 40,410 acres in Missouri. Division personnel work closely with more than 800 fire departments to offer training, provide federal excess property, provide grants for the purchase of fire equipment and promote wildfire-prevention activities.

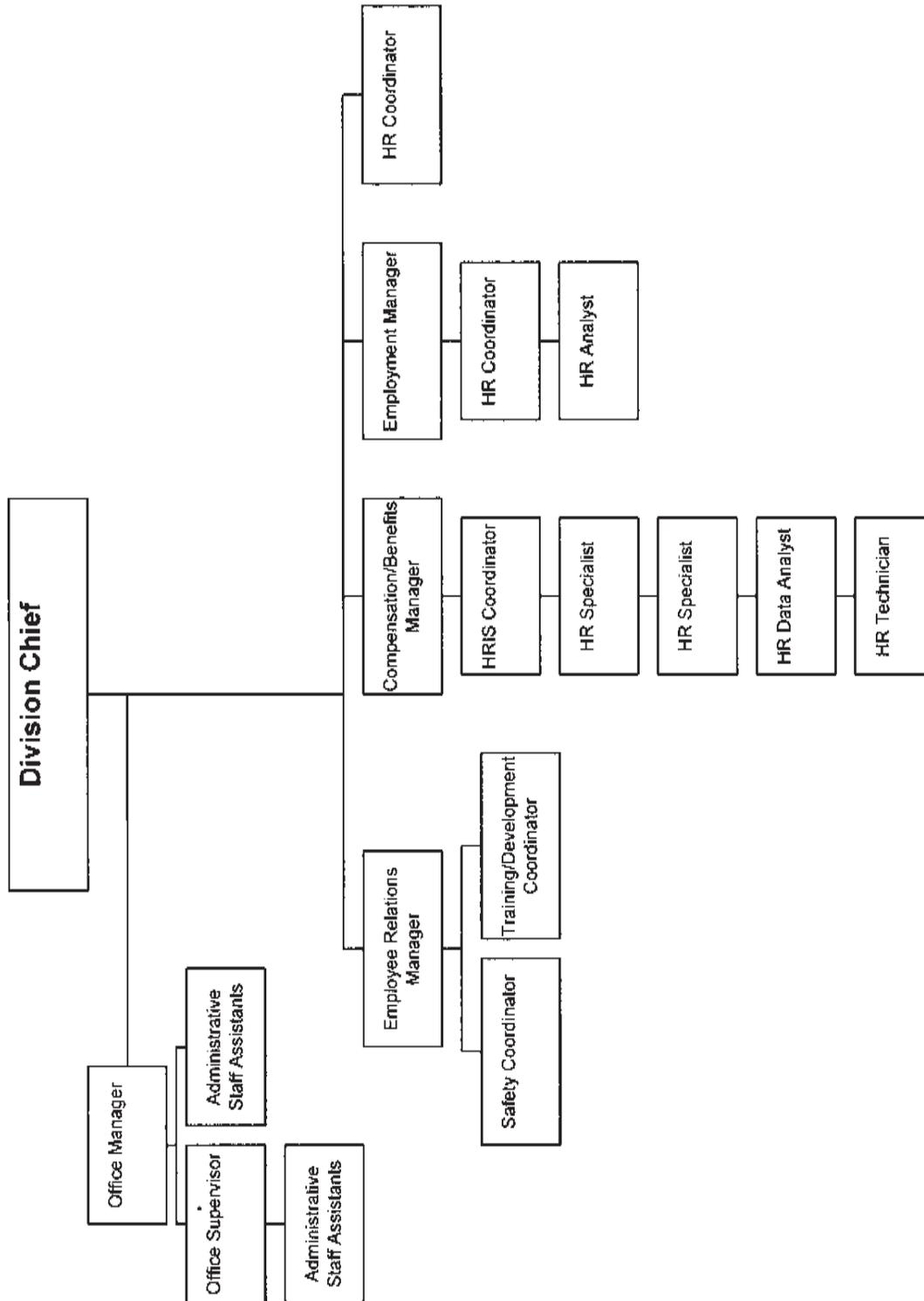
Urban and Community Forestry—This program provides planning and technical assistance to communities and homeowners. In addition, the Tree Resource Improvement and Maintenance (TRIM) program provided cost-share assistance to more than 59 Missouri communities for tree planting and maintenance of their community forest resources. We have a partnership with the National Arbor Day Foundation to promote and administer the Tree City USA program. Missouri has 79 certified Tree City USA communities. We also work with the Arbor Day Foundation to provide training to electric utility right-of-way clearing crews through the Tree Line USA program. Ten utility providers are Tree Line USA certified.

Forest Products—The main goal of the program is to provide technical assistance to the wood products industry and promote Best Management Practices (BMP) for water quality on timber sales statewide. We work with the Missouri Forest Products Association to provide forest products utilization programs and activities such as the Professional Timber Harvesters and the Master Logger Certification program. Also, we work with entities interested in the emerging bio-energy field. Another important function of the program is to provide technical training for field foresters regarding wood use, timber-harvesting techniques, contracting and implementing BMPs.

Outreach and Education—Forestry Division works closely with our Outreach and Education Division to increase Missourians' understanding about their state's forest resources and proper forest-management activities. In addition, foresters conduct programs, field days and workshops for schools, special-interest groups and the general public on a wide range of forest-management issues.

State Forest Nursery—The nursery annually grows and distributes approximately 4.5 million seedlings of more than 60 species. The seedlings include trees and shrubs suitable for reforestation and wildlife-habitat restoration activities. The seedlings are planted on both public and private land throughout the state.

Human Resources Division



Human Resources Division

Mission: *To sustain the human resources services and programs that are necessary for a diversified, dynamic workforce and for an organization considered an “employer of choice.”*

Goals

- Assist MDC in hiring and retaining a highly trained and diverse workforce
- Advance practices that encourage employee empowerment and recognize job accomplishments
- Ensure ongoing employee training and development programs are predicated on important job competencies and offered in the most efficient and cost-effective manner
- Reinforce safety-conscious attitudes and practices in all aspects of employee work

Programs

Compensation—Staff performs compensation and classification activities that are used to support an employee-compensation program, which is both competitive and fiscally responsible. Staff also administers significant employee-benefits programs such as a comprehensive medical and life-insurance program.

Employee Relations—Staff coordinates activities promoting employee relations such as programs that recognize years of service, special achievement and retirement, and administers employee health and wellness programs that include health screenings and health education. Staff also assists employees and supervisors during grievance and corrective action processes to ensure that objective, fair and appropriate actions occur.

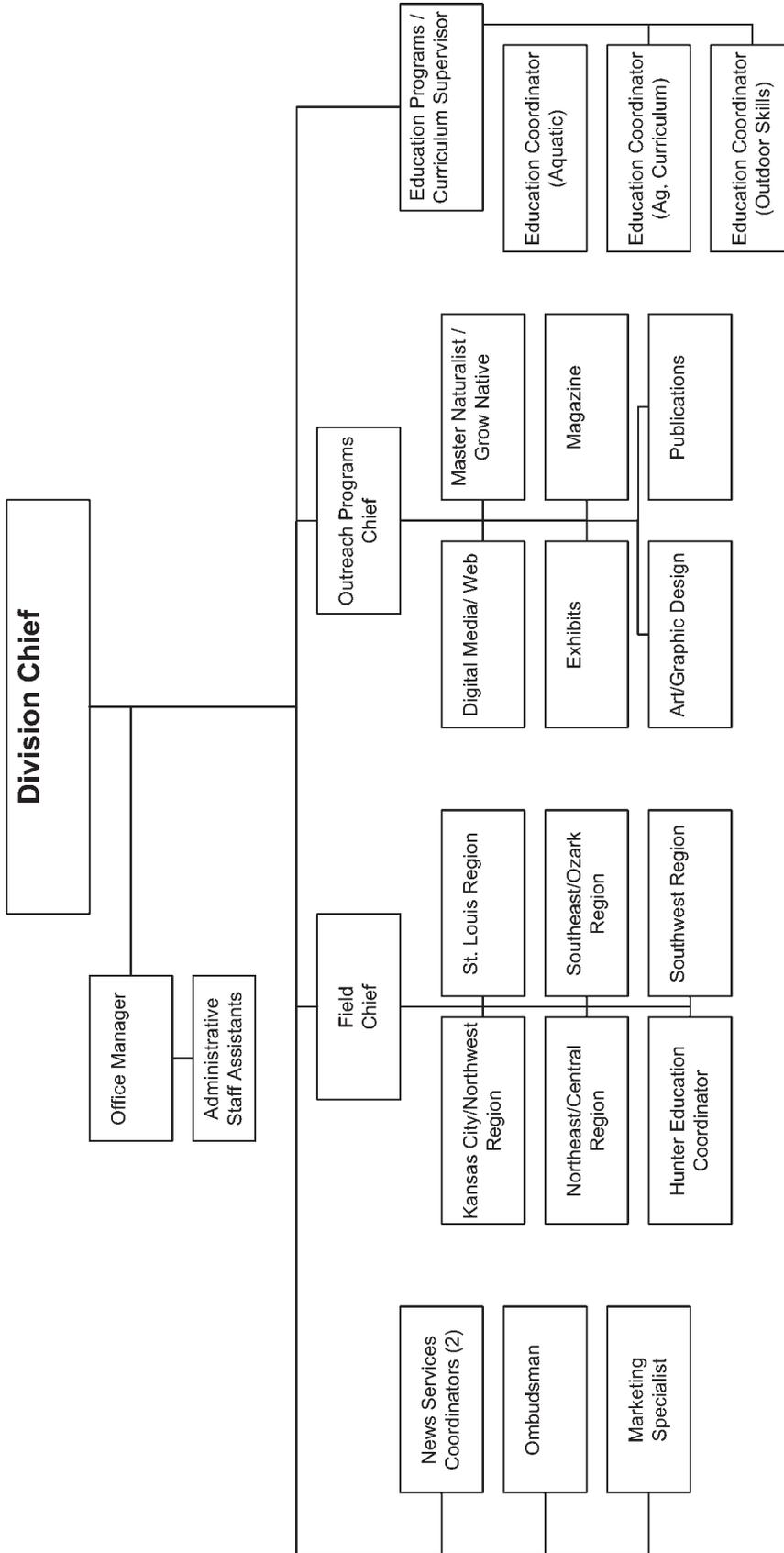
Policy Administration—Staff maintains MDC’s Human Resources Policy Manual by developing new or revised employment-related policies that help supervisors guide employees uniformly and fairly. Staff also tracks state and federal laws, executive orders and regulations that address human resources management issues, and works to ensure MDC is in compliance.

Recruitment and Selection—Staff uses a variety of recruitment methods to attract qualified applicants for job vacancies and assists supervisors with all activities during the evaluation and recommendation processes. In addition, staff monitors MDC’s affirmative-action effort to ensure equal-employment opportunities.

Training and Development—Staff administers MDC’s employee development and leadership-training programs. Among them is the Academy for Leadership Excellence, which provides training for all employees. The training is based on specifically identified competencies (knowledge, skills, behaviors and attitudes) that MDC considers important to success.

Safety—Staff administers loss-control programs including safety training, hazard identification on public lands, chemical safety, and personal injury, vehicle accident and public-mishap reporting and monitoring.

Outreach and Education Division



Outreach and Education Division

Mission: *To help Missourians connect with nature and conserve it, too.*

Goals

- Teach Missourians how to sustain healthy plant and animal communities
- Provide Missourians of all ages with skills and knowledge to enjoy the outdoors
- Show the many benefits people get from conserving our fish, forests and wildlife
- Teach the importance of science and ethical behavior in balancing how we live with our fish, forests and wildlife
- Help Missourians understand these key concepts of conservation:
 - a. A healthy environment needs a diverse mix of plants and animals.
 - b. Forests, grasslands, rivers and wetlands are always changing—with or without us. To live in balance with the natural world, we must understand how it works and work with it.
 - c. It's natural for what's on the ground to flow downhill into streams and ponds. To protect the health of our waters and the life that depends on them, we must be mindful of what we put on the land and how we change it.
 - d. Hunting, fishing, trapping and harvesting wood are part of our heritage, provide us with valuable resources and, perhaps most important, are tools that can be used to improve and maintain the health of our fish, forests and wildlife long into the future.

Programs

Outreach—The *Missouri Conservationist* magazine is mailed to about 500,000 readers each month and covers all sorts of nature, conservation and outdoor-recreation subjects. We serve up millions of web pages each year, produce free publications, for-sale books and news releases on topics as diverse as bird identification, hunting and fishing regulations, and how to create wildlife habitat. The information flows in as well as out; an ombudsman finds the answers to citizens' questions and helps to investigate concerns and resolve complaints.

Conservation Education through Schools—The new Discover Nature—Schools program helps students explore nature close to home. It includes instructional materials correlated with state standards, teacher workshops, grants for outdoor-learning experiences and outdoor-classroom development. Missouri Archery in the Schools Program (MoNASP) is an archery program offered to Missouri school grades 4–12. It's part of a fast-growing national program that's empowering students with a lifelong skill.

Conservation Nature Centers, Education Centers and Visitor Centers—These are located in Jefferson City, Kirkwood, Blue Springs, Springfield, Cape Girardeau, St. Charles, Winona, St. Louis, Branson and Glencoe. Exhibits and naturalist-led programs, as well as walking trails, offer about a million visitors each year a variety of opportunities to learn about and enjoy Missouri's nature. Programs such as Discover Nature—Families and Discover Nature—Women offer families and women the skills to enjoy the outdoors.

Hunter Education—Since 1988, hunter-education training has been mandatory for all hunters born on or after Jan. 1, 1967. Our staff works with the conservation agents to coordinate volunteer hunter educators, who provide about 950 classes each year. These result in hunter certification of about 25,000 people annually. New online training expands the training opportunities.

Shooting Range/Outdoor Education Centers—Five staffed shooting ranges provide safe, inviting places for hunters and others to practice shooting rifles, shotguns, handguns and archery equipment. Classes are offered to the public as part of our Discover Hunting program, which is designed to give

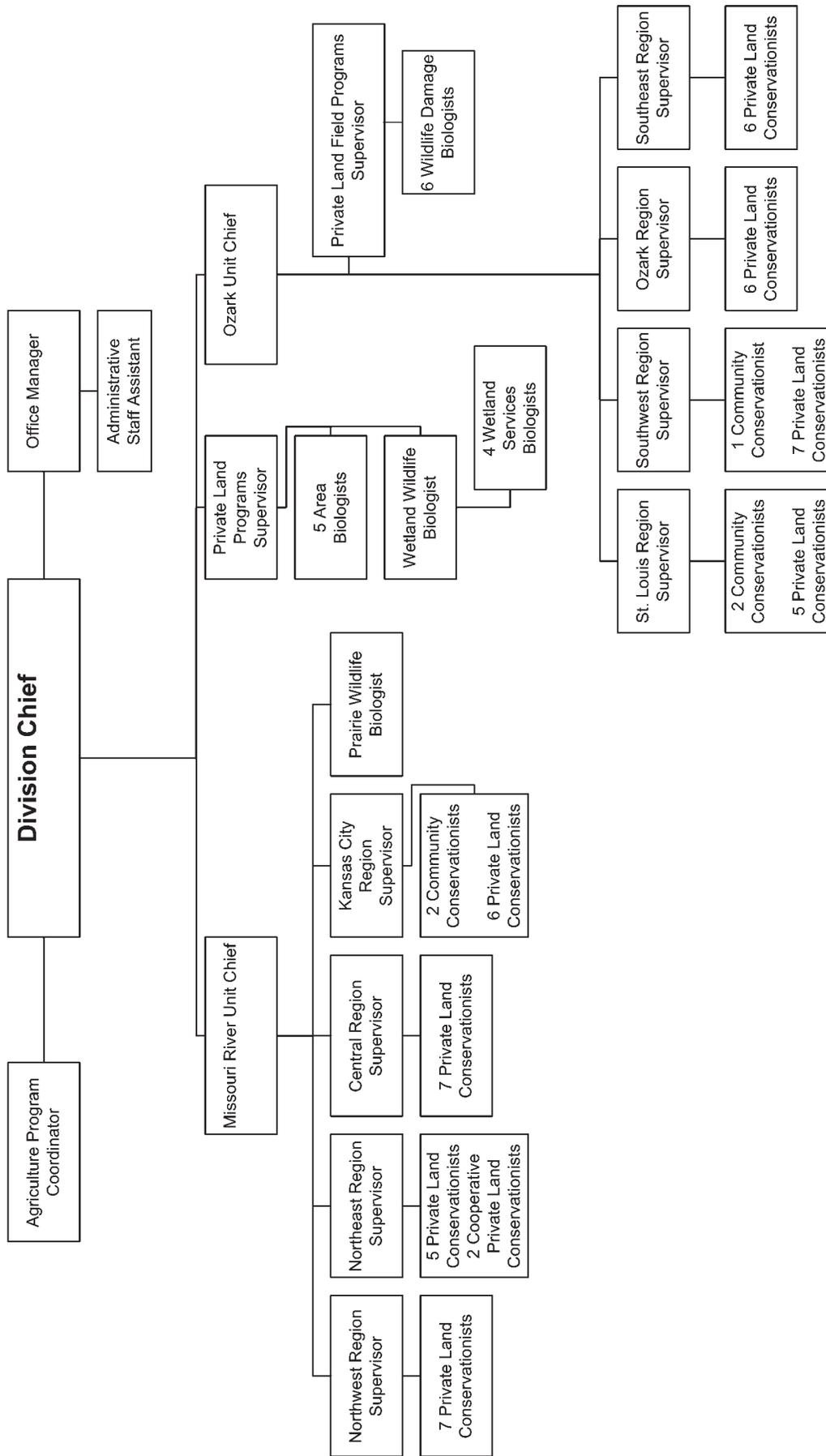
beginning hunters the skills they need. More than 130,000 people each year use the staffed ranges. In addition, more than 70 unstaffed ranges (including both firearms and archery ranges) serve Missourians throughout the state.

Citizen-Involvement/Awareness Programs (Grow Native, Missouri Master Naturalist, No More Trash)—Several programs help Missourians promote conservation at a statewide and grassroots level. Three partners work with MDC to sponsor these (Missouri Department of Agriculture, University of Missouri Extension and Missouri Department of Transportation, respectively).



David
Besenqer

Private Land Services Division



Private Land Services Division

Mission: *Help landowners meet their land management objectives in ways that enhance fish, forest and wildlife conservation.*

Organization: With 93 percent of Missouri in private ownership, the health of our natural resources will be determined by private landowners. In recognition of the need to provide enhanced support to traditional agricultural producers, as well as growing numbers of people who own land for recreation, Private Land Services Division was established in 1999. The division contains fish, forest, wildlife and agriculture professionals who provide conservation assistance to private landowners in Missouri.

Goals

- To provide timely technical advice to private landowners who request assistance
- To help interested private landowners provide meaningful benefits to fish, forest and wildlife resources that need attention
- To increase awareness of conservation importance by connecting with agriculture and communities

Programs

Technical Support—Private Land conservationists are available to evaluate resource needs and provide advice/recommendations to private landowners through in-office or on-ground visits, as well as workshops, field days and other initiatives. Most of these positions are co-located in USDA service centers to make contact easy for private landowners throughout the state.

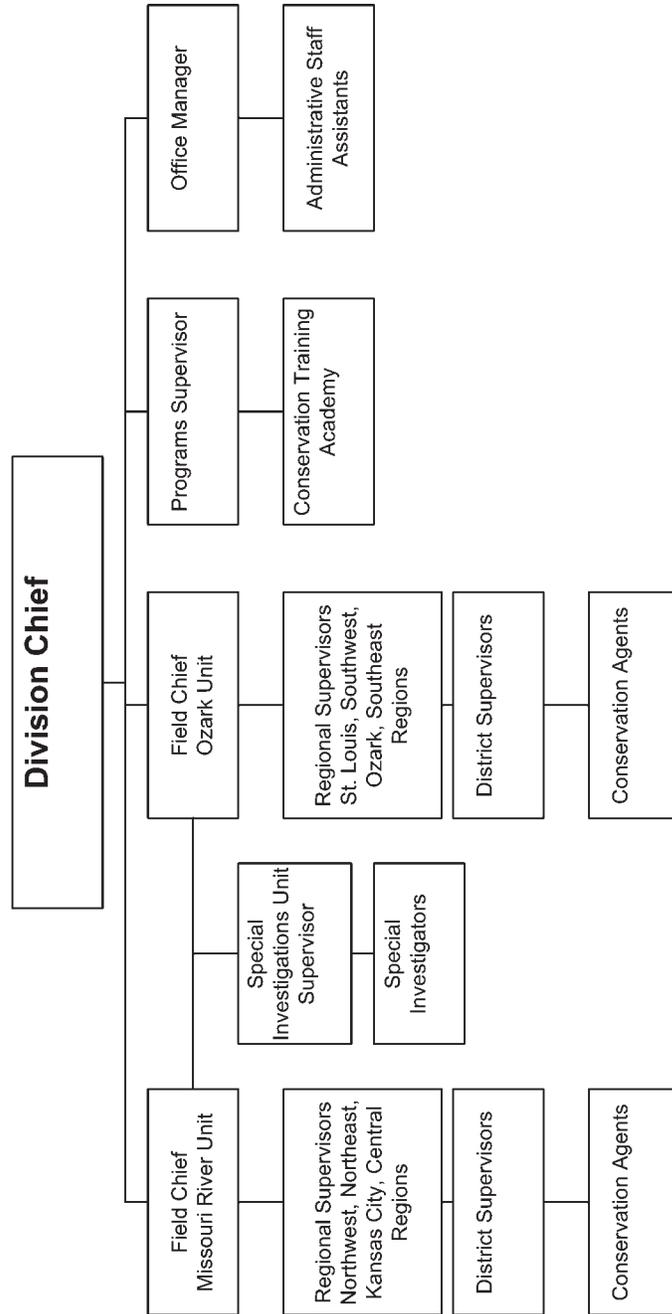
Financial Assistance—MDC has established effective working partnerships with the Natural Resources Conservation Service and Farm Service Agency to integrate fish, forest and wildlife considerations into implementation of Farm Bill programs that include Conservation Reserve Program, Wetland Reserve Program, Environmental Quality Incentives Program, Grassland Reserve Program, Conservation Stewardship Program and Wildlife Habitat Incentives Program. MDC is also in partnership with non-governmental organizations such as Ducks Unlimited, Quail Unlimited, the National Wild Turkey Federation, Quail Forever, Pheasants Forever and the Ruffed Grouse Society to develop cost-share and other initiatives through matching arrangements.

Wildlife Damage Assistance—Wildlife damage-control biologists provide expert and specialized technical assistance to private landowners who experience problems with wildlife including beaver, coyote, otter, Canada geese, deer and other species.

Agriculture Liaison—Liaison efforts with agricultural agencies and groups foster communication and understanding of fish, forest and wildlife issues as they relate to agriculture. These efforts are important since 65 percent of the land area of Missouri is included in farms.

Community Conservation—Community conservationists in Kansas City, St. Louis and Springfield/Branson/Joplin areas are available to deliver natural-resource technical services at the municipal, county and regional levels. Their job focus is to work with communities, urban planners and developers to help them make informed land-use decisions that incorporate the conservation of Missouri's forest, fish and wildlife resources.

Protection Division



Protection Division

Mission: *To protect and conserve Missouri fish, forest and wildlife resources and to serve citizens through a coordinated program of resource law enforcement, education, information and one-on-one contacts.*

Goals

- To provide high-quality resource law-enforcement services to the public for protection and conservation of Missouri's fish, forest and wildlife, as well as for safe and proper public uses of conservation areas
- To provide opportunities for all citizens to use, enjoy and learn about fish, forests and wildlife through educational and informational programs and habitat management advice
- To represent the Conservation Commission, Department of Conservation and the state with knowledgeable, respectful, well-trained and professional employees versed in all general MDC programs in every county

Programs

Conservation Agents—Agents carry out a variety of programs for MDC within their county assignments. Major job components are resource law-enforcement activities; hunter education; local media liaison duties (many with regular radio/TV programs and newspaper articles); educational and informational presentations to adult and youth groups; wildlife surveys; response to fish kills, wildlife-nuisance and damage complaints; and basic fish-, forest- and wildlife-management advice and services to private landowners.

Conservation agents contacted 182,636 hunters and anglers in FY09 to ensure compliance and to provide regulation information. During these contacts, agents noted 26,244 violations; issued 3,733 written warnings; and made 7,896 arrests. This depicts a 94 percent conviction rate, which indicates high-quality work and excellent public support by agents in the area of resource law enforcement.

Operation Game Thief—Operation Game Thief provides a way for citizens to anonymously report poaching incidents with the opportunity for a monetary reward. In FY09, OGT produced 323 convictions from 1,030 telephone calls, which resulted in \$7,700 in reward money being paid to informants. The Operation Game Thief traveling exhibit was used 106 days throughout Missouri this past year.

Revocations—Missouri is a participating state in the Interstate Wildlife Violator Compact (IWVC). The compact is a legal organization of the wildlife agencies of 31 member states that agree to reciprocally honor revocations/suspensions of hunting, fishing and trapping privileges for wildlife-related violations. During the last fiscal year, 1,370 people from other states had their privileges revoked in Missouri through provisions of the Interstate Wildlife Violator Compact; an additional 164 were revoked for cause by the Conservation Commission in Missouri and submitted to the IWVC. Participation in the compact also benefits Missourians who travel to other compact member states for hunting and fishing activities. If found in violation, they may be given the opportunity to resolve the citation by mail rather than being required to post a bond before leaving the member state. They are subject to revocation by all compact states if the citation is ignored.

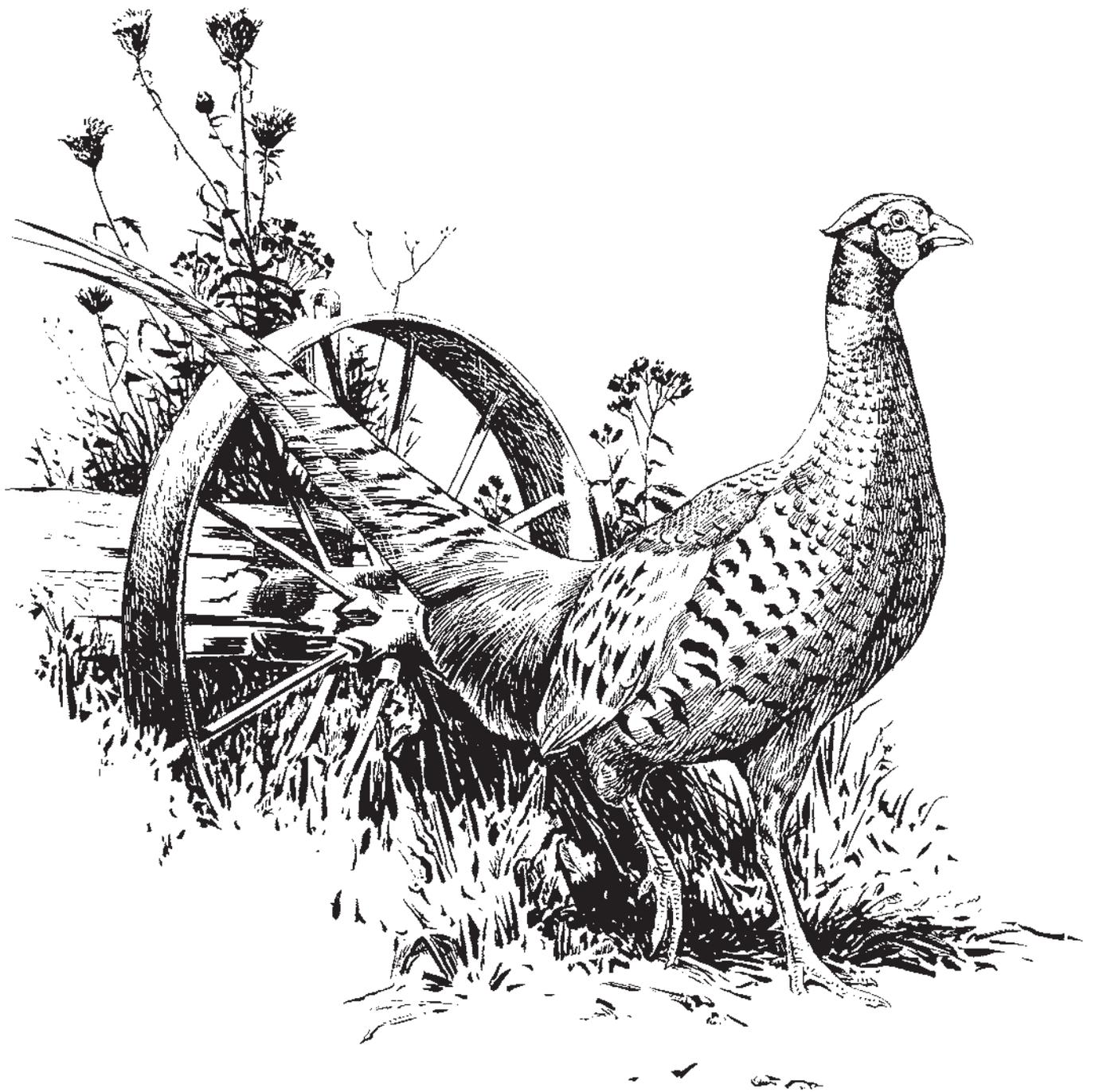
Missouri Seed Program—The Missouri Seed program provides habitat-planning information and food-plot seed to Missouri landowners. The goals of the program are to improve the quality of wildlife habitat on private lands and promote better farmer and landowner relations. Conservation agents distributed 73,019 pounds of seed to 2,011 landowners. The program is an avenue through which to contact private landowners regarding wildlife-management programs, as well as other programs which MDC offers. Protection and Private Land Services divisions share in the administration of the program.

Hunter Education—Hunter-education certification is required for purchasing any type of Missouri firearm-hunting permit for people born on or after Jan. 1, 1967 (except the youth deer-and-turkey hunting permit). Conservation agents work with Outreach and Education Division personnel and approximately 2,000 volunteer instructors to coordinate hunter-education courses in all 114 Missouri counties. Protection Division personnel also are heavily involved in investigating every hunting incident in the state.

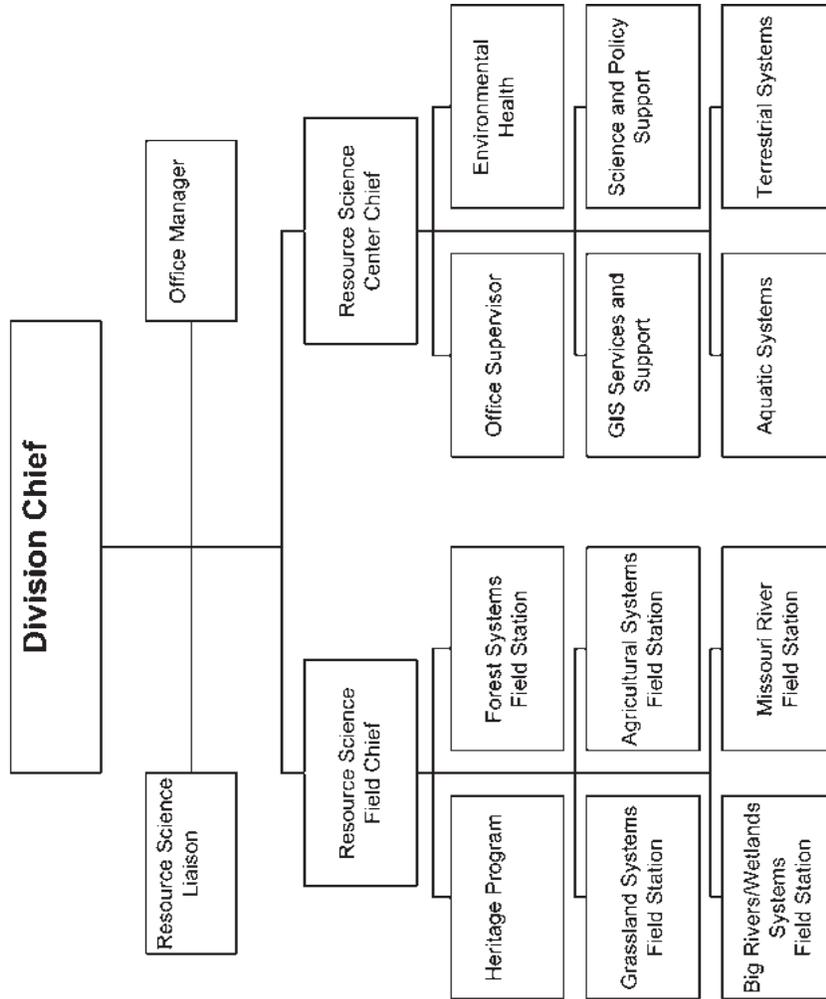
Hunting Method Exemption Program—The Hunting Method Exemption program provides special exemptions to physically disabled people by allowing them to hunt and take wildlife by methods not otherwise legally permitted. During FY09, 2,945 hunter method exemptions were approved.

Group Fishing Permit Exemptions—Protection Division administers permit-exemption authorizations to supervised groups involved in rehabilitation programs or groups of hospital patients or people with disabilities under therapy or for educational purposes. During this past fiscal year, 308 group-fishing permits were issued for outings—providing fishing experiences to people who otherwise may not be able to participate in outdoor fishing activities.

Share the Harvest—Conservation agents and the Conservation Federation of Missouri coordinate the Share the Harvest program, in which hunters may donate deer meat to those in need through established charitable organizations. During FY09, approximately 4,465 hunters donated 249,156 pounds of venison to needy Missourians. Since the inception of the program, nearly 1.9 million pounds of deer meat have been donated to Missouri citizens. Hunters donating venison to the program pay for the processing and tell the processor how many pounds of meat they want to donate. Hunters who wish to donate their entire deer may receive a \$35 reduction in the price of processing, which is paid to the processor by the Missouri Conservation Federation. In some cases, local organizations provide additional funds for processing so there is no cost to hunters who wish to donate deer.



Resource Science Division



Resource Science Division

Mission: *Provide the science-based information needed to conserve, appreciate and effectively manage the living resources of Missouri.*

Goals: Natural-resource management is based on sound biological, geographical and sociological information. An objective to establish a nationally recognized, science-based model for conservation will be accomplished by 1) ensuring ongoing development of a comprehensive and integrated understanding of Missouri's living resources and their values to society, 2) using accumulated knowledge to inform and recommend conservation actions, 3) evaluating the biological and social impacts of conservation actions and 4) reporting emerging knowledge of Missouri's living resources.

An integrated focus in Resource Science Division is organized around six integrated units and functions rather than traditional disciplines, and is dedicated to delivery of management assistance through five field stations; this approach was the basis for the following organizational units within the division (see organizational chart):

Terrestrial Systems scientists strive to understand plant and animal-habitat relationships, monitor population status and develop harvest and species-management recommendations. Staff is regularly involved with specialized projects to monitor wildlife, plant diversity, population changes and forest silviculture.

Aquatic and Wetland Systems scientists conduct research and surveys that focus on issues involving fisheries management, wetland and waterfowl management, fish communities, watersheds, stream-riparian-floodplain systems, reservoirs, in-stream flow and interactions among predators and prey and species of concern. Harvest-management recommendations for statewide fish populations, waterfowl and other migratory birds are developed by this group.

Science and Policy Support staff works to link and improve access to databases which document Missouri's rich biodiversity through a web-based archival and retrieval system. Post-season harvest hunter and angler surveys, attitude surveys and public-use surveys are conducted to better understand the opinions and attitudes of Missourians and to ensure that human-dimensions information is integrated with biological information to inform management decisions. Natural-resource economics data are collected in conjunction with the public use-and-attitude information. Biometricians ensure statistically sound study designs and the use of appropriate statistical techniques to analyze and interpret complex natural-resources questions.

Geographic Information Systems (GIS) will continue to play an ever-increasing role in natural-resources management, planning and evaluation. The goal of the GIS program is to fully use geospatial technology and products to support natural-resource decisions, archive the processes and evaluate the results. The GIS program supports more than 300 ArcInfo and ArcView users. Monthly training courses are conducted to help train new ArcView users and improve the skills of existing users.

The **Environmental Health** unit primarily provides the services that ensure monitoring and protection of Missouri's forest, fish and wildlife resources. Primary functions include protecting aquatic biodiversity such as mussel conservation and genetics research, water quality, forest health, and providing responsive service to agency staff, the public and other agencies and entities. Staff coordinates pollution and fish-kill investigations with the Department of Natural Resources, and monitors contaminants in fish with the Department of Health.

The **Heritage Program** unit provides expertise and location information to MDC, its partners and the public on plants, reptiles and amphibians, karst communities, mammals and species of conservation concern. Our vehicles are workshops, publications, personal contact and Missouri's Natural Heritage program. Through this program, the status and presence of 1,116 species of conservation concern and

natural communities are tracked. Scientists survey for species presence and population trends, develop life-history information, and make management evaluations. Staff ensure accurate documentation and archiving of occurrences of species of conservation concern and natural communities that can be used for regulation purposes and management.

The **Field Unit of Resource Science Division** is leading regional management evaluations by developing protocols and study designs with the goal of “learning by doing.” Field stations, actively integrated with the division’s centralized functions, focus on improving understanding of ecological systems, functions and processes by working with regional staff throughout the state.

- 1) The **Grasslands Systems Field Station in Clinton** focuses on ecological processes and management implications for cool- and warm-season grass pastures and hay lands, native prairie, savannas and glades and grassland-associated fish, invertebrate, wildlife species of conservation concern and all streams and impoundments fed by grassland watersheds.
- 2) The **Forest Systems Field Station in West Plains** focuses on ecological processes and management implications for upland forests, glades, savannas, springs, karst, fens and cold- and warm-water streams and impoundments drained by forested watersheds and management of forest-associated fish, invertebrate and wildlife species of conservation concern.
- 3) The **Big Rivers and Wetlands Systems Field Station in Jackson and Puxico** focuses on Missouri’s large rivers and associated floodplains to understand landscape-level ecological processes. Staff develops tools and strategies to improve channel and floodplain habitats, bottomland forests and wetlands for fish, invertebrate and wildlife communities including species of conservation concern.
- 4) The **Agricultural Systems Field Station in Kirksville** emphasizes annually cropped lands that produce cereal grains, oil crops, crops for human consumption and annually planted livestock forages. Also included in the field station’s focus are retired crop lands including CRP plantings, cool-season grass pastures and old fields, concentrated-livestock operations and streams and impoundments drained by agricultural watersheds, and management for agriculturally associated fish, invertebrate and wildlife species of conservation concern.
- 5) The **Missouri River Field Station in Chillicothe** focuses on issues directly related to management of the Missouri River. Many aspects of large-river ecology will be addressed by the Big Rivers and Wetlands Field Station, including some important to the Missouri River. However, several active restoration and recovery programs are being conducted along the Missouri River, and this field station will bring a focused and coordinated monitoring approach among agencies to help clarify the success of these activities.

Programs

Population management—Manage for, and when feasible, restore viable populations of plants, fish and wildlife compatible with the ecological capability of the land and balanced with the desires of resource users and the public.

Resource Science Division identifies priority population management challenges and develops recommendations, in collaboration with resource divisions, to manage harvested species, species of concern and invasive species.

Ecological processes—Increase our understanding of the processes that determine habitat conditions for native and introduced animals and plants.

Erosion and deposition through water, wind and fire are the natural disturbance and renewal processes that are essential to maintaining healthy systems and functions. The division focuses investigations on how to effectively re-establish or mimic these processes in Missouri’s contemporary landscape to ensure restoration and management of plant and animal communities.

Management evaluation—Ensure that results of management and policy actions are measured and appropriately linked to resource-related outcomes, budgets and staff time.

Ongoing evaluation of resource responses and resource uses are essential to determine whether goals are met and to understand when change is needed. Resource Science Division promotes “learning by doing” to improve resource-management programs and to ensure accountability of staff and budget resources.

Human dimensions—Provide and promote the use of human-dimensions information in the management decision process.

Resource Science Division collaborates with other divisions to ensure that human-dimensions information is acquired and used in policy and management decisions. This information is used to track changing public expectations, anticipate demographic trends, and ultimately provide the information needed to make sound resource policy and management decisions.

Large-scale planning—Ensure that all planning and program efforts are based on sound science and include evaluation measures.

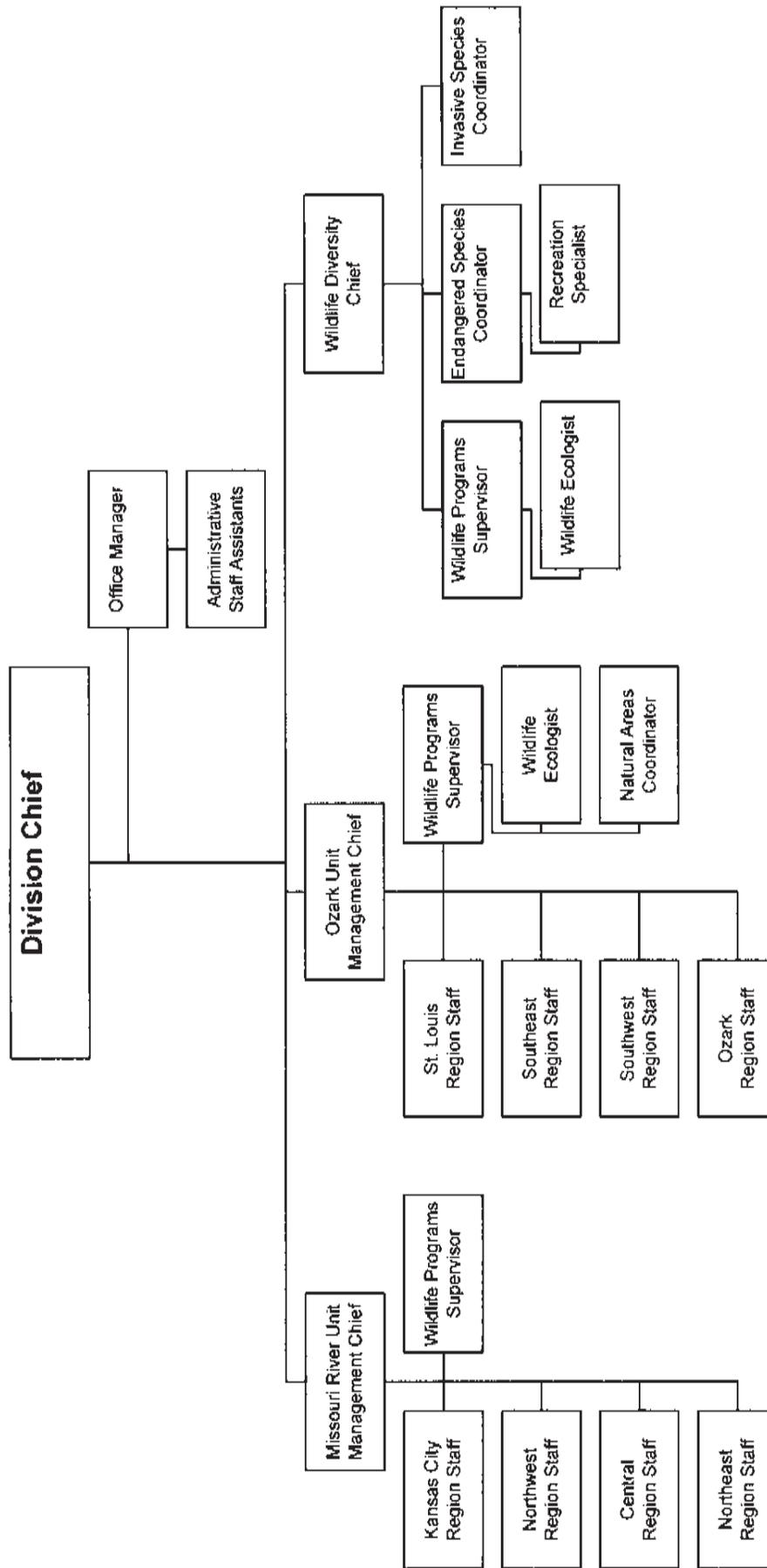
Advances in Geographic Information Systems and associated ecological and geospatial applications (e.g., Ecological Classification Systems) are used to inventory, assess and monitor resource condition and management results at national, state, regional and area scales.

Information transfer—Manage, share and transfer data collected in a useful, archival and easily obtainable format.

The division ensures that information about resource investigations, population status, harvest and public use is timely, current, accurate and available in a form that is useful.



Wildlife Division



Wildlife Division

Mission: *To conserve for public benefit Missouri's wildlife resources and the landscapes on which wildlife depend, and to manage public lands to conserve and enhance their natural resources, provide vital ecosystem services, and invite public use and enjoyment.*

Goals

- Balance wildlife resource needs with public expectations
- Advocate wildlife and biological diversity in conservation efforts
- Actively seek ways to inform peers, cooperators and citizens about wildlife stewardship
- Provide opportunity for all citizens to use, enjoy and learn about wildlife and their habitats
- Manage conservation areas that provide opportunities for citizens to recreate and enjoy the outdoors

Programs: Wildlife Division is responsible for the management of Missouri's wildlife resources and the habitats upon which they depend to best serve the long-term interests of the people of the state. Fulfilling this role involves a wide range of programs and activities on public, as well as private, land.

Strive for wildlife diversity through natural community management/restoration on MDC lands

- Manage MDC's Wildlife Diversity program in a way that benefits the full range of MDC programs and Missouri landscapes
- Continue support of the Missouri Natural Areas program
- Continue to coordinate MDC's endangered species program
- Restore natural communities on MDC lands, especially native grasslands and wetlands
- Continue a renewed focus on the "active management" of wildlife habitats and plant/animal communities on MDC lands
- Ensure that aquatic species are profiled in agency wildlife diversity efforts, especially the State Wildlife Grant and Landowner Incentive programs
- Implement the directions outlined in MDC's Strategic Guidance for Northern Bobwhite Quail Recovery
- Implement management programs on conservation lands that feature priority focus areas for bird conservation as outlined in Partners in Flight, Joint Venture plans, and Important Bird Area recommendations

Develop and strengthen effective conservation partnerships

- Administer Missouri's Comprehensive Wildlife Strategy, an approach to conservation planning and implementation within a framework of partnerships to integrate conservation action for all wildlife statewide
- Administer state wildlife grants to improve opportunities for MDC to work with conservation partners to conserve species with the greatest conservation needs
- Continue to promote all-bird conservation in Missouri through participation in the Missouri Bird Conservation Initiative, within the framework of 41 organizations and private-citizen partners
- Through the Golden Anniversary Wetlands Initiative, assemble the conservation partnerships necessary to secure grants and other funding for rehabilitation of wetland-management structures on the oldest wetland-management areas
- Form partnerships with landowners for wildlife stewardship on private land through the Landowner Incentive program and provide technical support through personal landowner contacts
- Continue to focus on grassland birds, especially prairie chickens, to enhance existing and future partnerships with communities near their habitat

Coordinate MDC invasive-species activities in conjunction with other affected/involved divisions

- Integrate the coordination of invasive/exotic species control into agency Wildlife Diversity programs
- Control invasive/exotic species on conservation lands, especially in natural communities, while taking actions where appropriate to control the introduction of new invasive/exotic species to MDC lands

Public Resources Management—MDC area facilities/infrastructures maintained and operated in a way that invites public use

- Ensure that conservation-area facilities are clean and operated in ways that welcome citizen visitors to the areas
- Maintain infrastructures of all types in ways that enable them to meet their use expectations
- Administer the Wildlife Restoration Grant in ways that provide federal support for operations, maintenance, habitat management and resource planning on conservation lands
- Promote Adopt-A-Trail groups to help with trail maintenance
- Develop mourning-dove habitats as a means to attract doves and hunters to MDC lands
- Provide special recreational opportunities through deer, dove, turkey and waterfowl managed hunts

Deer populations balanced with the interest and tolerance of landowners, hunters and the general public

- Manage conservation-area deer-hunting programs in ways that provide a range of hunting opportunities for deer hunters as outlined in the deer strategic-direction statement
- Ensure that deer populations on conservation areas do not create problems for neighbors
- Assist private landowners with deer-harvest management programs on private lands

Manage forests on MDC lands that promote forest health, sustainable wood products, wildlife habitat and ecosystem restoration

- Continue efforts to assist Forestry Division staff in the attainment of agency timber-management objectives
- Actively pursue opportunities to use timber harvests as a means to attain natural-community restoration objectives, especially for oak-pine woodlands, savannas, glades and prairies
- Assist Forestry in natural area management activities, such as prescribed burning, on Forestry areas

Conservation by the Numbers

- ▲ Actual Funds Available and Disbursements
- ▲ Number of Deer Harvested by County
- ▲ Number of Turkeys Harvested by County
- ▲ Acres of Conservation Land by County
- ▲ Payment In-lieu of Taxes (PILT) by County
- ▲ County Aid Road Trust (CART) Program
- ▲ Capital Improvement Projects Funding by County
- ▲ Number of Deer and Turkey Permit Holders by County of Residence
- ▲ Number of Fishing Permit Holders by County of Residence
- ▲ Number of Small Game Permit Holders by County of Residence
- ▲ Number of Landowner Deer Permit Holders by County of Residence
- ▲ Number of Landowner Turkey Permit Holders by County of Residence

MISSOURI DEPARTMENT OF CONSERVATION

Actual Funds Available and Disbursements
For Fiscal Year 2009

RECEIPTS

Sales Tax	\$96,571,218
Hunting, Fishing & Commercial Permit Sales	30,502,935
Federal Reimbursements	24,165,283
Agricultural Sales	1,854,192
Timber Sales	2,885,440
Other Miscellaneous Receipts	2,958,468
Miscellaneous Fees & Tags	1,553,679
Surplus Property	1,250,521
Interest	1,049,928
Publication Sales	757,271
Nursery Stock Sales	978,085
Grants, Gifts, Bequests & Donations	2,471,113
Contractual Services	668,984
Rentals	41,100
Miscellaneous Sales	242,109
Land Sales	579,569
Yield Tax & Other taxes	16,832
Refunds	378,237
Damage Reimbursements	36,952
Concession Income	13,152
TOTAL RECEIPTS	<u><u>\$168,975,069</u></u>

DISBURSEMENTS

County Assistance Payments	1,453,573
Capital Improvements	\$21,777,980
Fisheries	12,563,006
Forestry	16,051,758
Wildlife	16,338,979
Outreach & Education	15,186,325
Private Land Services	7,630,877
Protection	13,505,810
Resource Science	11,392,711
Regional Public Contact Offices	3,583,989
Administrative Services and Human Resources	30,661,827
Design & Development	12,134,219
Administration	3,349,974
TOTAL DISBURSEMENTS	<u><u>\$165,631,028</u></u>

Excellent public service is
what we will provide.

Employees are
the Department's most
important resource.



All citizens are important;
we value their trust and
their point of view.

Fairness, objectivity, sound science,
integrity and accountability will
guide our actions.

Missourians are our
partners to achieve
conservation success.