

**Arkansas Natural Resources Commission
The Arkansas Water Plan
Title 24
(Effective February 1, 2016)**

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Arkansas Natural Resources Commission
The Arkansas Water Plan
Title 24
(Effective 2016)

Subtitle I. The Arkansas Water Plan

Section 2401.1 The Arkansas Water Plan.

The Arkansas Natural Resources Commission will prepare, develop, formulate, and engage in a comprehensive program for the orderly development and management of the state's water and related land resources, to be referred to as the "Arkansas Water Plan." The first edition of the Arkansas Water Plan was published by the Commission in 1975 and updated in 1990 and 2015 2014.

Section 2401.2 Mission of the Arkansas Water Plan.

The Arkansas Water Plan is the state's comprehensive planning process for the conservation, development, and protection of the state's water resources, with a goal of long-term sustainable use for the health, well-being, and environmental and economic benefit of the state.

Section 2401.3 Enabling and pertinent legislation.

- A. Ark. Code Ann. §15-20-201 et seq., General Provisions (describing the Arkansas Natural Resources Commission).
- B. Ark. Code Ann. §15-22-201 et seq., Allocation and Use of Water.
- C. Ark. Code Ann. §15-22-301 et seq., Determination of Water Use Requirements.
- D. Ark. Code Ann. §15-22-501 et seq., Water Development Projects Generally.
- E. Ark. Code Ann. §15-22-901 et seq., Arkansas Groundwater Protection and Management Act.
- F. Ark. Code Ann. §15-23-401 et seq., Arkansas River Compact.
- G. Ark. Code Ann. §15-23-501 et seq., Red River Compact.
- H. Ark. Code Ann. §15-24-101 et seq., Flood Control.
- I. Ark. Code Ann. §25-15-201 et seq., Arkansas Administrative Procedure Act.

Section 2401.4 Commission adoption of the Arkansas Water Plan.

A. The Arkansas Natural Resources Commission shall publish an Arkansas Water Plan, which shall from time to time be revised, updated, and amended as new information, projects, and developments shall occur.

B. Through the planning process, the Commission will identify priority water issues and adopt policy approaches for the orderly development and management of the state's water and related land resources.

C. Priority issues, goals, and recommendations are effective upon adoption by the Commission pursuant to the rulemaking provisions of the Arkansas Administrative Procedure Act.

D. Technical reports supporting the planning process are not binding policy or rule.

Section 2401.5 Publishing the Arkansas Water Plan.

The Commission will maintain an electronic version of the planning documents and supporting technical studies available to all interested state agencies, departments, commissions, and individuals.

Section 2401.6 Ongoing supporting technical studies.

The Arkansas Natural Resources Commission will gather, compile, and analyze information on both the use of water in this state and the needs of the citizens of this state and will make the information available to officials of this state and to its citizens.

Section 2401.7 Definitions.

As used in these rules:

A. "Agricultural Irrigation Science Technical Workgroup" means a voluntary group of technical experts and stakeholders who will assist the Commission in ensuring the best possible data and science is used to support agricultural water policy decisions. The Commission's Executive Director will empanel the members.

B. "Arkansas Method" means the methodology used to determine instream flow needs for fisheries when calculating the amount of water that is legally available for nonriparian use. The Arkansas method divides a year into three seasons based on physical processes that occur in the stream and critical life cycle stages of fish and other aquatic organisms. The mean monthly flow (MMF) of a stream is determined from the gauging network and records. From November to March, the Arkansas Method specifies that 60% of MMF is required; from April to June, 70% of MMF is needed, and from July to October, 50% of MMF is necessary. (Steve Filipek, William E. Keith, and John Giese, *The Status of the Instream Flow Issue in Arkansas*, Proceedings of Arkansas Academy of Science, 1987, 43-48).

C. "Conjunctive Water Management" means use of surface water and groundwater in combination to improve water availability and reliability.

D. "Water Resources Planning Region" means one of five regions of the state with similar hydrology, economy, and geography. See map attached as Appendix A-1.

E. "Integrated Irrigation Water Conservation Practices" means irrigation practices that conserve surface water, groundwater, and energy as well as reducing financial costs, sediment load, and nutrient runoff.

F. "Irrigation Water Use Efficiency" means the overall efficiency of obtaining, distributing, and using water for crop production.

G. "Nutrient management plan" means a documented record of how nutrients will be managed on a nutrient management unit prepared in accordance with United States Department of Agriculture Natural Resources Conservation Service conservation practice standards for Arkansas to guide and assist landowners and operators in the use of fertilizers, litter, sewage sludges, compost and other nutrient sources for soil fertility and protection of the waters within the state.

H. "Priority issues" means water resources issues identified during the planning process and selected by the Commission as having long-term, statewide application requiring further work to ensure water availability and quality.

I. "Sustainable yield" is development and use of ground water resources in a manner that can be maintained for an indefinite time without causing unacceptable environmental, economic, or social consequences. (William M. Alley & Stanley A. Leake, *The journey from safe yield to sustainability*, 42 Ground Water 1, 12-16).

J. "Target efficiency" is a goal for irrigation water use formulated to conserve surface and groundwater, save energy, and lower crop production cost.

K. "Technical reports" are any documents or data helpful to the planning process.

Subtitle II. Issues and Recommendations

Section 2402.1 Conjunctive water management and groundwater decline.

A. Arkansas must reduce groundwater withdrawals and move toward sustainable groundwater use, provide sustainable yield protection for the Sparta aquifer, and ensure water is available to satisfy irrigation uses through conjunctive water management.

B. Since September 30, 2006, owners of wells extending into sustaining aquifers, including the Sparta Aquifer, have been required to install metering devices to their wells. The Commission will seek opportunities to purchase, install, and read meters on selected wells drilled into the Mississippi River Valley Alluvial Aquifer.

C. The Commission will develop and implement conjunctive water management strategies based on storing surface water during months when excess water is available, for use during the summer irrigation months when excess surface water is not available. Surface water supplies should be developed to support sustainable groundwater use. During periods of water shortage, however, public water systems have priority and a reserved water right. The non-riparian users of water storage development projects are subordinate, and this may mean that during periods of drought they would receive no water and could suffer economic loss.

Section 2402.2 Tax incentives and credits for integrated irrigation water conservation.

A. Tax incentives and credits are needed to encourage the implementation and management of integrated irrigation water conservation practices.

B. The Commission will set goals to be achieved for integrated irrigation water management and conservation practices.

C. The Commission will evaluate the effectiveness of the existing tax credits and incentives and, based on this assessment, consider recommending that the General Assembly:

1. Increase the percentage of the total project cost available for tax credits based on applicants improving their irrigation water use efficiency compared with the goal or target efficiency,

2. Extend the period for claiming tax credits for implementing water conservation practices, and

3. Increase the annual cap on tax credits so additional tax credits can be claimed.

D. The Commission will track the acreage on which water conservation practices have been implemented.

Section 2402.3 Funding water resources development projects.

A. State-issued general obligation bonds are vital to finance and refinance the development of water; waste disposal; pollution control, abatement, and prevention; drainage, irrigation, flood control, wetlands, and aquatic resources projects to serve the citizens of the State of Arkansas.

B. As current bond authorization is exhausted, the Commission will pursue authorization of an additional \$300 million under the Water, Waste Disposal, and Pollution Abatement Facilities General Obligation Bond Program.

C. Additional bond authorization will be requested as needed to finance and refinance the development of water resources projects.

D. The Commission will seek the authority to merge water or sewer systems where necessary in order to bring them into economic viability.

Section 2402.4 Infrastructure condition.

A. Public water and wastewater infrastructure is failing and in need of repair and replacement throughout Arkansas.

B. Public entities operating water and wastewater infrastructure or flood control and drainage projects should develop sustainability plans that evaluate:

1. Current infrastructure status and historical trends in status,

2. Needed infrastructure repairs, replacement, and maintenance and associated schedules,

3. Federal and state programs available to support infrastructure projects, and

4. Contingency plans, including the potential for regionalization or privatization (including the usage of private water wells, septic systems, or decentralized systems), if the utilities are assessed to be unsustainable.

C. The Commission may initiate receivership proceedings for public water and wastewater providers that have defaulted on loans.

D. The Commission will develop training programs for utility boards of directors on sustainability planning and how these plans relate to the operation of their facilities and infrastructure.

E. The Commission may provide lower loan rates to any utility that submits a sustainability plan with its financing application.

Section 2402.5 Excess water for nonriparian withdrawal and use.

A. The statutory definition of excess water should be based on sound science.

B. A deficit of legally available water has been identified within certain basins in the East Arkansas Water Resource Planning Region. The General Assembly should consider raising the 25 percent limitation for permitting excess surface water within these basins for nonriparian transfer upon completion of scientific studies validating the need for an increase and confirming water is seasonally available to protect and sustain instream, riparian, and other uses specified in state law.

C. The scientific studies referenced in Subsection B will first be conducted in the East Arkansas Water Planning Region, and then shall be conducted in the remaining regions in the following order: South-central, West-central, North, and Southwest. These studies will be conducted in collaboration with the Arkansas Game and Fish Commission, the Arkansas Department of Environmental Quality, the Arkansas Department of Health, and other state, regional and local agencies with constitutional and statutory water management duties.

D. Continue to use the Arkansas Method in estimating the proportion of total available water needed to satisfy fish and wildlife flow needs in estimating excess water for nonriparian withdrawals and transfers.

E. Through adaptive management, the Commission will evaluate and assess alternative methods for estimating fish and wildlife flows, or other instream needs and uses, as more accurate, scientifically reviewed, and defensible methods become available.

F. The Commission will engage stakeholders in the planning regions through an open and transparent process as scientific studies are conducted and as better scientific approaches become available and are proposed for use.

Section 2402.6 Drought response.

A. Planning is needed before droughts occur.

B. The Commission will develop a coordinated drought contingency response network among state, regional and local agencies with constitutional and statutory water management duties, federal agencies; drinking water utilities, organizations, and institutions; and the private sector for alerting the public about impending droughts, sharing consistent messages and information, and providing information on voluntary conservation measures to reduce water use.

C. The Commission will seek financing and ensure stream gaging networks throughout the state are adequate to provide streamflow information needed to make informed decisions about impending or advancing droughts statewide and within each planning region.

Section 2402.7 Reallocation of water storage in federal reservoirs.

A. Reallocation of water storage in United States Corps of Engineers reservoirs is needed to increase available water for existing and new uses.

B. Reallocation of water storage in reservoirs, based on the revised 1977 Water Supply Act guidance manual, should be sought if there is a documented need for additional water for domestic, municipal, or industrial water supply.

Section 2402.8 Improving water quality through nonpoint source management.

A. Water quality is affected by nonpoint sources of pollutants and nonpoint source management projects need state funding in addition to federal funding.

B. The Commission will propose legislation to designate funding specifically for financing nonpoint source pollution management programs and implementing nonpoint source management practices.

C. The Commission will collaborate with the Arkansas Department of Environmental Quality, the Arkansas Game and Fish Commission, the Arkansas Natural Heritage Commission, the Arkansas Department of Health, the United States Geological Survey, and other state, regional, and local agencies and organizations that engage in or have water quality management interest through:

1. The biennial Clean Water Act water quality review processes, and
2. The water quality criteria review to determine the attainment or nonattainment of water quality standards in streams and identify the sources and causes of nonattainment.

D. The Commission may encourage the General Assembly to consider the need for nutrient management plans for the application of poultry litter and animal manure in other regions of the state.

E. The Commission will leverage funding from multiple sources such as Source Water Protection under the Safe Drinking Water Act, administered through the Arkansas Department of Health, to address nonpoint source pollution in watersheds with drinking water sources.

Section 2402.9 Public awareness and education.

A. Public awareness and education are critical for water planning in Arkansas.

B. The Commission will collaborate with the Arkansas Water Foundation, the Arkansas Association of Conservation Districts, the University of Arkansas Cooperative Extension Service, and others to develop and disseminate public information.

C. This information should focus on water conservation practices being implemented in Arkansas, advances in water conservation technology, and trends in groundwater and surface water use.

Section 2402.10 Water use reporting.

A. The accuracy of water use reported for agricultural irrigation has been questioned because most water use is not measured or metered.

B. The Commission will form an Agricultural Irrigation Science Technical Workgroup to:

1. Review the water use reporting process for agricultural irrigation,
2. Modify the ranges for accepted water use by crop type, if needed for greater accuracy,
3. Evaluate various quality assurance criteria and approaches for confirming crop type and acreage,
4. Assess the adequacy of the surface water and groundwater monitoring network in providing confirmation of the aggregate or cumulative withdrawal of groundwater and surface water for agricultural irrigation,
5. Propose incentives for agricultural users to report water use more accurately, and
6. Periodically review advances in technology for measuring and estimating water use and water use reporting and provide recommendations to the Commission on incorporating these advances in water use reporting programs.

C. The Commission will continue and improve awareness and education programs, in conjunction with conservation districts, to explain and promote the water use reporting program currently in place and any future improvements.

Subtitle III. Continuous Planning

Section 2403.1 Continuous planning.

The Arkansas Water Plan shall be altered, amended, or repealed to the extent necessary for the proper administration of the state's water resources.

Section 2403.2 Implementation teams and workgroups.

A. The Executive Director of the Commission will empanel issue-specific implementation teams and workgroups recommended in the Arkansas Water Plan.

B. Participation in workgroups empaneled by the Commission will be open to all interested parties acting in good faith, with the Commission retaining its statutory responsibility to make final policy determinations.

Section 2403.3 Updating the Arkansas Water Plan.

A. The Commission will compile water demand and supply data continuously and improve its collection and analysis methods.

B. Gap analyses for non-population-driven uses, such as agriculture, industry, and thermoelectric power generation, will be conducted on approximately five-year cycles, or when the Commission determines that emerging issues warrant more frequent study.

C. After release of the decennial United States Census, the Commission will update population-based water demand, supply, and gap analyses for public water and wastewater services. The Commission may determine that conditions require a more frequent interval.

D. Regionally, the Commission will foster efforts to involve the public in water studies, revised estimates of water demand and availability, gap analysis, and planning.

E. The Commission will continue its Water Plan education and awareness efforts through all practical means, including presentations, participation in water conferences, social media and internet tools, and publications.

F. Full public involvement is necessary for successful implementation and future updates.

Appendix

Water Resources Planning Regions

