Arkansas Water Plan

"A comprehensive program for the orderly development and management of the state's water and related land resources."

Arkansas Code section 15-22-503(a)

Water Planning - 1930s to the Present



Current Plan Revision Timeline

- 2011: General Assembly authorizes Arkansas Natural Resources Commission to update
- 2012: Contractor selection and kickoff
- 2013-2014: Public participation process
- 2015: Rules drafted and considered in another round of public meetings
- 2016: Rules formally adopted
- 2015-present: Implementation of recommendations

Process

- **Demand** how much needed, where, and when?
- **Supply** how much available, where, and when?
- Gaps the difference between demand and supply
- Issues and Recommendations -challenges and solutions

Rulemaking 2015

2050

Public Participation

- 1990 Update drafted internally, then released
- This update involved hundreds of people
- Volunteer workgroups beginning to end
- Approximately 250 meetings and presentations
- Implementation is following the same model, involving people with drought planning, watershed plans, and the review of our Water Use Database

Reading the Update

- Plan is over 2,600 pages long
- Start with the rules <u>www.anrc.arkansas.gov</u>
- Full Plan is at arwaterplan.arkansas.gov
- Summary report is about 100 pages and a good overview

Demand Projections

- Current demand is 12.4 million acre-feet per year
 - 11 billion gallons per day
- Projected demand in 2050 14 million acre-ft. per year
 - Would cover the state in 4.9 inches of water
- Largest demands:
 - Crop irrigation 80%
 - Thermoelectric power 11%
 - Public drinking water 3.5%



Water for Row Crop Irrigation

- Arkansas ranks second in the nation for groundwater use, third for crop irrigation, and fourth for total water use
- 80% of water used in Arkansas is for irrigation
- Of that, 85% comes out of the ground
- 53.5% of our alluvial aquifer groundwater withdrawals are unsustainable
- 45% of our Sparta aquifer use is unsustainable

The Groundwater "Gap"

- Current groundwater demand is 8.7 million acre-feet per year
- Projected demand in 2050 is 9.9 million acrefeet per year (Total demand 14 million AFY)
- <u>Sustainable yield of our aquifers is 1.9 million</u> <u>acre-feet per year</u>
- We expect a groundwater availability gap of over 8 million acre feet per by 2050

Plan Recommendations for Agriculture

- Manage irrigation water better (Plan projects this will reduce the gap by 25%)
- Encourage conservation through by improving use of state tax credits for practice installation
- Reduce the remainder of the gap by using surface water from natural sources, on-farm storage, and irrigation projects
- Improve our water-use reporting system to get better data to set goals and measure progress

Infrastructure Recommendations

- The Plan projected \$11 billion in needed infrastructure investments
 - Drinking water need: \$5.74 billion by 2024
 - Wastewater need: \$3.76 billion by 2024
- Continue to use the successful state general obligation bond program as a source of financing
- Motivate operators of water, wastewater, levee, and drainage projects to develop maintenance and replacement plans and dedicate a portion of revenue to implement those plans

Water quality recommendations

- Continue to use the non-point source program to improve water quality through voluntary, incentive-based practices
- ANRC has helped develop several watershed management plans since the Plan was adopted
- Cooperate with state and federal agencies to improve water quality

Drought Planning

- Prior to the Water Plan update, Arkansas was one of three states with <u>no</u> drought planning
- Implementing the Plan recommendation to form a Drought Contingency Response Network, ANRC has built a framework for coordinated drought response

Outreach and Education

- Educating the public on water issues is a challenge, and the Plan recommends continued efforts
 - Inviting participation in planning has an educational benefit
 - All water issues, from preventing people from driving into floodwaters to getting better participation in conservation, require an educational component

Arkansas Arkansas Essential For Life

arwaterplan.arkansas.gov