

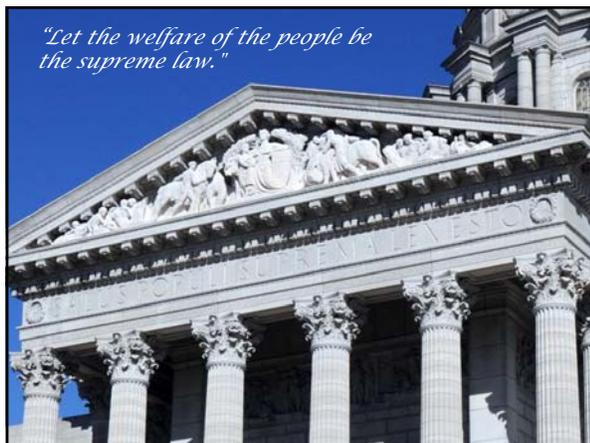
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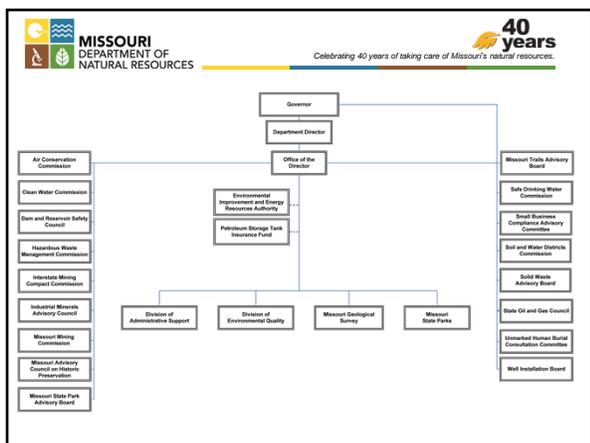
Celebrating 40 years of taking care of Missouri's natural resources. **40 years**

Enhancing Missouri's Water Resources

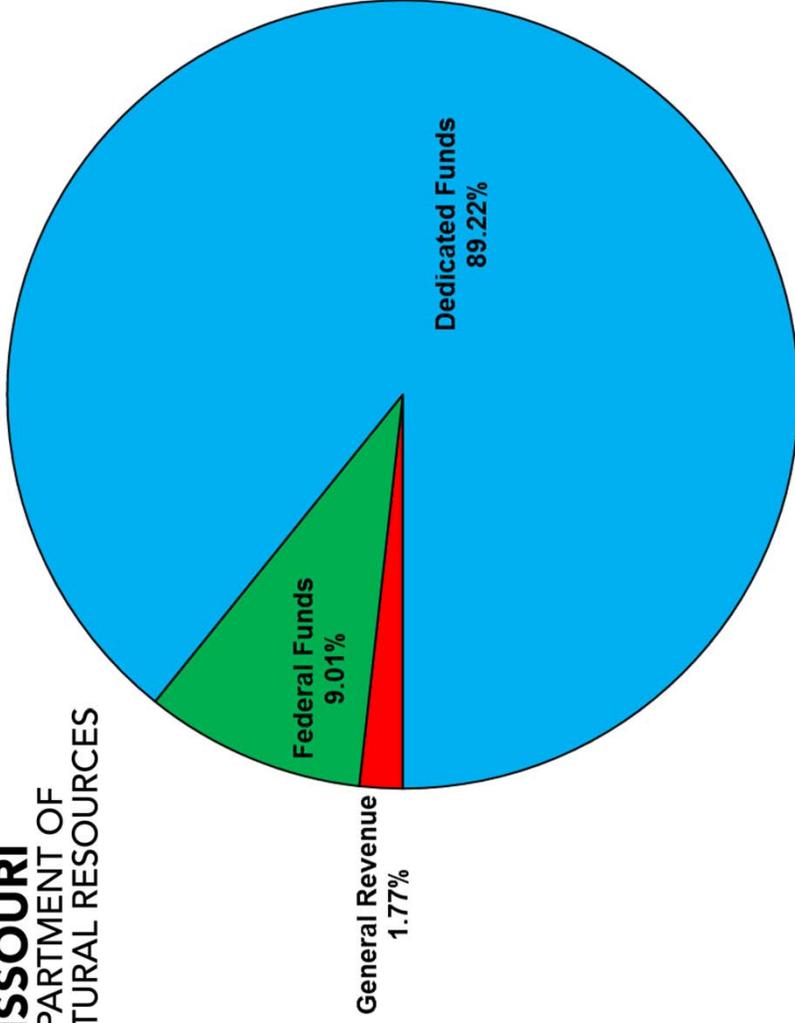
Sara Parker Pauley, Director







FY 2015 Truly Agreed and Finally Passed DNR Operating Budget (HB 6) by Fund*



	<u>Dollars</u>
General Revenue	\$ 9,858,086
Federal Funds	\$ 60,321,492
Dedicated Funds	\$ 498,140,316
Total	\$ 558,319,893

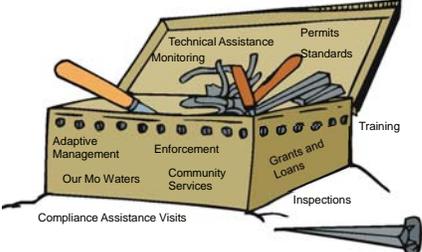
*Includes appropriated transfers

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Natural Resources' Toolbox



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Meeting Objectives

- Better Understand Key Functions of the Department, Select Boards and Commissions, and Programs Related to Water Resources Management Efforts
- Better Understand How the Department is Planning for the Future of Water Resources

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Meeting Objectives

- Provide Specific Input into the Department's Planning Effort
- Determine How Select Boards and Commissions Want to Engage Moving Forward

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Meeting Agenda and Process

Ginny Wallace, Facilitator

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Role of Department Director

Marty Miller, Acting General Counsel

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Role of Department Director

- DNR Director's role - 640.010, RSMo:
- Appointed by the Governor, Senate confirmation
- **Administer programs** assigned to DNR relating to environmental control and the conservation and management of natural resources

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Role of Department Director

- **Recommend policies** to the various boards and commissions assigned to DNR **to achieve effective and coordinated environmental control and natural resource conservation policies**
- **Execute policies established by rules** of the boards and commissions assigned to DNR

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Role of Department Director

- Decisions Subject to Appeal as Provided by Law
- **Appoint directors of staff** to service each of the policy making boards or commissions assigned to DNR, subject to their approval

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Role of Department Director

- Coordinate and **supervise all staff** and other personnel assigned to DNR, consistent with Chapter 36 RSMo, in such a manner as to provide optimum service, efficiency and economy
- Budgeting and Reporting Functions

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Role of the Clean Water Commission

John Madras, Director of Staff
Water Protection Program

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 **Clean Water Commission**

 **Water Pollution Branch**

Key Functions



Standards License Certification Planning Grants & Loans Assistance Permits Inspections Enforcement Monitoring

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Clean Water Commission

- Established by Section 644.021, RSMo
- Appointed by the Governor
- Serve 4-year Term
- Minimum Four Meetings Per Year

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Clean Water Commission

- Seven Members
 - All must be representative of the public interest
 - All must have interest and knowledge in conservation and the effects and control of water contaminants
 - Two members must be knowledgeable concerning the needs of agriculture, industry or mining
 - One member must be knowledgeable concerning the needs of publicly owned wastewater treatment works
 - Four members must represent the public

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Clean Water Commission Authority

- Missouri Clean Water Law (Sections 644.005 to 644.141, and 640.700 to 640.755)
- Exercise General Supervision of the Law
- Develop Comprehensive Plans and Programs for the Prevention, Control and Abatement of New or Existing Pollution

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Clean Water Commission Authority

- Conduct Rulemaking of Water Quality Standards and Other Aspects to Implement the Law
- Administer Grants and Loans
- Represent Missouri in all Matters Pertaining to Interstate Water Pollution Including Interstate Compacts
- Decide Variances and Appeals

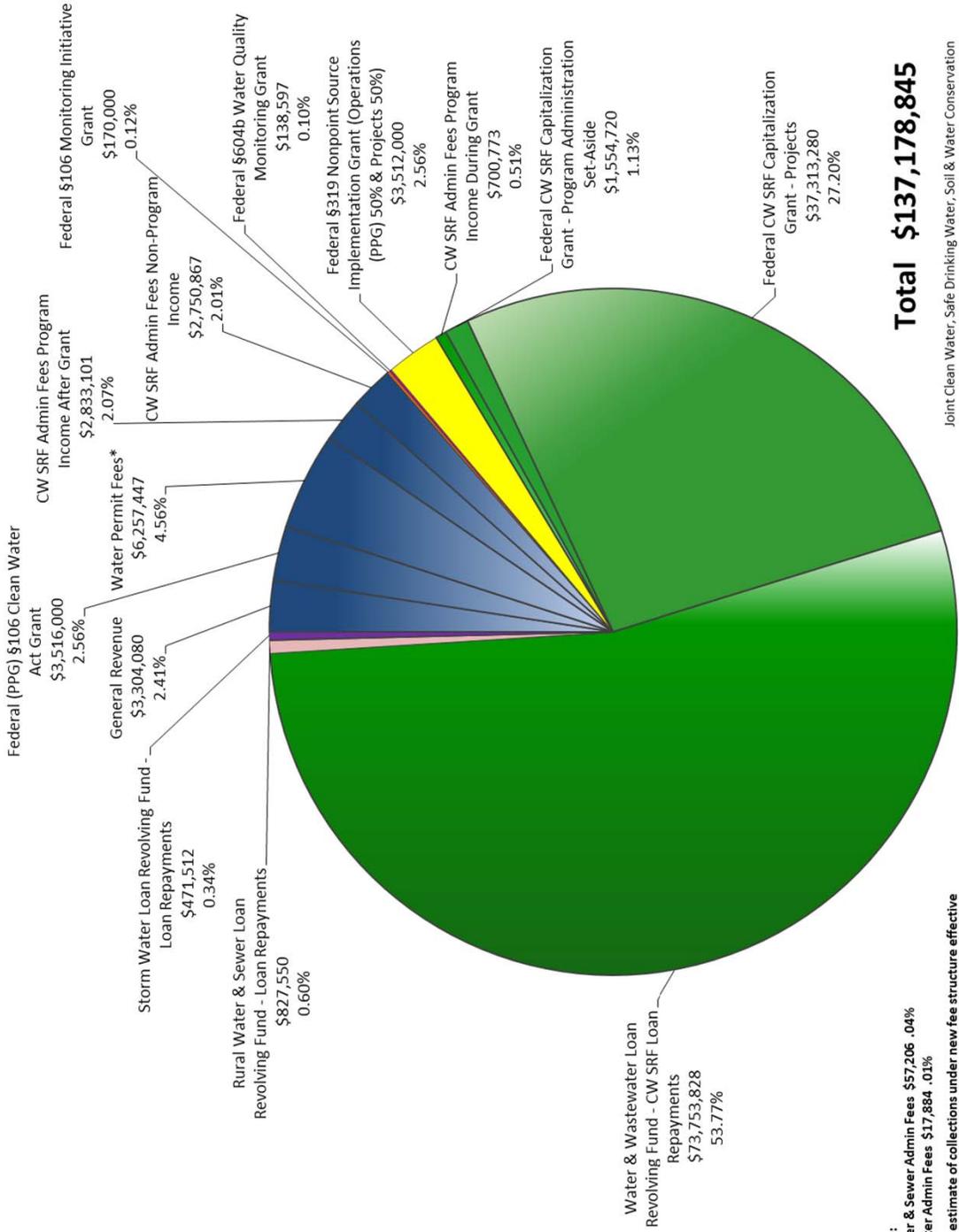


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Clean Water Funding Annual Estimated Revenues



Not visible:
 Rural Water & Sewer Admin Fees \$57,206 .04%
 Storm Water Admin Fees \$17,884 .01%
 * Full year estimate of collections under new fee structure effective January 1, 2015

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Tools

- Establish Design Criteria and Process Requirements
- Construction and Operating Permits, Water Quality Certifications
- Appeal and Variance Decisions
- Inspections and Enforcement
- Nonpoint Source Management Plan and Related Grants



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Role of the Safe Drinking Water Commission

Steve Sturgess, Director of Staff
Public Drinking Water Branch

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 **Safe Drinking Water Commission**

 **Drinking Water Branch**

Key Functions



Standards License Certification Planning Grants & Loans Assistance Permits Inspections Enforcement Monitoring

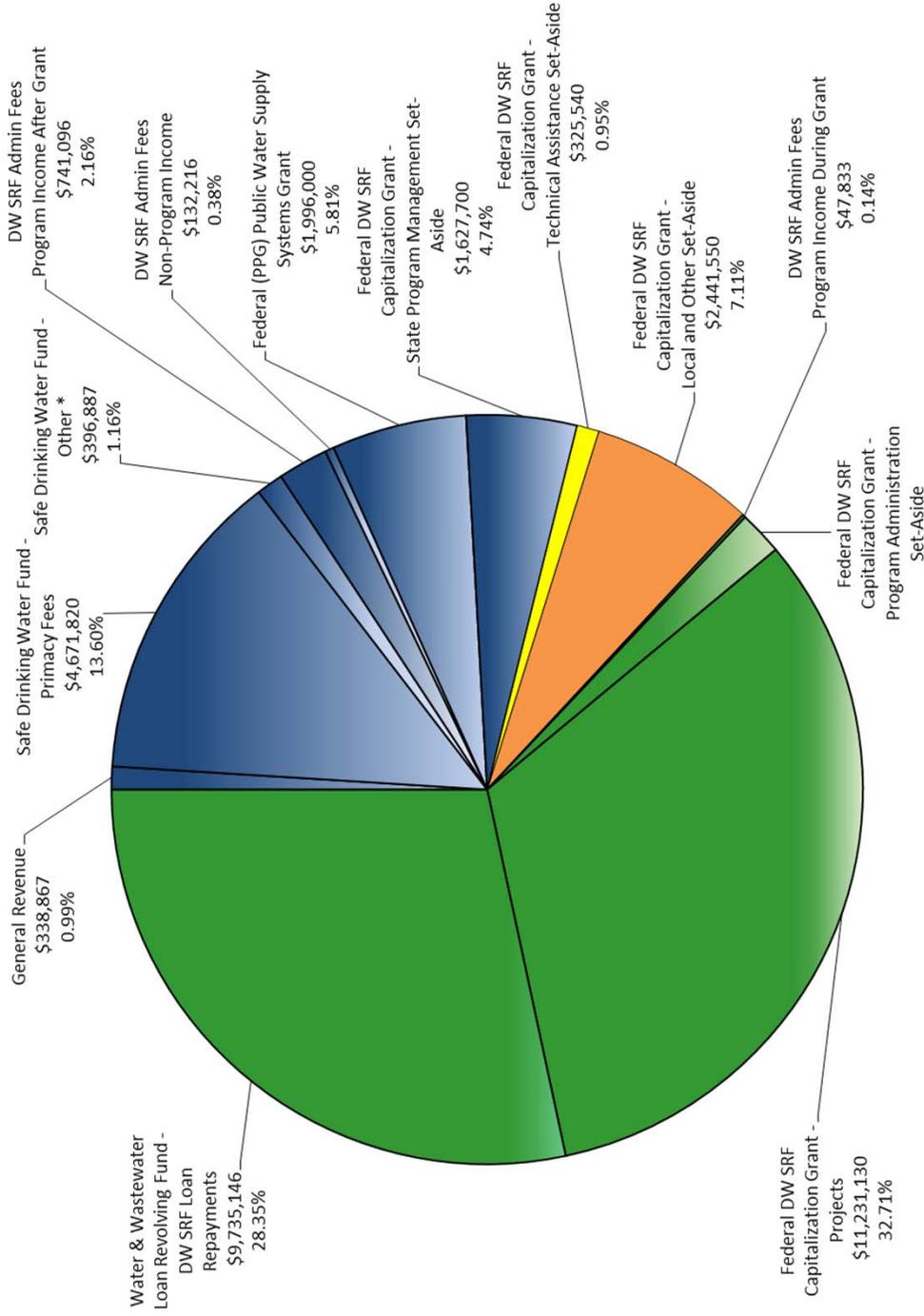


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Safe Drinking Water Funding Annual Estimated Revenues



* Safe Drinking Water Fund Other includes:
 Lab Services and Program Admin Fees \$267,528
 Lab Certification Fees \$20,967
 Operator Certification \$108,392

Total \$34,336,865
 Joint Clean Water, Safe Drinking Water, Soil & Water Conservation Commissions and Well Installation Board Meeting October 1, 2014

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Tools

- Engineering Standards for Water Systems
- Engineering Plans and Construction Permits
- Permits to Dispense to New Systems
- Monitor 2,750 Public Water Systems for Nearly 100 Contaminants, Some on a Monthly Basis
- Inspections and Enforcement
- System Operator Certification and Education



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Tools

- Sanitary Surveys (inspections) at systems on either a 3- or 5-year cycle
- Require Public Notification - Contaminant Events
- Assist Systems Prepare Annual Water Quality Reports for Customers
- Source Water and Wellhead Protection Plans
- Minimum Technical, Managerial and Financial Capacity



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Tools — DWSRF Set-aside funds

Community Assistance:

- Grants - Preliminary Engineering Reports
- Grants - Source Water Protection and Well Plugging
- Vouchers - Operator Certification and Training Cost
- Compliance and Technical Assistance
- Water Security/Disaster Preparedness and Response
- Optimizing Treatment Processes (AWOP program)




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Tools – DWSRF Set-aside funds

Community Assistance:

- Missouri Rural Water Association Circuit Riders – Hands-on Assistance to Water Systems:
 - Location of Water Main Leaks
 - Technical Assistance
 - Capacity Development
 - Operator Compliance
- Disinfection By-product Studies by MU to Identify Causes/Solutions at Specific Water Systems
- Training for Operators and Board & Council members
- Studies by Missouri Geological Survey on Radionuclide-Contaminated Wells




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Role of the Well Installation Board

Carey Bridges, Director of Staff
 Geological Survey Program


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Wellhead Installation Board



Wellhead Protection

Key Functions



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Well Installation Board

- Established by Section 256.605, RSMo
- Nine Members:
 - Four hold valid permits in the well drilling industry
 - Four public members (one - public water supply district user and one - private well user)
 - One DNR representative
- Appointed by Governor
- Serve 4-year Term
- Minimum Four Meetings Per Year

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Well Installation Board Authority

- Water Well Driller's Act (Sections 256.600 to 256.640)
- Protect Groundwater from Contamination due to Improper Construction and Well Abandonment
- Establish/Modify Well Drilling Rules - Water Well, Heat Pump, Monitoring Well, and Pump Installation Industry in Missouri

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Well Installation Board Authority

- Set Fees
- Take Enforcement Actions

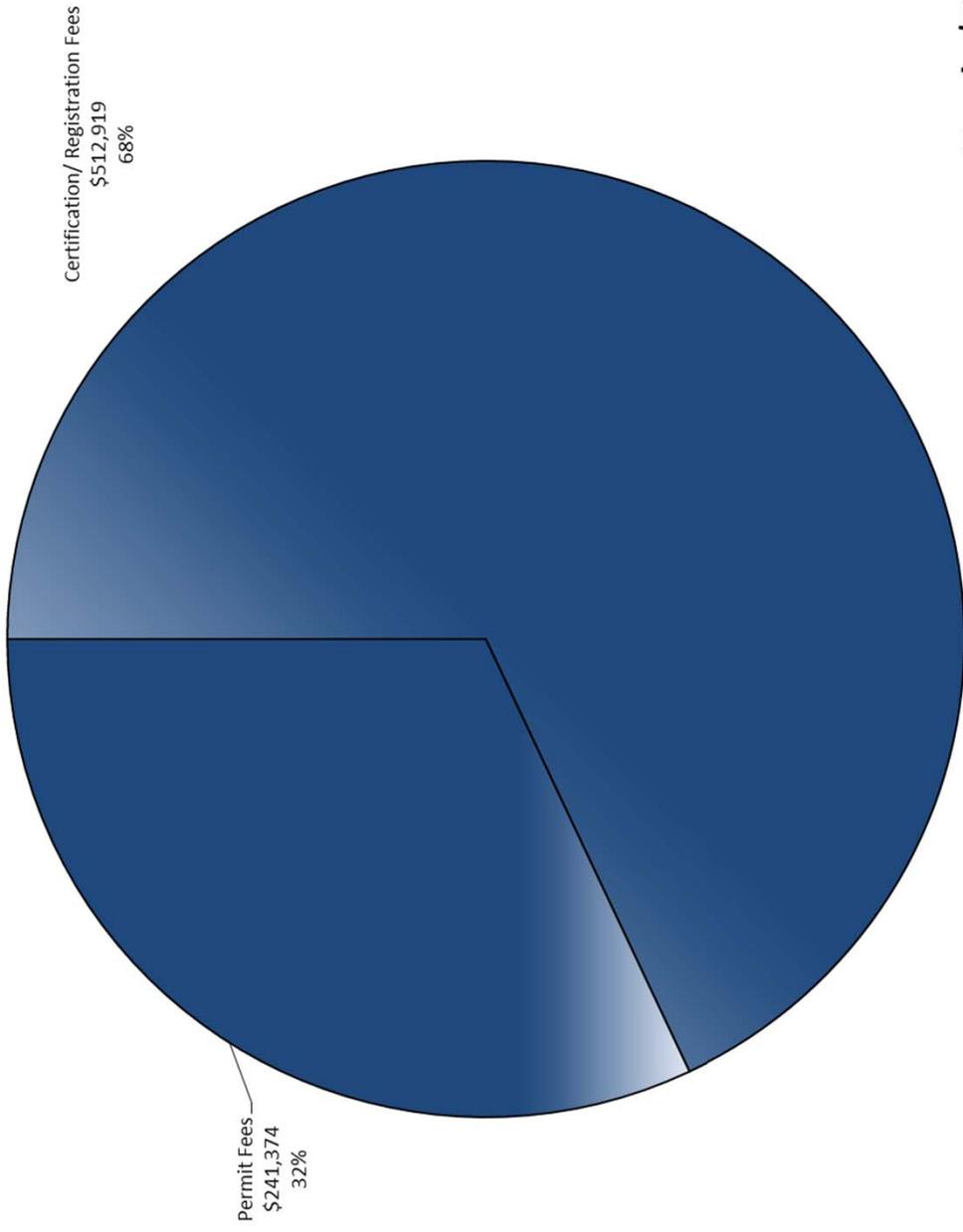


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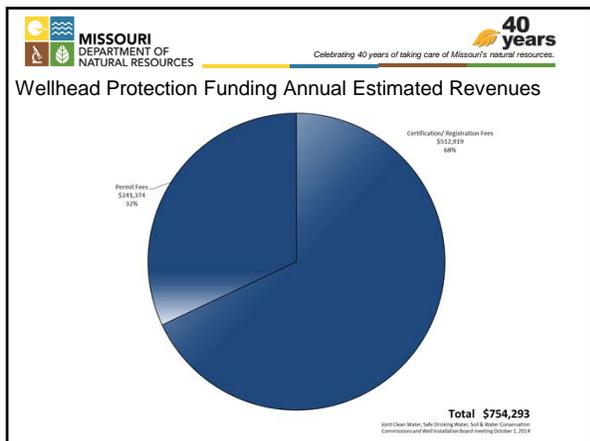
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Wellhead Protection Funding Annual Estimated Revenues



Total \$754,293

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Tools

- Permit (License) Qualified Well Installation Contractors
- Well Construction and Plugging Standards that Protect Groundwater
- Certify New Wells and Register Plugged or Reconstructed Wells to Ensure Compliance with Regulations

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Tools

- Enforce Well Construction Code
- Provide Assistance to Public on Well Drilling Issues and Problems
- Provide Technical and Regulatory Assistance to Well Installation Contractors


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Role of the Soil and Water Districts Commission

Colleen Meredith, Director of Staff
Soil and Water Conservation Program


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Soil and Water Districts Commission


Soil and Water Conservation

Key Functions




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Soil & Water Districts Commission

- Established by Section 278.080, RSMo
- Six Farmer Members (voting)
 - No more than four voting members from the same political party.
 - Three voting members from north of the Missouri River and three from south of the Missouri River.
 - Only one voting member from any given state senatorial district
- Appointed by Governor
- Serve 3-year Term
- Four Ex-Officio Members
- Meets Six to Nine Times Per Year


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Soil & Water Districts Commission Authority

- RSMO 278.080. 1. states....
- "...The State Soil and Water Districts Commission" to **administer for this state the soil and water conservation districts** provided for by sections 278.060 to 278.300. The state soil and water districts commission shall **formulate policies and general programs for the saving of Missouri soil and water by the soil and water conservation districts...**"


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Constitution

Article IV Section 47(a). For the purpose of providing additional monies to be expended and used by the department of natural resources through the state soil and water districts commission as defined in Section 278.070, RSMo, **for the saving of the soil and water of this state for the conservation of the productive power of Missouri agricultural land...**

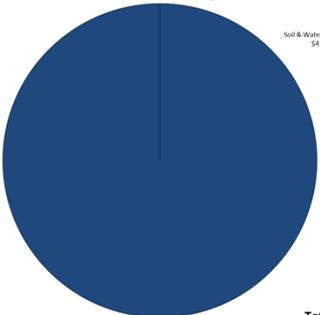
↓
 Missouri State Statutes
 ↓
 Code of State Regulations
 ↓
 Commission/ Rules Policy


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Soil and Water Conservation Funding Annual Estimated Revenues



Soil & Water Sales and the Tax
\$41,355,923
100%

Total \$41,355,923

Soil & Water Sales and the Tax
Soil & Water Conservation
Commission and Well Installation Board meeting October 1, 2014

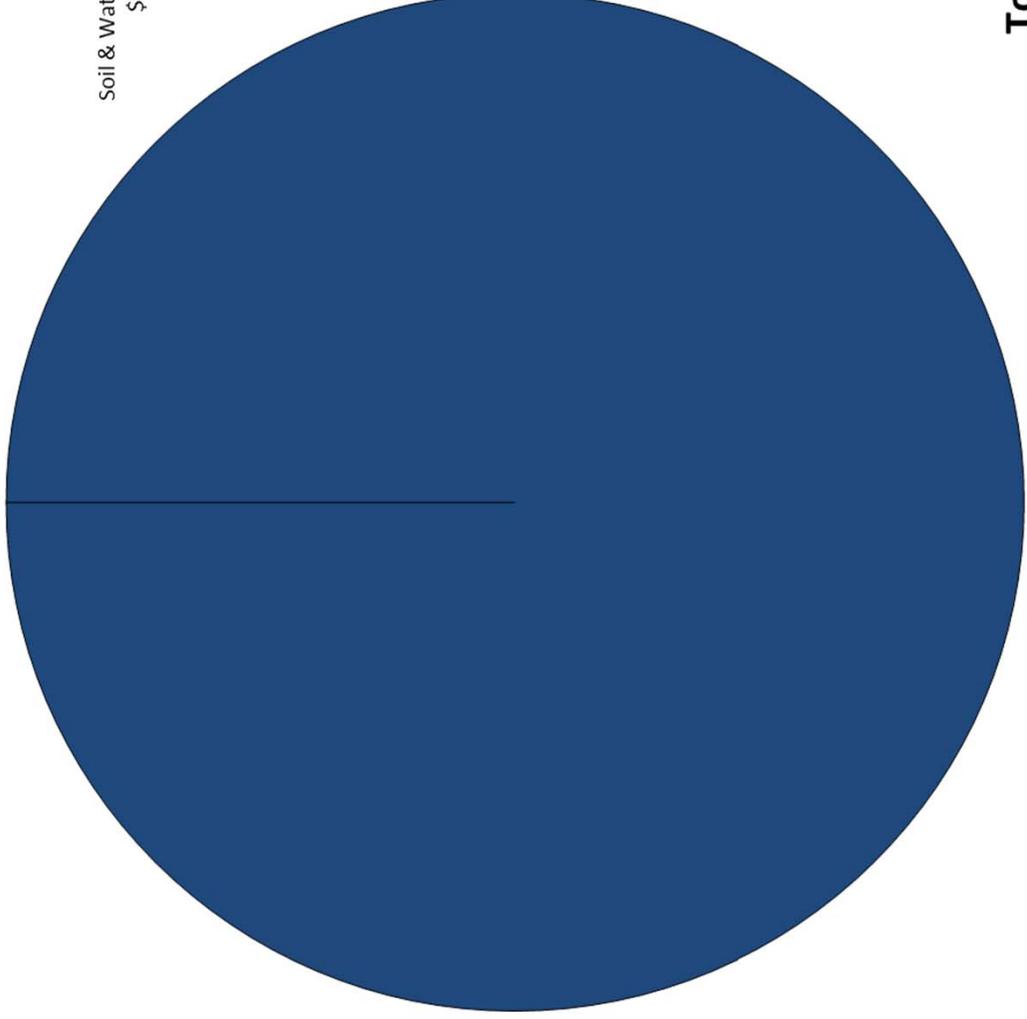


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40 years

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Soil and Water Conservation Funding Annual Estimated Revenues



Soil & Water Sales and Use Tax
\$41,355,923
100%

Total \$41,355,923

Joint Clean Water, Safe Drinking Water, Soil & Water Conservation Commissions and Well Installation Board meeting October 1, 2014

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Tools

- Resource Concern Areas
- Nutrient and Pest 2
- Grazing 6
- Sensitive Areas 11
- Sheet, Rill & Gully 15
- Irrigation 6
- Woodland 4
- Animal Waste 6

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Tools

- Commission Functions
- Establish Standards
Policies for Programs & District Operations
- Licensing
Tech Certification
- Grants/Loans
Grants to Districts
- Monitoring
WQ/Soil
- Inspections
Practice Reviews
- Assistance
Financial Incentives Staff
- Planning
Plan for the Future & Resource Planning

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Role of the Water Resources Center

Ryan Mueller PE, Director
Water Resources Center

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Boards and Commissions

Water Resources

Key Functions

Standards
License Certification
Planning
Grants & Loans
Assistance
Permits
Inspections
Enforcement
Monitoring

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Water Resources Center

- Water Use and Availability
- Interstate Water Management
- Water Law and Policy
- Water Resources Monitoring
- Dam and Reservoir Safety
- *State Water Planning*

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Water Resources Annual Estimated Revenues

Category	Amount	Percentage
Federal - Dam Safety Grant	101,658	2%
General Revenue	54,092,000	98%
Total	\$4,194,718	

Missouri Clean Water, Safe Drinking Water, Soil & Water Conservation Commission and Water Protection Board Meeting October 1, 2014

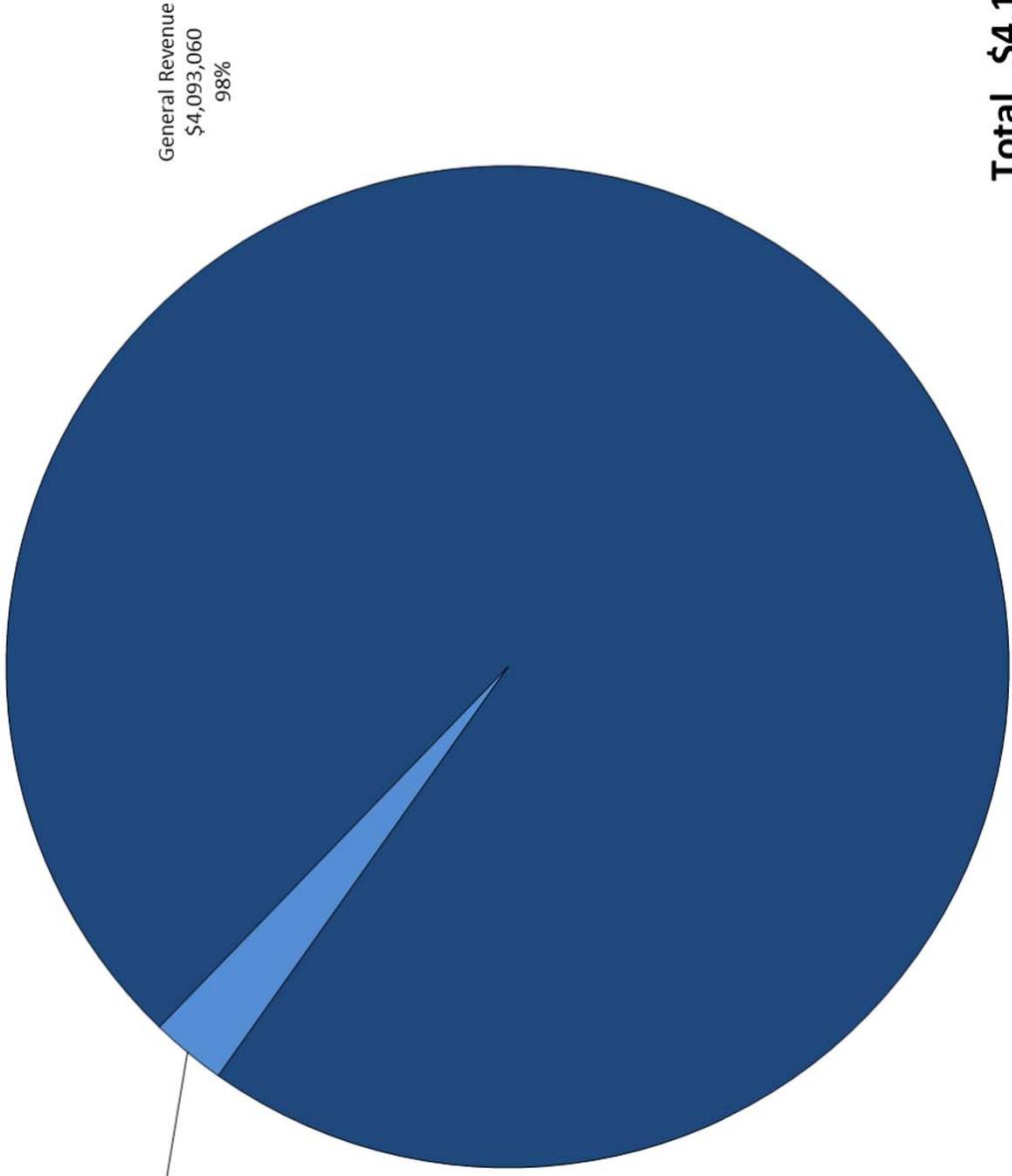


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Water Resources Annual Estimated Revenues



Total \$4,194,718

Joint Clean Water, Safe Drinking Water, Soil & Water Conservation Commissions and Well Installation Board meeting October 1, 2014


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Authority – Major Water Use Law

- Users with the Capability to Withdraw 100,000 Gallons Per Day or More Must Register and Report Annual Water Use.
- 2,200 Registered Major Water Users
- Reporting Documents Need and Historic Use
- NOT a Water Use Permit – Missouri Does Not Regulate Use




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Water Resources Authority

- Water Resources Law RSMo 640.400 – 640.435
 - The department shall develop, maintain and periodically update a state water plan for the use of surface and groundwater resources of the state, including existing and future need for drinking water supplies, agriculture, industry, recreation, environmental protection and related needs. This plan shall be known as the “State Water Resources Plan.”


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Water Resources Authority

- Water Resources Law RSMo 640.400 – 640.435
 - The department shall collect data, make surveys, investigations and recommendations concerning the water resources of the state as related to its social, economic and environmental needs.

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History of Water Planning

- 1911 Water Plan – Sanitation
- 1938 Water Plan – Public Works Projects
- 1976 Water Plan – “Water Problem Areas and Draft Framework”
- 1989 Passage of Water Resources Law
- 1993 Flood Report Analysis
- 1995 Missouri Drought Response Plan (revised in 2002)

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History of Water Planning

- 1996 - Rural Water Systems Project
- 1996–2002 - Missouri State Water Planning Series Completed
- 2004 – State Water Planning Staff and Budget Reduced
- 2006 – General Assembly Appropriates Funding for Water Resources Monitoring and Regional Planning Following Multi-Year Drought

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History of Water Planning

- 2006 - Present, Implementation of State Water Plan Recommendations, with Priority on Regional Water Supply Development and Enhanced Water Resources Monitoring

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Water Planning in Neighbor States

- Arkansas
 - Two years, \$4 Million Appropriation
 - Public Meetings, Education and Policy Review
 - Focus on Resource Assessment, Water Demand Forecasting, Regional Management Plans
 - First Update Since 1990



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Water Planning in Neighbor States

- Oklahoma
 - Five years, more than \$12 Million in Federal and State Appropriations
 - Extensive Public Involvement (more than 400 Facilitated Meetings)
 - Focus on Basin Assessments, Water Availability, Water Demand Forecasting, Climate Change Implications
 - More than 80 Water Bills Passed by OK Legislature Following Water Plan Update – Water for 2060 Advisory Committee Formed

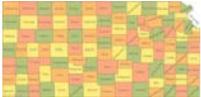


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Water Planning in Neighbor States

- Kansas
 - Gov. Brownback Issued Call to Action for Developing 50-Year Water Vision
 - Multi-Agency Water Vision Team Formed
 - Specific Goal to Ensure Adequate Water Supply for Kansas Citizens
 - Update at Nov. 12-13 Governor's Conference on the Future of Water in Kansas.



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Water Planning in Missouri

- Coordinated Water Planning Ongoing through OMW
 - Basin Advisory Committees will Serve as Vehicle for Education, Public Participation and Input (Fall 2014)
 - Basin Advisory Committees Envisioned to Develop Contemporary Priorities and Needs for Each Basin
- Community Services Initiative Focusing on Needs and Sustainability of Smaller Communities



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Water Planning in Missouri

- Statewide scoping effort to evaluate OMW activities, basin committee priorities, Community Services progress and Departmental strategies – goal of identifying key priorities for implementation (Kickoff Oct. 2014)
- **Broad awareness and support is critical for success**



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Challenges and Opportunities

Sara Parker Pauley,
Director





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Coordination






Silos
To
Synergy

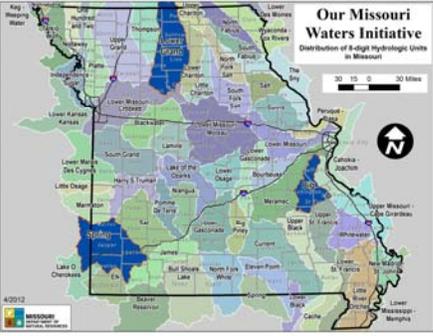





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Our Missouri Waters Initiative

Distribution of 8-digit Hydrologic Units in Missouri









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Our Missouri Waters

Jennifer Hoggatt, OMW Coordinator
Office of the Director



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Opportunity



Image Credit: Böhringer Friedrich

Our Missouri **WATERS**

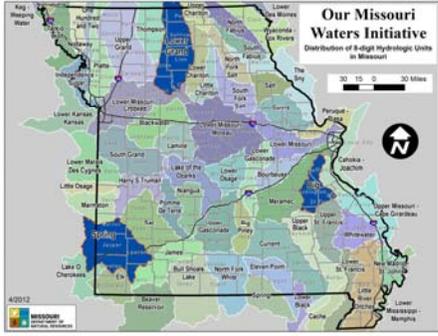
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Our Missouri Waters Initiative

Distribution of 8-digit Hydrologic Units in Missouri



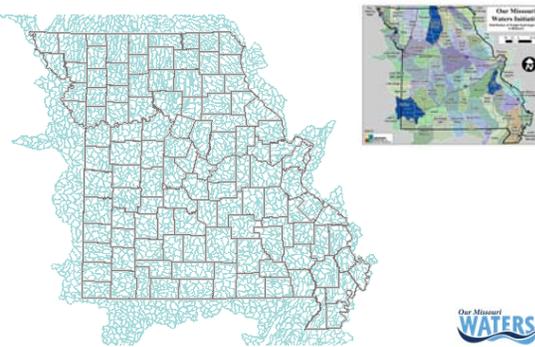
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Five Year Rotation – Initial Goals

- Compile department water resource information for each watershed
- Communicate the water resource information in a clear, concise format
- Facilitate discussion with a wide range of watershed stakeholders with a goal of identifying shared water resource priorities
- Discuss actions/next steps to address the priorities




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Five Year Rotation – Initial Goals

First two goals:

Compile and Communicate water resource information




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Five Year Rotation – Initial Goals

Third goal:

Facilitate discussion and identify shared priorities





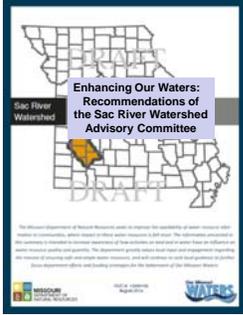
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Five Year Rotation – Initial Goals

Fourth goal:
Action plan
and next steps



**Enhancing Our Waters:
Recommendations of
the Sac River Watershed
Advisory Committee**

**Sac River
Watershed**

DRAFT



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Opportunities, Synergy and Success

Community Services



Image Credit: Route 66 Travel Guide



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Opportunities, Synergy and Success

Harrisonville Lake





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Opportunities, Synergy and Success

Spring River Watershed Plan



The Spring River Watershed map shows the geographical extent of the watershed across several Missouri counties, including Barton, Dade, Jasper, Lawrence, Newton, Barry, and McDonald. It highlights the Spring River and its tributaries. A legend in the top right corner provides details on the map's symbols and data sources.

Our Missouri **WATERS**

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Opportunities, Synergy and Success

Spring River Watershed Plan

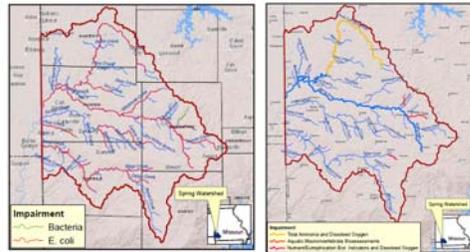


Figure 10: Impairment. This figure contains two maps of the Spring River Watershed. The left map shows impairment from Bacteria (indicated by red lines) and E. coli (indicated by yellow lines). The right map shows impairment from Total Suspended Solids and Dissolved Oxygen (indicated by blue lines), and from Heavy Metals, Pesticides, and Herbicides (indicated by red lines). A legend at the bottom left of the left map defines the symbols for Bacteria and E. coli. A legend at the bottom right of the right map defines the symbols for Total Suspended Solids and Dissolved Oxygen, and Heavy Metals, Pesticides, and Herbicides.

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Spring River Watershed Plan

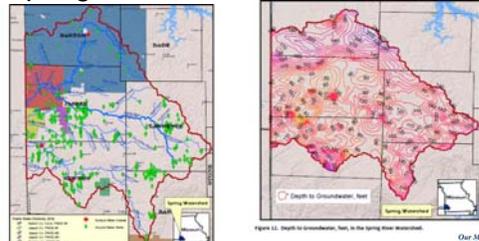


Figure 11: Public Water Supply Facilities and Public Water Districts in the Spring River Watershed. This figure contains two maps of the Spring River Watershed. The left map shows public water supply facilities (indicated by green dots) and public water districts (indicated by blue shaded areas). The right map shows the depth to groundwater in feet (indicated by a color gradient from red to blue). A legend at the bottom left of the left map defines the symbols for Public Water Supply Facilities and Public Water Districts. A legend at the bottom right of the right map defines the symbol for Depth to Groundwater, feet.

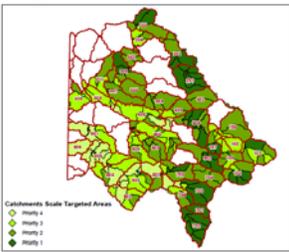
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Categorical Scale Targeted Areas
 Priority 4
 Priority 3
 Priority 2
 Priority 1




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Figure 25. North Fork Spring River Sub-Watershed




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North Fork Spring River Sub-Watershed

Sub	Non-Point Source	Urban Stormwater	Urban Sanitary Sewer	Animal Waste	Septic Systems	Other	Watershed Total	Watershed % of Total
101	868	88	222	222	855	268	644	66%
102	1,798	286	286	286	286	286	2,878	18%
103	778	286	286	286	286	286	2,878	18%
104	868	88	222	222	855	268	644	66%
105	868	88	222	222	855	268	644	66%
106	868	88	222	222	855	268	644	66%
107	868	88	222	222	855	268	644	66%
108	868	88	222	222	855	268	644	66%
109	868	88	222	222	855	268	644	66%
110	868	88	222	222	855	268	644	66%
111	868	88	222	222	855	268	644	66%
112	868	88	222	222	855	268	644	66%
113	868	88	222	222	855	268	644	66%
114	868	88	222	222	855	268	644	66%
115	868	88	222	222	855	268	644	66%
116	868	88	222	222	855	268	644	66%
117	868	88	222	222	855	268	644	66%
118	868	88	222	222	855	268	644	66%
119	868	88	222	222	855	268	644	66%
120	868	88	222	222	855	268	644	66%
121	868	88	222	222	855	268	644	66%
122	868	88	222	222	855	268	644	66%
123	868	88	222	222	855	268	644	66%
124	868	88	222	222	855	268	644	66%
125	868	88	222	222	855	268	644	66%
126	868	88	222	222	855	268	644	66%
127	868	88	222	222	855	268	644	66%
128	868	88	222	222	855	268	644	66%
129	868	88	222	222	855	268	644	66%
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143	868	88	222	222	855	268	644	66%
144	868	88	222	222	855	268	644	66%
145	868	88	222	222	855	268	644	66%
146	868	88	222	222	855	268	644	66%
147	868	88	222	222	855	268	644	66%
148	868	88	222	222	855	268	644	66%
149	868	88	222	222	855	268	644	66%
150	868	88	222	222	855	268	644	66%



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Final Thoughts...



Alone we can do so little, together we can do so much – Helen Keller



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Enhancing Missouri's Water Resources



Permitting
Standards
Inspections
Enforcement

Monitoring
Assistance
Grants & Loans

Department Programs

Boards and Commissions



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Questions?
