



Enhancing Missouri ~ *it's in our nature*



Fall 2015

Director Sara Parker Pauley
Director's Update on the
Missouri Department of Natural Resources



The mission of the Missouri Department of Natural Resources is to protect our air, land and water; to preserve our unique natural and historic places; and to provide recreational and learning opportunities for everyone.

Inside this Issue

Page 3

- Budget and Legislation
- Executive Staff Updates
- Our Strategic Framework

Page 4

- Comprehensive State Water Plan
- Our Missouri Waters
- Youth Education

Page 5

- E3 - Enhancing Effectiveness and Efficiency
- Community Services
- Natural Resources Restoration

Page 6

- Parks, Soils and Water Sales Tax
- New State Park at Former Camp Zoe

Page 7

- Nutrient Reduction Strategy
- Compliance Assistance and Enforcement

Page 8

- Information Technology Governance Committee
- Clean Power Plan

Page 9

- Sulfur Dioxide Monitoring
- Ozone

Page 10

Coal Combustion Residuals

Director's Update

Welcome to the first edition of the Missouri Department of Natural Resources' Director's Update newsletter!

I'm reminded that change is a core element of life each fall as the stunning palette of colors reveals itself on Missouri's hillsides. We all enjoy the brilliant yellow and bold red leaves displayed by the maple and oak trees. However, I also appreciate the deep browns and muted burnt sienna that frames the landscape far in the distance. It takes those deeper more muted shades working in harmony to create the middle tint of autumn's scenery—allowing the brilliant colors to shine even brighter.



The Missouri Department of Natural Resources has been taking care of Missouri's natural resources on a daily basis for more than 40 years. Still there is much work to do and future natural resource challenges that await us.

Developing, expanding and improving our many partnerships remains a crucial part of the process in addressing our future challenges. Whether you are a department commissioner or a member of one of the department's kitchen cabinets, we want to provide you with more timely updates on important topics through this quarterly newsletter. I hope you find this newsletter useful in receiving the latest updates and summaries of issues happening at the department, state and federal level.

Thank you for your continued commitment and dedication toward enhancing Missouri. With your help, the Missouri Department of Natural Resources will continue to provide all Missourians a healthy environment in which to live, work and enjoy the great outdoors!

Sara Parker Pauley

Director

Missouri Department of Natural Resources



Budget

The department's Fiscal Year 2016 Truly Agreed to and Finally Passed budget totals \$560,481,082 and 1,700 full time employees. The budget provides funding from July 1, 2015 through June 30, 2016 and includes:

- \$10.8 million General Revenue (less than 2 percent)
- \$50 million Federal Funds (9 percent)
- \$499.7 million Other Funds (89 percent)

The department's \$560 million budget is approximately 2 percent of the total state's \$26 billion budget and General Revenue is approximately 0.12 percent of the state's \$8.8 billion General Revenue funding.

More than 80 percent of the department's operating budget is used to distribute funds to communities, organizations and individuals. The department provides grants, loans and contracts through a variety of programs to clean and protect the environment.

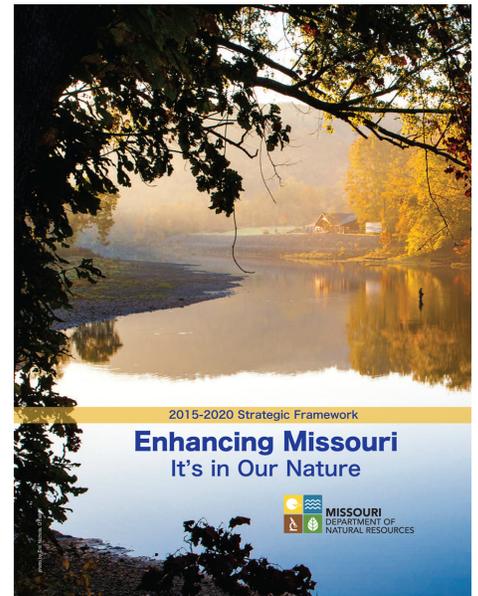
The department are working on the Fiscal Year budget request, due Oct. 1, 2015.

Legislation

- The 2015 legislative session saw the passage of House Bill 92, a department omnibus bill signed into law by Governor Nixon July 14, 2015.
- The bill includes legislation concerning changes to Missouri's Oil and Gas Law, changes to the definition of "Waters of the State" and provisions relating to sulfur dioxide monitoring.
- Staff is developing a legislative agenda and proposals for the 2016 session.

Our Strategic Framework

As Missourians, we are proud of our state's unique natural and cultural resource abundance and diversity, our heritage and our way of life. The Department of Natural Resources is a steward of this heritage – a responsibility it shares with Missouri citizens, businesses and communities.



- We are happy to provide Missouri citizens with the 2015 – 2020 Strategic Framework. This document is available on the department's website at dnr.mo.gov/pubs/.
- The department's strategic framework has been developed to be holistic and collaborative in its approach. It is intended to provide a department-wide framing of our opportunities and challenges with the intention that detailed division-level planning will provide the strategies, projects and measures to form a comprehensive strategic plan.



Executive Staff Updates

Several new team members have joined the department in 2015

- Tom Bastian joined the department as the new Communications Director
- Andrea Collier was announced as the new Water Resource Center Director and Deputy Director for Missouri Geologic Survey
- Mitchell Roberts was announced as the new Kansas City Regional Director
- Dawn Brooks joined the department as the new Custodian of Records and Assistant General Counsel
- Tony Prawl joined the department as the new Historic Preservation Program Director



Comprehensive State Water Plan Update

Planning for the future of Missouri's water resources

The department is charged with preparing, maintaining and implementing the Missouri State Water Plan per state statute 640.415 RSMo.



The updated Comprehensive State Water Plan will help guide decisions on the future of water resource use and development for Missouri. The soon to launch process requires extensive involvement from water users to characterize Missouri's water resources including surface and groundwater, quality and quantity and define how those water resources are currently used. Where challenges or potential shortfalls are identified, the plan will outline options to address water resource needs, costs and potential projects.

To get involved or learn more, visit the Web at dnr.mo.gov/env/wrc/statewaterplanMain.htm.



Our Missouri Waters

Engaging with and empowering local watershed citizens to ensure clean and abundant water within their watershed for generations to come

Our Missouri Waters, in partnership with Missouri's Regional Planning Commissions and Councils of Government, is beginning a series of meetings in select watersheds throughout the state. These watersheds include: Niangua; Meramec; Upper Mississippi-Cape; Sac; Lower Missouri-Crooked; North Fork Salt; Lower Grand; and the Lower Missouri.

The department's Our Missouri Waters effort has been instrumental in bringing additional resources to the state in the form of a \$6 million federal award under the U.S. Department of Agriculture's Regional Conservation Partnership Program. The program will provide cost-share funding directly to Missouri



landowners for the implementation of conservation practices. More information on the program can be found at dnr.mo.gov/env/swcp/.

In addition, the Our Missouri Waters effort in the Meramec River basin led to a partnership with a broad group of federal and state agencies and non-governmental organizations to develop a comprehensive study of the basin, which includes the Meramec, Bourbeuse and Big River watersheds. The study will result in a thorough analysis of the environmental challenges in the watershed and will offer a blueprint to guide environmental protection and restoration efforts. This study will introduce the use of available resources and will encourage the possibility of leveraging additional resources. This comprehensive approach is facilitated through the Our Missouri Waters process with its focus on local engagement.

More information about Our Missouri Waters and contact information for regional watershed coordinators can be found on the department's website at dnr.mo.gov/omw.

Youth Education

Encouraging youth to learn about the natural resources that affect their quality of life



The department's youth education program seeks to provide today's youth with the knowledge and appreciation of nature that will encourage them to connect with and care for our natural resources into the future.

The department is in the process of developing lesson plans and activities that are tied to Missouri's learning standards and the Next Generation Science Standards.

The department continues to work with partners across the state to bring natural resource education and interpretation information to our youth.



E3 - Enhancing Effectiveness and Efficiency

Implementing a Lean in Government approach to enhance effectiveness and efficiency

Over the past year, the department has ramped up efforts to employ a Lean in Government process improvement strategy. This effort is intended to increase the department's efficiency and effectiveness at delivering services. E3 systematically examines processes to identify and eliminate inefficiencies.

The department will conduct its first major E3 event beginning in September, which is aimed at improving the department's hiring process.



Everybody every day, with discipline, looking at what we did yesterday and, with discipline, thinking about how we do it better tomorrow.

Community Services

Helping local governments easily access assistance and resources to make informed, common-sense decisions about environmental protection for their community

The department has named community services coordinators in each region to assist local governments by providing one-on-one assistance on specific environmental issues. Department staff, along with our partners, are available to help small, financially and technically challenged communities with developing a compre-

hensive plan to address current and future infrastructure needs. Emphasis will be on wastewater and drinking water projects.

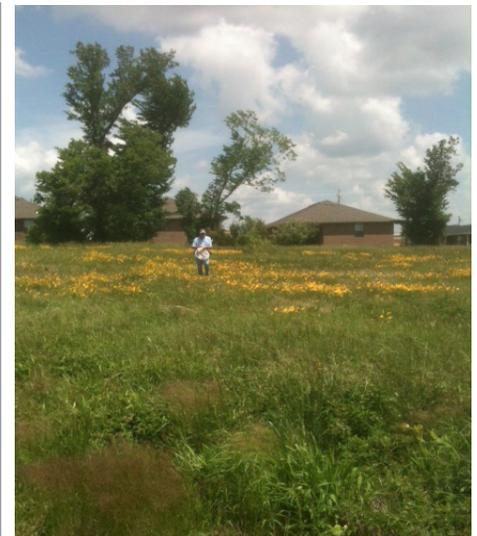
The department will begin the planning assistance effort in September. For more information on the department's Community Assistance program, visit dnr.mo.gov/assistance.



Natural Resources Restoration

As stewards of Missouri's natural resources, the department works closely with federal agencies to implement Natural Resource Damages claims and restoration activities. Natural Resource Damages focuses on restoring or replacing resources lost as a result of various activities.

In southwest Missouri, the department is working with Webb City to reclaim and clean up land that was formerly mined and will become a local park. The department is working with Jasper and Newton county soil and water conservation districts on voluntary projects with landowners that focus on livestock exclusion from streams. Additionally, the department is working with the Missouri Prairie Foundation to protect remnant prairies.



In southeast Missouri, the Soil and Water Conservation Program is coordinating with The Nature Conservancy to implement projects to stabilize stream banks and restore native plants to riparian areas.

The department recently acquired a 1,200-acre property that was added to Taum Sauk State Park as a replacement for terrestrial habitats lost to mining in southeast Missouri.



Parks, Soils and Water Sales Tax

The parks, soils and water sales tax was created through a constitutional amendment first approved by voters in 1984 (Article IV, Section 47 of the Missouri Constitution). The parks, soils and water sales tax is a statewide one-tenth-of-one percent sales tax that provides funding for Missouri state parks, historic sites and soil and water conservation efforts. The tax is divided equally between the two efforts. Voters have continued their support by reapproving the tax in 1988, 1996, and 2006. The sales tax is up for renewal by voters in 2016.

A Citizens Committee for Parks, Soils and Water was formed by citizen supporters. Their first meeting to officially organize the committee was held on Aug. 26, 2015 at the Missouri Farm Bureau Headquarters. Blake Hurst, President of Missouri Farm Bureau, and Steve

Mahfood, representing The Nature Conservancy, are serving as co-chairs of the Citizens Committee.



New State Park at Former Camp Zoe

In November of 2013, the State of Missouri acquired a 330-acre tract of land in Shannon County along Sinking Creek near the Current River. The property is approximately 1 1/2 miles downriver from Current River State Park. The property is bordered on the north and the

east by the Roger Pryor Pioneer Backcountry, approximately 64,000 acres of Pioneer Forest LLC. Despite the difficult weather that has hit all of Missouri this spring and summer, construction at the park has continued on pace and is projected to be completed the summer



of 2016. The park will feature several miles of hiking trails for visitors to enjoy during all seasons. In addition, the park's amenities provide great opportunities for corporate retreats, special events like weddings and reunions, and other functions where organizers need formal space for the business aspects of their trip to complement the abundant recreational features.





Missouri Nutrient Loss Reduction Strategy

The Missouri Nutrient Loss Reduction Strategy is being implemented to address soil loss in Missouri, resulting water quality affected and hypoxia in the Gulf of Mexico. The strategy addresses the science and policy that form the basis of the state's approach to nutrient loss reduction. It provides recommended actions for those nutrient loss reduction practices best suited to Missouri and describes the water quality benefits that are expected to result from these actions. The recommendations have been divided

into several major categories to allow users to focus on the areas of greatest personal interest. The following is a list of those categories.

- Agriculture**
- Urban Stormwater**
- Municipal and Industrial Wastewater**
- Decentralized (Onsite and Cluster) Wastewater**

Other Actions

The stakeholder work group representing agriculture has been meeting monthly to develop a framework

for nutrient trading with completion scheduled for 2016.

Implementation of the strategy has been initiated by the department after receiving a \$6 million Regional Conservation Partnership grant to implement geographic targeting of cost-share funds for agricultural conservation practices in chosen watersheds.

Another effort includes the Mississippi River Basin Healthy Watersheds Initiative is a collaborative project with NRCS to promote voluntary implementation of conservation practices and Edge of Field Monitoring that support nutrient loss reduction. These strategies leverage state and federal funding to help support Missouri's nutrient loss reduction strategy.



Compliance Assistance and Enforcement

Strengthening our compliance assistance and enforcement efforts to protect Missouri's natural resources

The department continues to take steps to improve compliance and enforcement activities. Over the past few months, workgroups have defined the scope of work and time frames for completing the projects described below.

Updating inspector training materials, guidance manuals and posting inspection checklists on the Web will help the department provide consistency.

The department is targeting increased inspections in two specific areas - water pollution and stormwater within Missouri's Outstanding National Resource Waters, which includes the Current, Jacks Fork and Eleven Point rivers. The inspections will focus on permitted as well as unpermitted facilities.

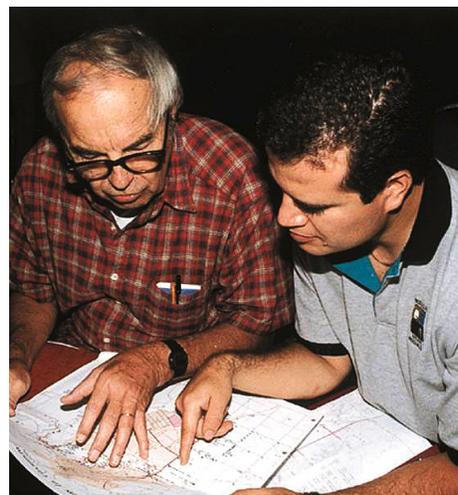
The second inspection effort focuses on air pollution and hazardous waste related to dry cleaner facilities. The dry cleaner inspection effort is focused on ensuring compliance with both hazardous waste and air pollution regulations. Both will involve some degree of compli-

ance assistance and enforcement if appropriate.

Ensuring consistency in how staff prioritize responses to certain types of environmental violations is import to the department.

The department is using a standardized model for administrative orders as a way to improve the speed, efficiency and effectiveness of the department's response to environmental violations.

A one-page document about land disturbance permits will summarize the use and the permittee's responsibilities. The department will use this as a template to complete summaries for other permits that are frequently used by small businesses in order to provide greater clarity of their obligations.





Information Technology Governance Committee

The department's Information Technology Governance Committee evaluates and prioritizes IT projects for the department. Decisions are made based on necessity (i.e., required by state or federal law or statute), impact to stakeholders, ability to provide increased efficiency and other factors.

The Missouri Gateway for Environmental Management

The Missouri Gateway for Environmental Management will allow the department to integrate data to better enable customers to interact with the department online. MoGEM will also provide efficiency gains within the department as information will be readily available to staff and management. MoGEM is a multi-year, multi-phase project. The project is currently in Phase I – a foundational phase to lay the

groundwork for a master-data-management approach for information needs. Future phases will include linking data systems and developing a public-facing gateway to allow customers access to information about their facilities.

Hazardous Waste Generator eReporting

The department recently implemented a system to allow hazardous waste generators to report electronically. Generators can now report annually, rather than quarterly. This system went online June 30, 2015.

The Cross-Media Electronic Reporting Requirement

The Cross-Media Electronic Reporting Requirement is a federal regulation that outlines the technical and business process that the department must adopt to accept required documents from our facilities elec-

tronically. The regulation establishes user security standards. By implementing a CROMERR-compliant system, the department will be able to expand electronic permitting and accept other required reports as well. The department is implementing a set of shared CROMERR services developed by EPA and other states. Using a shared services approach is less costly for the department and also ensures EPA approval of the system. The department plans to implement a single CROMERR portal so that each user only has one login and password.

Sunshine Law Requests

The department is updating the system for tracking and managing records requests. The goal is to modernize the process for external records requestors and for internal processing of records requests.

Clean Power Plan

EPA's plan to protect our health, environment and economy

On Aug. 3, EPA issued the final Clean Power Plan to reduce carbon dioxide emissions from existing power plants. According to the final rule, there are 21 power plants in Missouri that must cut emissions of carbon dioxide. To devise a plan for Missouri, the department is working with the Department of Economic Development's Public Service Commission and Division of Energy.

According to EPA's implementation proposal, states may pick from a mix of strategies to meet their goals. A few options include switching to natural gas; improving efficiency at power plants; and developing more renewable energy sources such as nuclear energy.

Missouri must submit its preliminary plans by September 2016 and its final plan by September 2018. If the department submits a plan that EPA cannot approve or submits the plan late, the state would have to follow EPA's federal plan, which is now under development.

The department is interested in gathering input from all stakeholders. There will be a Clean Power Plan stakeholder meeting at 10 a.m. on Sept. 23, 2015, in the department's Elm Street Conference Center in Jefferson City, 1730 E. Elm St., lower level. All interested citizens are welcome to attend.





Missouri Sulfur Dioxide Monitoring

In June 2010, EPA established a new sulfur dioxide National Ambient Air Quality Standard of 75 parts per billion measured over one hour. When a new NAAQS is finalized, the department follows a process that results in EPA designating areas within a state as “attainment,” meeting the standard, or “nonattainment,” not meeting the standard, typically based on monitoring data. For this standard, EPA also established a method that could utilize computer modeling to justify attainment.

EPA has established a multi-step approach to designate areas that do not meet the NAAQS for sulfur dioxide. The first round of designation’s focused on areas with existing air monitors. After the designation process was complete, EPA designated Jackson County and Jef-

erson County as nonattainment for sulfur dioxide, which means they do not meet the new standard. In May 2015, the department submitted its plans to bring Jefferson County into compliance, and it will submit plans for Jackson County in November 2015. EPA must review and approve or disapprove the plans.

The second round focused on four sources in Missouri: Kansas City Power and Light – Sibley; Sikeston Power Station, Doe Run Buick in Iron County and Ameren Labadie in Franklin County. The department will present boundary recommendations to the Missouri Air Conservation Commission Sept. 24, 2015 and submit them to EPA by the end of September 2015. EPA must review and approve or disapprove the plans.

The final round was set by the sulfur dioxide Data Requirements Rule, which EPA finalized in August. The final rule requires evaluation of all other sulfur dioxide sources with 2014 actual emissions greater than 2,000 tons per year. There are three options available to sources under the rule: take an emissions limit, model emissions, or install and operate a monitoring system - new monitoring sites must be operational on Jan. 1, 2017 and continued throughout 2017-19 and beyond. The area surrounding each source will be designated nonattainment or attainment in two remaining rounds of designations in December 2017 and December 2020.



Ozone National Ambient Air Quality Standard

In November 2014, EPA proposed a lower ozone standard in the range of 65 to 70 parts per billion. EPA requested comments on setting the ozone standard as low as 60 ppb, as well as retaining the existing standard of 75 ppb. EPA will finalize the new standard no later than Oct. 1, 2015. EPA also proposed extending ozone season from March to October for some states, including Missouri.

Estimated timeline:

- October 2015 – EPA finalizes standard



- October 2016 – States make boundary recommendations (one year after final standard) Recommendations based on three-years monitoring data 2014-2016
- October 2017 – EPA makes final designations of attainment or nonattainment

- 2020 to 2037 – Deadline for attaining the standard date depends on classification

It is difficult to predict the impacts of a lower standard on Missouri because future ozone monitoring data is unknown.



Coal Combustion Residuals

EPA published the Coal Combustion Residuals final rule April 2015, which governs the disposal of coal combustion residuals that are produced by electric utilities. This complex rule becomes effective Oct. 19, 2015 and will impact new and existing coal combustion residuals landfills and surface impoundments across the state. The earliest requirements become effective in October of this year.

Under the federal rule, coal combustion residuals are regulated as a solid waste and the provisions will be self-implementing. Self-implementing provisions create a situation of dual regulation as states cannot adopt or seek to implement a state program in lieu of the federal program.



Since the rule announcement, the department has been working in collaboration with affected facilities that already have state-issued utility waste landfill permits to deter-

mine the expected impacts of the federal rule implementation. This collaborative evaluation takes into consideration both solid waste and water-related regulations.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

**2 The Big Muddy
A Timeless Resource**
by Joe Gillman
The Missouri River has provided life-sustaining water for millennia. We might be surprised that its massive watershed drains nearly one-sixth of the United States. Protecting this resource today will benefit future generations of Missourians and their neighbors.

**6 From Eyesore to Asset
Rural Brownfield Sites Going Back to Work**
by Larry Archer
It can be a tall order to restore an environmentally contaminated property back to appropriate health standards. In rural settings, the issues are challenging due to smaller tax bases and magnified when the site must be passed over for a less desirable alternative.

12 Missouri State History Flows on its Great River
by Tom Ullendorck
In 1804, 55 years after the founding of St. Charles, Lewis and Clark met in that fledgling river town to plan their historic expedition. That same trip today boasts many reminders of just why the Missouri River meant so much to so many – and still does today.

departments
18 Explore Missouri 20 DNR News 22 Top Spots 25 ... But Not Least

Above: The Lewis and Clark Interpretive Plaza at Lewis and Clark State Park in southwest Buchanan County.
Front Cover: The Mississippi River as viewed from the overlook at Fall of Run State Park in Cape Girardeau County.
Back Cover: The Mayhan family, Capelle, enjoys a walk on the Katy Trail in Callaway County. 2015 photos by Ben Hickman.

Missouri Resources Magazine Fall Issue Now Available Online

Missouri Resources magazine is published quarterly by the Department of Natural Resources to inform readers about important natural resource issues and how they are being addressed. *Missouri Resources* is free to Missouri residents.

Read the latest issue online or subscribe by visiting the Web at dnr.mo.gov/magazine.