

Department of Conservation

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Brought into being by public demand for better management of the state's fish, wildlife and forest resources, the Department of Conservation was created in 1937 by an initiative process and statewide vote to amend the Missouri Constitution. It is headed by the Conservation Commission, whose four members, no more than two of whom may belong to the same political party, are appointed by the governor with the advice and consent of the Senate. They serve without compensation for staggered six-year terms. The Commission appoints the department director, who in turn appoints the staff. The staff is selected on the basis of training, experience, ability and character.

Four assistant directors assist, supervise and coordinate programs and activities carried out by divisions of fisheries, wildlife, forestry, protection, private land services, outreach and education, resource science, administrative services and human resources. They provide leadership for projects and initiatives assigned by the director, legislative liaison, partnerships and a policy coordination unit—which investigates issues. They also coordinate with major federal and state agencies, programs and projects, and lead strategic planning, environmental compliance, public input and human dimension studies.

The department's principal sources of revenue are receipts from the sale of hunting and fishing permits and the one-eighth of one percent conservation sales tax. Funds are also received from contracts and grants, primarily on a matching basis from federal aid provisions of the Wildlife Restoration, Sport Fish Restoration and Cooperative Forestry Assistance Acts.

Department funding was increased in 1976 when voters by initiative process proposed and approved a constitutional amendment for an addition to the state sales tax, earmarked for conservation use. Since then the department has acquired public land and expanded many programs—notably conservation education, law enforcement, forestry, fisheries, wildlife and assistance to private land owners and activities dealing with endangered species, non-game wildlife and natural areas.

The department's goals are communicated to the public and staff in this mission statement:



STEPHEN C. BRADFORD
Member
Conservation Commission



WILLIAM F. "CHIP" MCGEEHAN
Member
Conservation Commission



CYNTHIA METCALFE
Member
Conservation Commission



LOWELL F. MOHLER
Member
Conservation Commission

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

Conservation Commission

Bradford, Stephen C., (D), Cape Girardeau, July 1, 2007;

McGeehan, William F. "Chip," (R), Marshfield, June 30, 2011

Metcalfe, Cynthia, (D), St. Louis, July 1, 2007;

Mohler, Lowell F., (R), Jefferson City, July 1, 2009;

Administrative Services Division

The administrative services division is made up of three sections responsible for information technology, business and support services and design and development. In addition, the division administers maintenance personnel serving many department field offices, federal aid coordination and real property negotiations in support of conservation.



JOHN D. HOSKINS
Director



JOHN W. SMITH
Assistant Director



STEPHEN J. WILSON
Assistant Director



DENISE GARNIER
Assistant Director

The information technology section provides strategic direction for the department's information technology assets which include all computer hardware and software systems, telephone systems, two-way radio and other telecommunications systems, and the coordination of those systems with other state agencies. It is responsible for managing and supporting those assets, and defining technology solutions to meet business needs.

The business and support services section is responsible for the business administration activities of the department. It maintains liaison with the State Treasurer, State Auditor, Office of Administration and Department of Revenue in the performance of these activities. It is responsible for revenue collection, accounts payable, accounting, purchasing, budget, payroll, data processing, inventory control and reimbursement documentation for federal aid programs. It is also responsible for distribution of hunting and fishing permits statewide to retail businesses for sale to the public. Revenue from the conservation sales tax, hunting and fishing permits, federal reimbursement, public use areas, sale of timber, publications and surplus property is received and deposited in the state treasury for department programs.

This section is also responsible for procurement, repair and disposition of vehicles, marine and other mechanical equipment; management of aircraft operations; operation of a distribution center and warehouse for publications, products and media loan services; operation of offset printing, mailing and sign production services; coordination of the department's earthquake/emergency preparedness plans; and administration of the employee uniform/clothing policy.

The design and development section administers the department's construction and development program and is responsible for development and maintenance of areas, buildings and grounds managed by the department. The section consists of two units: engineering and construction. The staff consists of professional engineering, architecture, land surveying, construction and support staff in the areas of drafting and computer appli-



BOB ZIEHMER
Assistant Director



CAROLYN AUCKLEY
Executive Assistant to
Director/Commission Secretary

cations. All work is highly specialized to meet the needs of the department's resource programs. Typical capital improvements projects are the development of wetlands, reservoirs, hatcheries, buildings, nature centers, river and lake public use access areas, stream corridor improvements and hunter safety training facilities.

The engineering unit handles all aspects of design and development of capital improvement projects including performing investigations, feasibility studies and environmental assessments; preparing design drawings and contract specifications and administering construction contracts. Boundary, construction and topographic surveys of all land acquisition and development projects are performed under the direction of the division's registered surveyors. Support staff provide technical assistance in the areas of computer applications; state-of-the-art AutoCAD drafting applications; and construction quality control. The cartography unit archives all lands acquired and produces various area maps. The construction unit maintains department facilities, and its skilled construction crews construct countless special projects throughout the state.

To effectively design and develop the department's diverse projects, staff combines experience in the fields of survey, soil mechanics,

hydrology, river hydraulics, structural, architectural, mechanical, electrical, environmental, computer, CAD, drafting, construction, quality control and maintenance. This unique combination of engineering expertise and biological understanding allows creation of outdoor recreational developments that blend with the surrounding environment and enhance and expand resource habitat.

Creative thinking and innovative solutions by staff are the norm in coming up with original designs and new applications of existing techniques, such as covered floating docks at reservoirs to provide disabled user fishing access; automated control systems at river pump stations; ingenious wetland water control structures; rock-lined levee sections to work with instead of against flood waters; special light switch sensors in office buildings to lower utility costs; and disabled user accessible boat loading platforms at stream and river access ramps.

Fisheries Division

Missouri has about 1,163,000 surface acres of water comprised of nearly 900 public lakes (24% of surface acres), 486 miles of Mississippi River and 553 miles of Missouri River (22% combined), almost 16,000 miles of other permanent streams (8%), over 39,000 miles of intermittent streams (3%) and about 500,000 private lakes (43%). These waters support rich and diverse aquatic communities that are used, enjoyed and appreciated by millions of people each year. Fishing is one of the most popular and economically important uses of these waters. Each year, Missouri's 1.2 million sport anglers (16 years of age and older) make about 11.8 million fishing trips and generate more than 1.6 billion dollars in economic activity.

The Fisheries Division's mission is "to professionally manage the fish and associated aquatic plants and animals of Missouri for the use and enjoyment of the people." Its goals are to: maintain biodiversity and 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.

To carry out this mission and pursue these goals, the division has fisheries management staff in the department's eight regions. Management efforts are supported by five coldwater fish hatcheries, five warmwater fish hatcheries, a Stream Unit and central office staff. The division has 170 permanent and term employees and varying numbers of temporary employees.

Regional fisheries management staff (with headquarters in Cape Girardeau, Columbia, Kansas City, Kirksville, St. Joseph, St. Louis, Springfield and West Plains, and other staff in



CARTER CAMPBELL
Administrative Services
Division Administrator



STEVE EDER
Fisheries Division Administrator



ROBERT L. KREPPS
Forestry Division Administrator

the California, Camdenton, Chillicothe, El Dorado Springs, Hannibal, Hartell Conservation Area, Lebanon, Liberty, Neosho, Sullivan, Clinton and Sedalia offices) are responsible for monitoring and maintaining the quality of the aquatic resources, managing the public fisheries resources for quality fishing, providing technical stream and lake management advice to private landowners and other public agencies, providing and assisting with public information and education programs, assisting with other department programs and representing the division and department on matters pertaining to the aquatic resources in their region.

The five warmwater hatcheries (Blind Pony, Chesapeake, Hunnewell, Indian Trail and Lost Valley) rear and coordinate the stocking of about 2.9 million fish in public waters, suitable private lakes, waters used for special fishing events and aquatic resources education. Their staff also develops methods of rearing endangered species. The five coldwater hatcheries (Bennett Spring, Marmec Spring, Montauk, Roaring River and Shepherd of the Hills) rear and coordinate the stocking of about 1.7 million trout in public waters. Their staff is also responsible for stocking and managing the popular Bennett Spring, Marmec Spring, Montauk and Roaring River trout parks.

The Stream Unit is responsible for working cooperatively with the Missouri Department of Natural Resources on administering the work of 2,730 Stream Teams, producing and distributing *Stash Your Trash* litter bags to canoe liveries, and providing stream training and technical services to regional division and department staff and other agencies.

The division's central office staff directs and administers division programs, develops and refines regulations, works on the acquisition and development of public fishing and boat access areas, administers the Community Assistance Program and Corporate and Agency Partnership Program, administers Federal Aid grants, coordinates angler recognition programs, develops and revises technical and popular written materials, distributes a weekly fishing report during the fishing season, and provides administrative support for division and department staff.

Forestry Division

The forestry division is responsible for management and protection of the state's forest resources. Major program objectives are to urge and aid forest landowners and forest industries to adopt practices designed to ensure sustainable forests; ensure the proper management and sustainability of public forest lands; cooperate with public and private agencies in the control and abatement of major attacks of forest insects and diseases; work with communities to develop sustainable urban forestry programs; and to improve rural fire protection throughout the state.

Some forestry facts: About 13.4 million acres or 30 percent of the land area of Missouri is covered by commercial forest land. Eighty-four percent of the commercial land is owned by about 200,000 owners. Approximately three-fourths of this forest land is oak-hickory type, five percent is shortleaf pine and oak-pine types and the remainder is in cedar and bottomland hardwoods. Missouri's forests support a large forest products industry with about 1,000 manufacturing plants producing lumber, railroad ties, cooperage, cedar and walnut items (including gunstocks and veneer), charcoal and other products. Over \$3.5 billion per year is generated from processing forest products. Missouri leads the nation in the production of charcoal, cedar novelties, gunstocks, walnut bowls and walnut nutmeats.

Division personnel and volunteer rural fire departments annually suppress approximately 3,000 wildfires which burn 60,000 acres of forest and grassland. Although fire control efforts are concentrated in the more heavily forested counties in southern Missouri, protection is provided statewide.

Technical assistance, training and federal excess equipment are available at no cost to cooperating rural fire organizations. Federal legislation provides some funding to qualifying fire organizations on a matching basis. A rural forest fire equipment center is located in Lebanon. The center acquires and distributes federal excess property to rural fire departments for use in fire suppression activities.

"Operation Forest Arson" is a program to combat the high number of arson-caused wildfires. This program is combined with the Smokey Bear fire prevention campaign to educate school children.

Through a cooperative program with the U.S. Forest Service, technical and cost share assistance is provided to private woodland owners. This service is available statewide and includes tree selection and planting advice, forest management recommendations, forest products utilization and marketing assistance and wildlife management recommendations. In excess of 1,500 Missouri landowners are assisted each year by division foresters.

The forest health protection program ensures the continuing health of the forest resources through survey and detection, pest and control evaluations and public information. Pests are monitored and infestations reported through a network of trained citizen "forest keepers." Impact and control evaluations are accomplished through formal damage surveys using both ground and aerial mapping techniques. Public information includes diagnostic clinics, pest workshops, monthly status reports and handouts on common pests.

Tree Resource Improvement and Management (T.R.I.M.) is a cost share program that provides seed money for establishment or extension of community forestry programs including tree establishment and tree maintenance and care. The department provides 60 percent of total costs of projects up to a maximum of \$10,000 for activities such as tree inventory, pruning, hazard tree removal, tree research care and tree planting.

Assistance is provided to forest landowners on resource availability, market information, new technology and training. Individual businesses are encouraged to improve utilization of forest resources and reduce output of residues through efficient environmentally acceptable manufacturing methods.

Since the department was established, over 580,000 acres of forest land have been acquired and are managed as sustainable forest ecosystems. Forest management results include biodiversity, watershed protection, wildlife habitat, forest products and recreational opportunities.

To encourage forest and wildlife plantings, five to seven million seedlings of 70 different tree and shrub species are produced at the George O. White State Forest Nursery to fill over 13,000 orders from Missourians. Every fourth grade student in the state receives an Arbor Day seedling produced at the nursery. Residents can order planting stock after November 1, for delivery the following spring at planting time.

The State Forestry Law was passed by the General Assembly in 1946 to encourage stable and permanent management of privately-owned forest lands. It strengthened department efforts to protect woodlands from fire and timber theft and to assist in forest management, as well as providing partial tax deferral on lands classified as forest crop land.

To be eligible for classification, forest land must conform to the following: market value of the land must not exceed \$400 per acre; tract size must be 20 acres or larger; and the owner must agree to follow basic forest management requirements designed to keep the land in permanent forest production.

Land classified as forest crop land through 1974 is assessed for taxation purposes on a valuation of \$1 per acre; subsequent classification at \$3 per acre. Classification continues for a period of 25 years. To offset the loss of county taxes, the law provides for the department to reimburse counties based on a payment of 75 cents per acre per year on state-owned classified lands and 50 cents per acre per year on privately-owned classified lands. When timber products are cut for sale from classified forest crop land a yield tax on the amount sold is paid by the owner to the department.

Human Resources Division

Human Resources Division provides a full range of services that help the department attract and retain a diversified, dynamic workforce. Staff assist with recruitment and selection activities; administer salary and fringe benefits programs; oversee a comprehensive group life, medical, accidental death and dismemberment and dependent life insurance program; maintain official employee documents and records; and manage a safety program (including workers' compensation).

Equally important to the department are other Human Resources Division activities which include monitoring the department's compliance with employment practices relating to Affirmative Action, ADA and drug testing; providing employee training and development programs; administering employee assistance and wellness activities; and facilitating the disciplinary and grievance processes.



DEBORAH L. STROBEL
Human Resources
Division Administrator



LORNA DOMKE
Outreach and Education
Division Administrator

Outreach and Education Division

The Outreach and Education Division is dedicated to helping Missourians connect with nature in our state in a variety of ways. The goal is to educate young and old about how to sustain a healthy environment, make good use of fish, forest and wildlife resources and also enjoy nature-based outdoor recreation.

One of the division's most popular works is the *Missouri Conservationist* magazine, a source of conservation ideas that has been free to adult Missourians since 1938. More than 450,000 people now receive the magazine directly. A newer quarterly section in the magazine aimed at youth, *Outside/In*, is also produced in special bundles for school children throughout the state.

The website at www.missouriconservation.org has grown tremendously in the past several years as a handy source of conservation information. Highlights include maps and tips for conservation areas to visit, the *Missouri Conservationist* online, a calendar of events for each region of the state, seasonal hunting and fishing reports, and links to special programs such as Grow Native! and No MOre Trash! A weekly news release, *All Outdoors*, provides outdoor information on a statewide basis, while a more local perspective is provided through media specialists working directly with news media in each region.

Television viewers can catch *Missouri Outdoors*, the department's Emmy Award-winning TV show on channels throughout the state. The TV story collections, along with many other conservation videos, are also available free to schools and public libraries. Missourians can also learn about subjects as diverse as how to fish, create excellent wildlife habitat, follow hunting regulations and identify snakes through the division's many free brochures and booklets. In addition, the popular Natural Events Calendar, conservation books and videos are also available at low cost at our conservation offices

and nature centers, nature shop catalog or online website.

An outstanding network of conservation learning centers helps bring people and nature together across the state. Nature centers in Blue Springs, Jefferson City, Kirkwood, Springfield, and Cape Girardeau, and visitor centers in Andrew, Taney, St. Charles and St. Louis counties offer unique nature exploration programs. Staff also teach at the WOW museum in Springfield. The Discovery Center, located in the heart of Kansas City, offers a new approach to learning by featuring six workshops that offer hands-on instruction to school groups and individuals in a building that highlights energy-efficient design.

Conservation education staff also work with teachers and administrators at public, private and parochial schools, colleges and universities, other governmental education agencies, as well as youth leaders and community leaders to ensure that Missouri's natural resources can be sustained in a healthy environment for generations to come. Services include: developing and distributing a variety of teaching materials correlated with testing needs; assisting with teacher workshops and courses; and providing demonstration teaching and outdoor learning opportunities. Staff work with school leaders who want to use their own outdoor classrooms, which enable students to learn in an "outdoor laboratory" based on natural habitats.

Conservation materials available to teachers and students include a preschool publication, *Conservation Seeds*, a series for K-2 students in a quarterly print format, and *Habitat Packs* for 3rd and 4th grade classes that focus on streams, forests, prairies and wetlands. A quarterly conservation education newsletter for teachers, *The Resource*, is sent to more than 12,000 educators throughout the state.

Another important part of the outreach and education effort focuses on teaching people the skills to enjoy Missouri's outdoors safely and responsibly. As more Missourians grow up in urban landscapes, they have less contact with the natural world. The division's outdoor skills specialists work to give Missourians of all ages direct experience in nature-based activities such as camping, fishing, hunting, birding, canoeing, trapping and orienteering. By working with other conservation education staff, the outdoor skills staff teaches not only the hands-on skills, but also an understanding of what it takes to create the healthy habitat on which that skill depends. Outdoor skills staff work with teachers and youth leaders to provide hands-on conservation skills for students. They also create special classes for adults.

The outdoor skills staff also work with conservation agents to coordinate the many volun-

teers who provide hunter education training. In 1988, that training became mandatory for all persons born on or after January 1, 1967, as a prerequisite to purchase any firearms hunting permit. Since 1988, more than 430,000 people (about 30,000 per year) have been certified to hunt in a safe and ethical way.

Learning to safely handle firearms is part of the training, but hunters also need places to practice. In response to demand, the department in 1972 began to develop shooting ranges that meet or exceed national safety standards for shooting range design. Five staffed training center ranges and numerous unstaffed conservation shooting ranges have been created to provide Missourians with opportunities to practice their skills using firearms and archery equipment. The training centers also provide classroom opportunities for other conservation education.

Private Land Services Division

The mission of the Private Land Services Division is "to help landowners achieve long term conservation of natural resources and meet their land use objectives in ways that enhance land stewardship." The health of much of our state's natural resources is dependent on the land stewardship of private landowners, as approximately 93 percent of Missouri's landscape is in private ownership. Providing sound natural resource information and technical assistance to these private landowners is critical to long-term sustainability of our forest, fish and wildlife resources. The Private Land Services Division includes a staff of resource professionals dedicated to working with private landowners to improve forest, fish and wildlife conditions on their property.

We promote the wise use of fish, forest, wildlife and natural communities through voluntary participation, information, education and financial assistance. Private Land Service's personnel strive to provide prompt, professional assistance to landowners in the evaluation of natural resource conditions and recommend appropriate management and improvement techniques. Private land conservationists provide one-on-one assistance, tailoring management recommendations to the land use goals of the landowner and cite specific natural resource needs. Teams of resource professionals from all department divisions work collectively and independently with landowners and other resource partners to address important resource issues. Community conservationists provide assistance to urban developers, homeowners, city and county planners and others to address natural resource protection and management during and after development. Wildlife damage control biologists provide assistance to landowners experiencing damage to their property by

wildlife, including beaver, coyote, otter, Canada geese, deer and others. Wetland wildlife biologists provide specialized technical assistance to landowners to restore and manage wetland habitats. Wildlife Services Biologists work closely with the USDA Natural Resource Conservation Service to interpret and apply the forest, fish and wildlife conservation programs available to landowners through the USDA Farm Bill.

Establishment of partnerships with state and federal agencies, commodity groups, agribusinesses and conservation organizations help achieve shared natural resource goals. The department 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 the Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Environmental Quality Incentive Program (EQIP) and Wildlife Habitat Improvement Program (WHIP). To complement funding available through Farm Bill programs, the department offers a multi-faceted cost share program which provides cost-share payments to landowners for implementation of selected natural resources management practices. In addition, liaison efforts with agriculture agencies and groups have fostered communication and understanding of fish, forest, and wildlife issues within the agriculture and conservation communities. These efforts are enhanced through serving on Farm Bill committees, task force groups and agricultural advisory councils.

The Private Land Services Division promotes the development of alternative economic opportunities that benefit Missouri landowners and our natural resources. For example, native warm season grass planting and management assistance is provided through the grassland biologists on thousands of acres each year. The Missouri Ecotype Program is a complementary native plant program that encourages the use of native plant materials in backyard landscaping and for larger native community restoration projects. This program works to increase the supply of true Missouri native plant materials through the production and sale of native plant materials providing potential alternative economic opportunities for Missouri landowners.

We encourage a land stewardship ethic among landowners, strive to increase community involvement, build trust, and heighten understanding of the department's overall mission. Our staff of private land conservationists, wetland wildlife biologists, wildlife services biologists, community conservationists and wildlife damage biologists are strategically located throughout the state to provide routine contact with landowners, communities, civil clubs, churches, schools and others. This interaction with Missouri's citizens



LISA ALLEN
Private Land Services
Division Administrator



DENNIS STEWARD
Protection Division
Administrator

provides the foundation for building understanding between different interest groups and ensures a well informed approach to conservation of our natural resources.

Protection Division

The Protection Division is composed of informed conservation agents and support staff. Conservation agents, by official designation, serve as department representatives in their assigned areas and must be well versed on all department programs. They have responsibility for enforcing all statutory enactments related to fish, wildlife and forestry, and rules and regulations promulgated by the Conservation Commission. Conservation agents are certified as peace officers to enforce all state laws on lands owned, managed or leased by the department. Many agents are also commissioned by the U.S. Department of the Interior to enforce federal conservation laws.

Resource law enforcement is very important in managing Missouri's fish, forestry and wildlife resources. Conservation agents are assigned to each county in the state and are responsible for carrying out a wide range of wildlife-related law enforcement duties. Patrols by vehicle, boat and foot are routine. Agents depend heavily on help from local citizens to report violations.

Although law enforcement is the division's primary function, only about half of an agent's time is devoted to that activity. Other duties include hunter education, resource management assistance to landowners, media contacts, and educational and informational programs to youth and adult groups. Numerous surveys, censuses and special field studies are conducted for state and federal fish and wildlife research personnel.

Many special programs require personal contact with individual landowners. Preparation of land-use plans, delivery of seed and wildlife plantings, inspection of developments and periodic progress reports are involved in wildlife habitat improvement and fish stocking programs.

Preliminary contacts with landowners and arrangements for wildlife management projects, lake development and other large-scale department projects are delegated to agents. Frequently, community interest and participation in department projects designed to provide or increase local recreational opportunities result from encouragement or initiation by agents.

In addition to fish, wildlife and forestry program duties, many agents present regularly scheduled informational or educational programs on radio and television. A number of newspapers in the state carry weekly outdoor columns prepared by conservation agents.

Although hunter education and shooting ranges are administered by the Outreach and Education Division, conservation agents work closely with outdoor skills supervisors to ensure that these important programs reach as many citizens as possible in an efficient manner. Agents help to recruit, train and supervise hunter education volunteers. They also personally instruct many of the hunter education courses held in their assigned districts.

Two important programs administered by the division in cooperation with the Conservation Federation of Missouri are Share the Harvest and Operation Game Thief.

Share the Harvest provides Missouri deer hunters opportunities to donate all or part of their harvest to needy Missourians. Meat processors, charitable agencies and sponsors work with hunters, the Conservation Federation, Missouri Department of Conservation and corporate sponsors including Shield of Shelter Insurance, Bass Pro Shops and others to distribute much needed meat to hungry families. Over 275,000 pounds of venison were donated by 5,161 deer hunters during the 2004 firearms deer season.

Operation Game Thief provides an avenue for concerned citizens to report poaching through a centralized toll-free hotline. Rewards for information leading to the arrest of violators are available. Since the inception of this program in 1982, over 4,500 arrests have been made with information supplied by concerned citizens. Although rewards are offered for information leading to arrests, less than two thirds of citizens supplying information resulting in arrests actually request rewards. This program has been shown to be an effective means of public awareness and involvement in protecting the natural resources of Missouri.

Resource Science Division

The mission of the Resource Science Division is to provide the science-based information needed to conserve, appreciate and effectively manage the living resources of Missouri. Natural resource management is based on sound biological, geo-

graphical and sociological information. Conserving Missouri's natural heritage will require development of new management and research techniques and an emphasis on management evaluation, surveys, monitoring and long-term research.

An integrated focus in the Resource Science Division is organized around six systems and functions rather than traditional disciplines and also is dedicated to delivery of management assistance through five field stations. Functions and services centralized at the Resource Science Center in Columbia and the Department's Central Office in Jefferson City include a Terrestrial Systems group and an Aquatic and Wetland Systems group as well as units delivering services for Science and Policy Support, Geographic Information Systems (GIS), Environmental Health and Management Evaluation and Support. Field stations are dedicated to Grasslands Systems (Clinton), Forest Systems (West Plains), Big Rivers / Wetlands Systems (Cape Girardeau), Agricultural Systems (Kirksville) and the Missouri River (Chillicothe). Field station studies are actively integrated with projects from the Resource Science Center; all division staff have statewide or cross-regional responsibility.

Terrestrial Systems staff strives to understand plant and animal habitat relationships, monitor population status and develop harvest and species management recommendations. Staff are regularly involved with specialized projects to monitor wildlife diversity. Projects such as the Flora of Missouri, in cooperation with the Missouri Botanical Garden, are documenting the range and status of the over 3,000 plants found in Missouri. Annual population surveys of reptiles and amphibians, songbirds, mourning doves, wild turkey, white-tailed deer and bats secure the knowledge necessary for regulations and habitat conservation.

Aquatic and Wetland Systems scientists conduct research and surveys that center on issues involving fisheries management, wetland and waterfowl management, fish communities, watersheds, stream-riparian-floodplain systems, interactions among predators and prey and species of concern. Primary focus is on translating new knowledge about natural habitat processes into habitat management and restoration techniques that benefit people and aquatic resources. An integrated approach, encompassing aquatic and wetland species and communities of concern, is being used to investigate stream, river, wetland and floodplain systems and their associated species. Additionally, a specific focus on water quantity studies includes in-stream flow, stream bank stabilization and watershed influences. Harvest management recommendations for statewide fish populations, waterfowl and other migratory birds are developed by the Aquatic and Wetland Systems staff.

Science and Policy Support staff work to link and improve access to databases documenting Missouri's rich biodiversity. A web-based archival and retrieval system allows all employees to enter data, and a centralized data warehouse provides advanced querying techniques on data for species and communities of interest. Work on data standards and protocols facilitate information sharing and data transfer. Database managers and systems analysts provide custom database and web programming support to assist staff in entry, manipulation, analysis, transfer and presentation of data.

Post season harvest 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 natural resource management decisions. Natural resource economics data is 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 and are a key link in the application of adaptive resources management to field projects.

Geographic Information Systems (GIS) will continue to play an ever increasing role in the natural resources management, planning and evaluation. The goal of the GIS program is to fully utilize geospatial technology and products to support natural resource decisions, archive the processes and evaluate the results.

At the core of the GIS program is a team of Resource Science professionals that support over 300 ArcInfo and ArcView users. Central to the program is a GIS center that provides user access to ArcGIS software as well as the ERDAS Imagine GIS suite. An ArcIMS server provides on-line mapping capability to department staff as well as the Missouri citizenry. Monthly training courses are conducted to help train new ArcView users as well as 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, forest health, fish health and providing responsive service to agency staff, the public and other agencies and entities. The Environmental Services staff coordinates pollution and fish kill investigations (in cooperation with Dept. of Natural Resources), monitors contaminants in fish (in cooperation with Dept. of Health & Sen. Svcs.), coordinates a variety of intra- and interagency projects and provides expertise and guidance on water quality issues. The Forest Health program ensures the continuing health of forest resources through



DALE HUMBURG
Resource Science
Division Administrator



DAVID W. ERICKSON
Wildlife Division Administrator

survey and evaluation of forest pests, detection of invasive species and public information on forest pest management. Public information includes diagnostic clinics, pest workshops, regular status reports and handouts on common disease and insect pests. The veterinary fish pathologist certifies disease-free fish from hatcheries and diagnoses and treats diseases and parasites in public and private waters and fish hatcheries. The mussel program works to conserve, manage and restore Missouri's native freshwater mussels through research and monitoring, education and advocacy programs. The program works with hatchery staff, other state and federal agencies and universities to conduct research, develop rearing techniques for species of concern (including endangered species) and monitor mussels statewide. The genetics program supports biodiversity by documenting genetic diversity of species for management and restoration programs and providing information regarding the use of animal and plant resources. The program assists agency hatcheries and nurseries with production and post-release success through various genetic identification and marking techniques and maintains an archive of DNA from native animals and plants.

The Management Evaluation and Support group provides the specific focus on research and monitoring to support field staff. This involves coordinating, designing and conducting surveys, monitoring efforts and applied research aimed at understanding the impacts of management actions on Missouri's natural resources on public and private lands. Staff are involved in increasing the understanding of how local habitat manipulations fit into watershed level conservation strategies.

The Resource Science Division manages Missouri's Natural Heritage Program, which tracks the status and occurrence of 1,111 species of conservation concern and high quality natural communities and ensures that they are carefully documented, mapped and updated. In 2004–2005, more than 2,300 new records of endangered resources and natural communities were mapped

and documented, and updates and corrections were made on approximately 300 of the 17,000 total records. Resource Science staff regularly conduct specialized inventories and surveys related to threatened and endangered species and natural communities within Missouri. Information generated from these efforts are recorded, mapped and documented in the Natural Heritage Database and the Missouri Fish and Wildlife Information System (MoFWIS), a searchable database of habitat, management and distribution data on more than 700 species. Both databases are available on the department's website.

Wildlife Division

The Wildlife Division's mission is to conserve for long term 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. The Wildlife Division uses the best possible information, expertise, and judgment to manage game and furbearer species and to conserve all native plants, animals and natural communities. While this commitment is statewide, there is a special responsibility for exemplary management on public conservation lands. The division manages nearly 500,000 acres of land on roughly 400 conservation areas, considering both the needs of wildlife and the needs of citizens to use and enjoy public lands. Hiking, hunting, birding, fishing, mushroom gathering, camping, wildflower viewing and canoeing are examples of activities on conservation lands. In recent years the division has made a special effort to increase hunting opportunities and to introduce youth and other new hunters to dove, deer, turkey and other types of hunting. Another initiative has been to acquaint more people with the opportunities for nature viewing, especially birding, on conservation areas.

Good conservation management of public lands provides general environmental benefits to all citizens by maintaining the ecological health of our forests, prairies, glades, wetlands and streams. Healthy ecosystems produce fish, forest and wildlife resources. They also contribute to high water quality, groundwater recharge, air quality, soil erosion control and watershed protection. The division also provides technical advice on resource management to other agencies, organizations, industry, private landowners and other citizens.

In addition to wildlife and biodiversity conservation planning and implementation, the division administers the department's Natural Areas, Endangered Species, and Landowner Incentive Programs. It provides department-wide coordination of hiking, biking and equestrian trails, invasive



CRAIG EVANS
General Counsel



NANCY DUBBERT
Internal Auditor

species control, the national Northern Bobwhite Quail Initiative, wetland conservation, biodiversity conservation and the Missouri Comprehensive Wildlife Conservation Strategy. The Conservation Strategy enlists partner agencies, organizations and individuals to create shared visions for partner-driven implementation. Another example of conservation partnerships is the Missouri Bird Conservation Initiative, a consortium of over 30 organizations working together for all bird species.

The division helps develop regulations for the management of wildlife, and assists with research and monitoring to adjust regulations and to improve conservation practices and public outdoor recreation opportunity. It works to restore healthy populations of wildlife and plant species, and diverse natural communities that have declined or disappeared from the Missouri landscape. Past successes include wild turkey, white-tailed deer, bald eagle, peregrine falcon, osprey and river otter. Wetlands, glades, woodlands, prairies and savannas are natural communities that will continue to receive special restoration emphasis.

General Counsel

The General Counsel provides legal advice and opinions to the commission and department staff. All contracts and litigation in which the department, commission or a staff member is a party are handled by the General Counsel. Other functions include contract review, donor program support, employee training and review of administrative regulations.

Internal Auditor

The internal audit function provides an independent review and evaluation of designated department activities. It assists the commission and director by furnishing analyses, appraisals, recommendations and pertinent information concerning the activities reviewed.