



# Comprehensive Update of the Arkansas Water Plan

**Helping Arkansas Achieve a  
Safe and Reliable Water Resource Future**

November 15, 2012



# Welcome



*"If there is magic on this planet, it is contained in Water"*

Loren Eiseley



# Introduction to the Planning Team

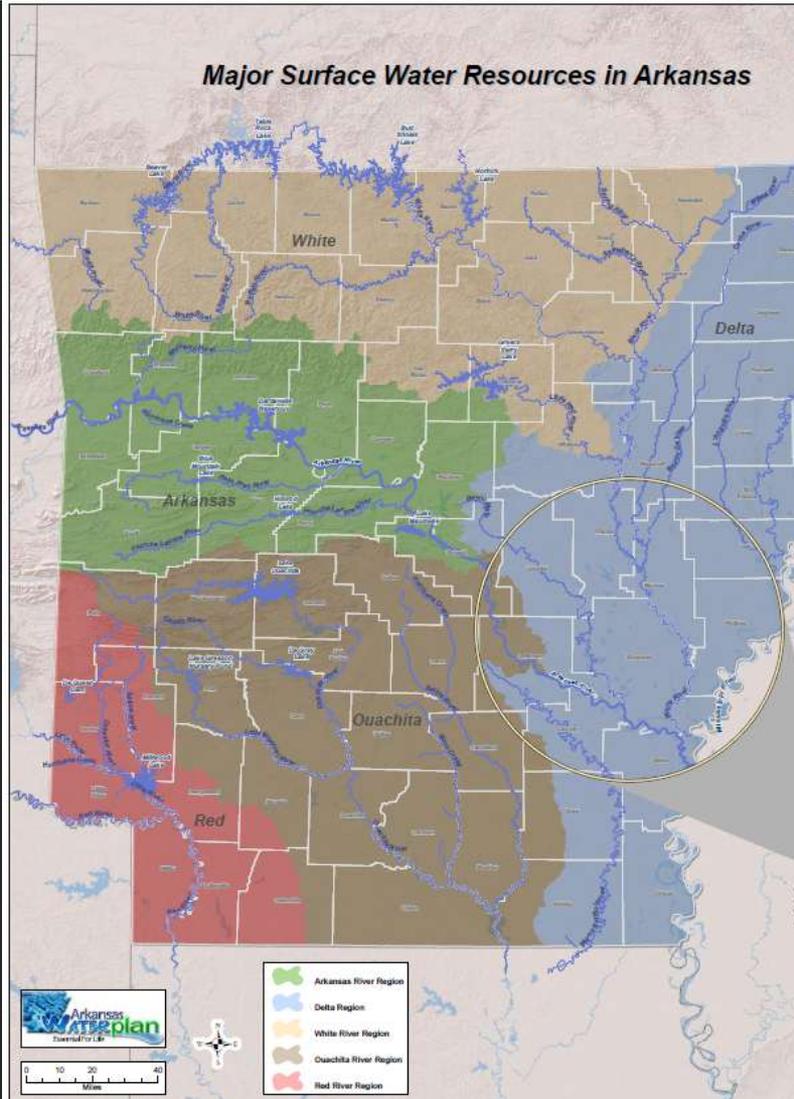


cranford  
johnson  
robinson  
woods  
fiftieth year

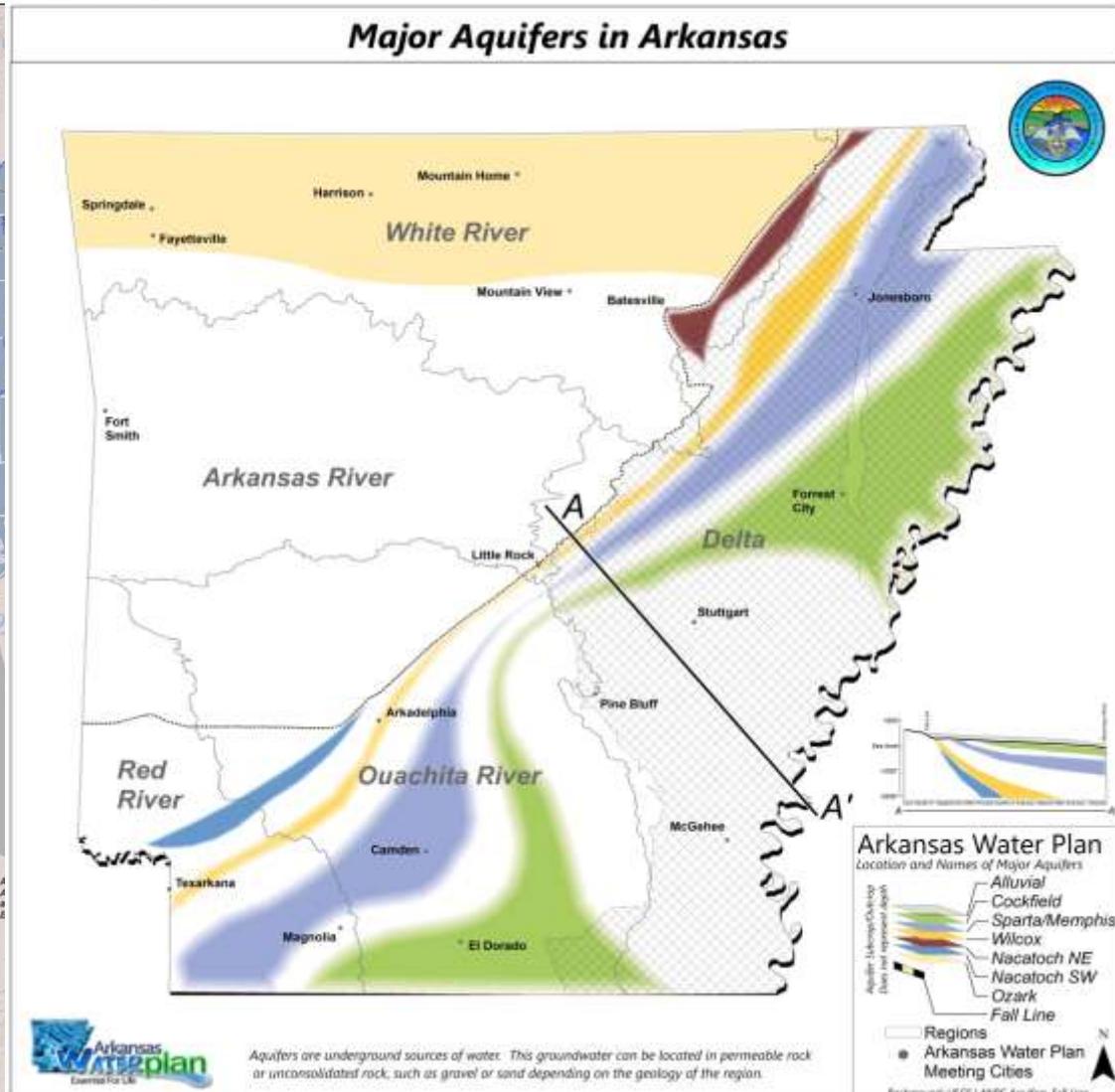


# Major Groundwater and Surface Water Resources of our State

Major Surface Water Resources in Arkansas



Major Aquifers in Arkansas

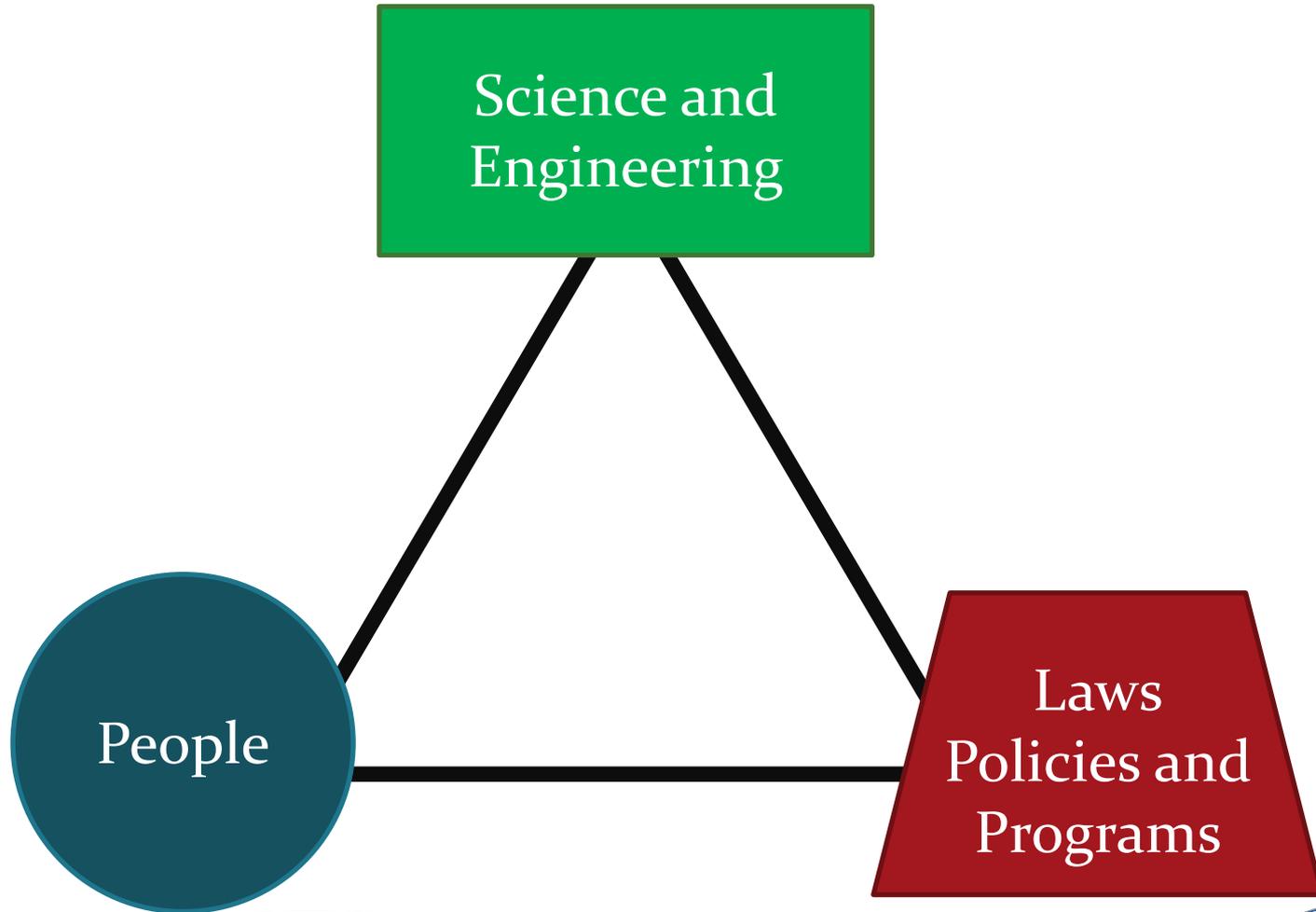


# Purpose of Tonight's Meeting?

## *Learn more about our water resources and provide an overview of the Arkansas Water Plan Update*

- Discuss why its important to have a water plan
- Review a short history of water planning in Arkansas
- Provide you an opportunity to ask questions and share your thoughts about water resource planning
- Outline the major steps in the water planning process
- Provide you with information to allow you to follow and continue to be involved in the ongoing process to Update the Arkansas Water Plan

# What is the Arkansas Water Plan?



# Arkansas Water Plan

## *Charting the Path to a Safe and Reliable Water Future*

- What are some of the major **questions** that you have about Arkansas Water?
- Are there any **specific water issues** or needs that you would like to see the Water Plan address?

Please note we will revisit these questions at the end of the presentation!

### Comprehensive Update of the Arkansas Water Plan

#### Draft Vision, Mission, and Goals

##### Draft Vision for Managing Water Resources in Arkansas

Water is vital to the prosperity and health of Arkansas's people and their natural surroundings. As such, water must be managed in a sustainable manner to support local and state economies, protect public health and natural resources, and enhance the quality of life of all citizens by applying appropriate policies and best practices with limited regulation and preservation of private property rights.

##### Draft 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, environmental, and economic benefit of the State of Arkansas. The Arkansas Water Plan will achieve the following goals.

##### Draft Goals

- Optimize the use of surface and groundwater for the differing economies of the various regions of the State.
  - Reliably meet agriculture water needs.
  - Reliably meet municipal & industrial water needs.
  - Manage water resources in a manner that protects the ecological needs of fish and wildlife.
  - Reliably meet the water quantity and quality needs to help support navigation, recreation, and tourism.
- Utilize the best available science, data, tools and technologies to support water resources decisions.
  - Employ the latest supply management and water efficiency technologies among the different sectors of use including residential, commercial, industry, natural resources and agriculture.
  - Identify and address emerging water resource management needs as identified through the water planning process.
  - Use best available science and data to update and implement the Arkansas Water Plan, and identify and address data gaps and needs.

# The Arkansas Natural Resources Commission

- Establishes policy that makes funding and regulatory decisions relative to:
  - soil conservation
  - nutrient management
  - water rights
  - dam safety
  - water resources planning and development
- Composed of nine members appointed by the Governor and confirmed by the Senate
- Several other boards and commissions were combined to form the Arkansas Soil and Water Conservation Commission in 1963 and it was renamed to Arkansas Natural Resources Commission in 2005



# Why is the Arkansas Water Plan Important to our Future?

- While Arkansas has significant water resources -- they are not infinite
- Water is vital to the social and economic well being of our communities, and our overall quality of life
- A dependable water supply requires
  - Good water supply sources (quantity and quality)
  - The ability to provide this water to our homes and businesses
- The Arkansas Water Plan will provide us with the **science and information** to make **informed decisions** on the best way to **manage water to meet the needs of our citizens and the environment**

# USACE, USGS, State and Local Entities will be Key Stakeholders for Data Collection and Coordination

Water Resources are complex – we will need the help and understanding of All Arkansans

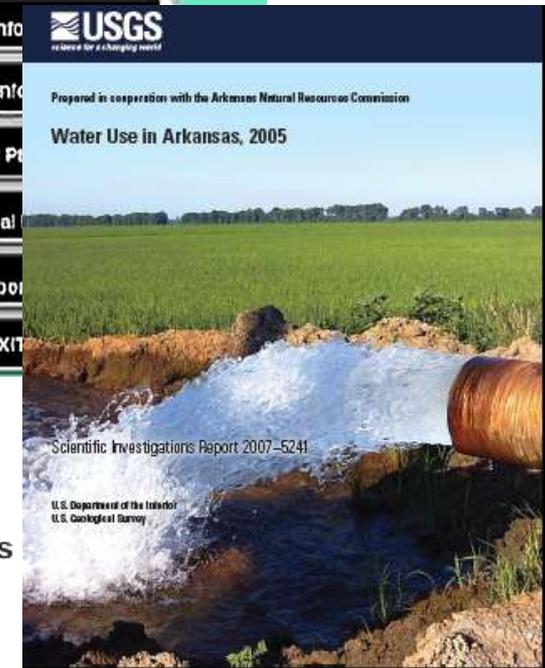


**Points of Contact  
U. S. ARMY CORPS OF ENGINEERS  
Regulatory Activities – Little Rock District & Adjacent Districts**

Little Rock District ATTN: CEWA/PRA P.O. Box 9027 Little Rock, AR 72203-0867 (501) 324-5255	Memphis District ATTN: CEWA/CEWA 407 N. Main Street Room 8-202 Memphis, TN 38103-1844 (901) 546-3471	Vicksburg District ATTN: CEWA/CEWA 410 E. City Street Vicksburg, MS 39183 (601) 431-0276	Kansas City District ATTN: CEWA/CEWA 703 Federal Bldg Room 702 801 East 12 <sup>th</sup> Street Kansas City, MO (816) 463-3670	St. Louis District ATTN: CEWA/CEWA 1222 Spruce Street St. Louis, MO 63102-2612 (314) 331-4676
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**US Army Corps  
of Engineers.**



# Arkansas Water Planning - *Charting the Future*

2012

2013

2014

*Water Education Program*

*Policy Review & Public Involvement*

*Scoping*

**Technical Phase**

*Resource Assessments*

*Forecasting*

**Planning Phase**

*Regional Management  
Strategy Formulation*

*Draft Plan &  
Public Review*

*Final Plan  
Rulemaking  
Nov 2014*



# Why do we Need to Update the Arkansas Water Plan?

- We depend on water in sufficient quantity & quality for our very existence
- The wise use and protection of this resource is critical for current and future generations
- The existing AWP is over 20 years old
- How we use and value water has changed over this timeframe
- New data and information collection and analysis is needed to define water supply, water needs, and identify potential solutions to meet those needs
- Increasing demands on water resources requires new technical, policy, and financial tools to address identified water resource issues and needs

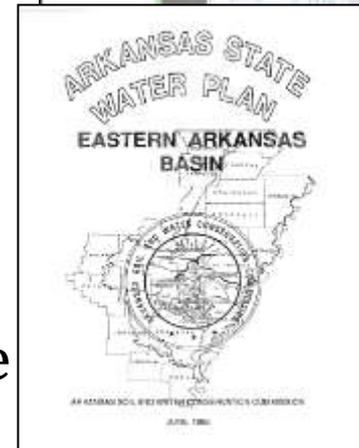
# How did the Update to the Water Plan Start?

- ANRC recognized an essential need to update the Plan
- Speaker Robert Moore convened a legislative water plan study team and appointed Rep. John Edwards to lead the effort to find financing and to guide the development of the update
- Legislative support came together, and the General Assembly appropriated \$4 million for the update (\$1 million of which can from Arkansas Game and Fish Commission)
- The AWP has a defined delivery date for ANRC rulemaking of November 2014

# A Quick Look at Past Water Planning in Arkansas

# What is the Arkansas Water Plan?

- A comprehensive program for the orderly development and management of the State's water and related land resources
- The State policy for the development of water and related land resources in this State
- A planning framework to be used by all State agencies, commissions, and political subdivisions in all matters pertaining to the discharge of their respective duties and responsibilities as they may affect the comprehensive plan (1975 and 1990 are the most recent planning efforts)



# Legislative Policy on the Water Plan Revised in 2011

- Water is vital to the prosperity and health of both people and their natural surroundings
- Water conservation will keep agriculture, industry, tourism, and recreation strong for future generations
- Encourage best management practices, reliable data, and scientific methods for water conservation and management
- Surplus water is underused

# Legislative Policy on the Water Plan Revised in 2011

- Groundwater supplies are being used at a rate that will result in aquifer destruction
- Surface water and groundwater supplies must be managed together for maximum effect
- State policy is to permit and regulate the construction of facilities to use excess surface water to:
  - Protect drinking water
  - Protect the rights of all persons
  - Maintain healthy in-stream flows
  - Prevent harmful overflows and flooding
  - Conserve natural resources

# Updating the Arkansas Water Plan

*The Major Steps in the Water Planning Process*

# Building on and Improving Existing Programs and Information

**Comprehensive Update to the Arkansas Water Plan**

**Public and Stakeholder Input**

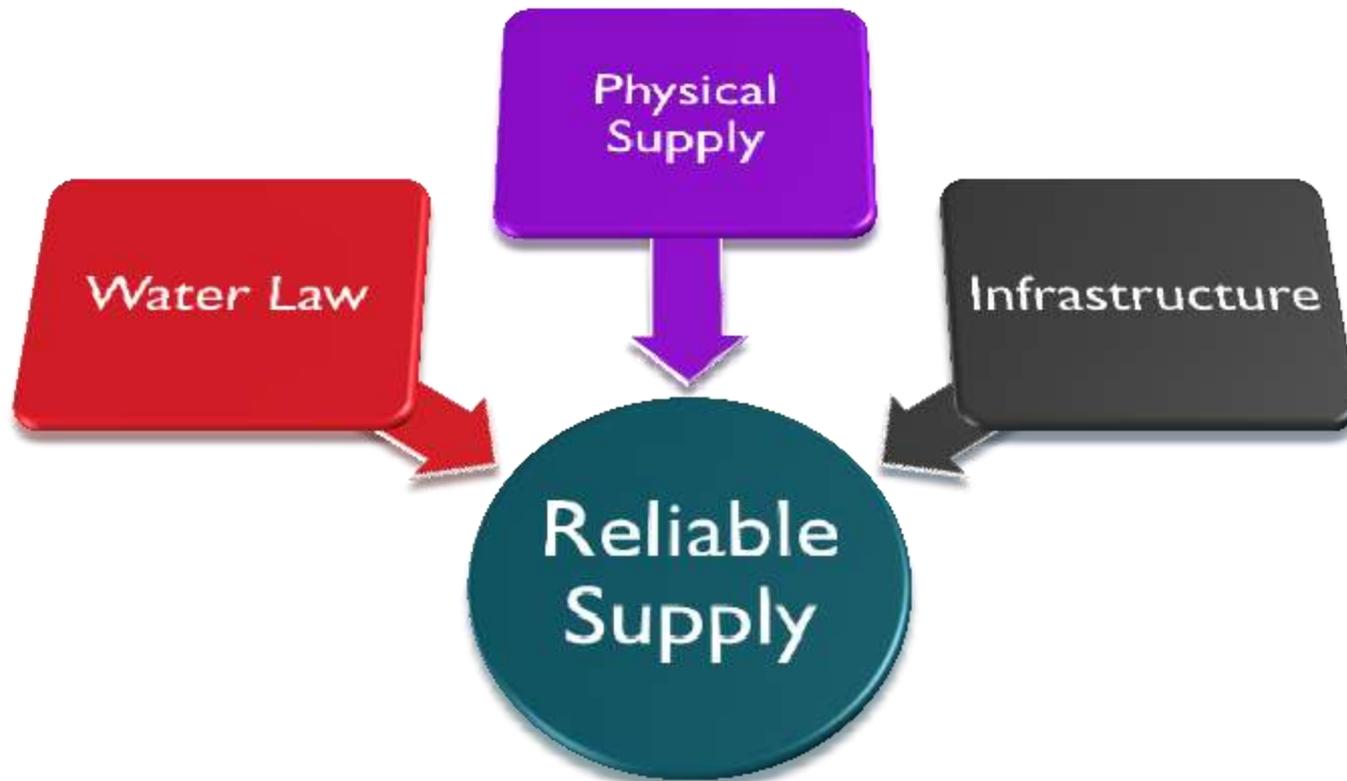
**Existing and New Data and Forecasted Needs**

**Existing Policies and Programs**

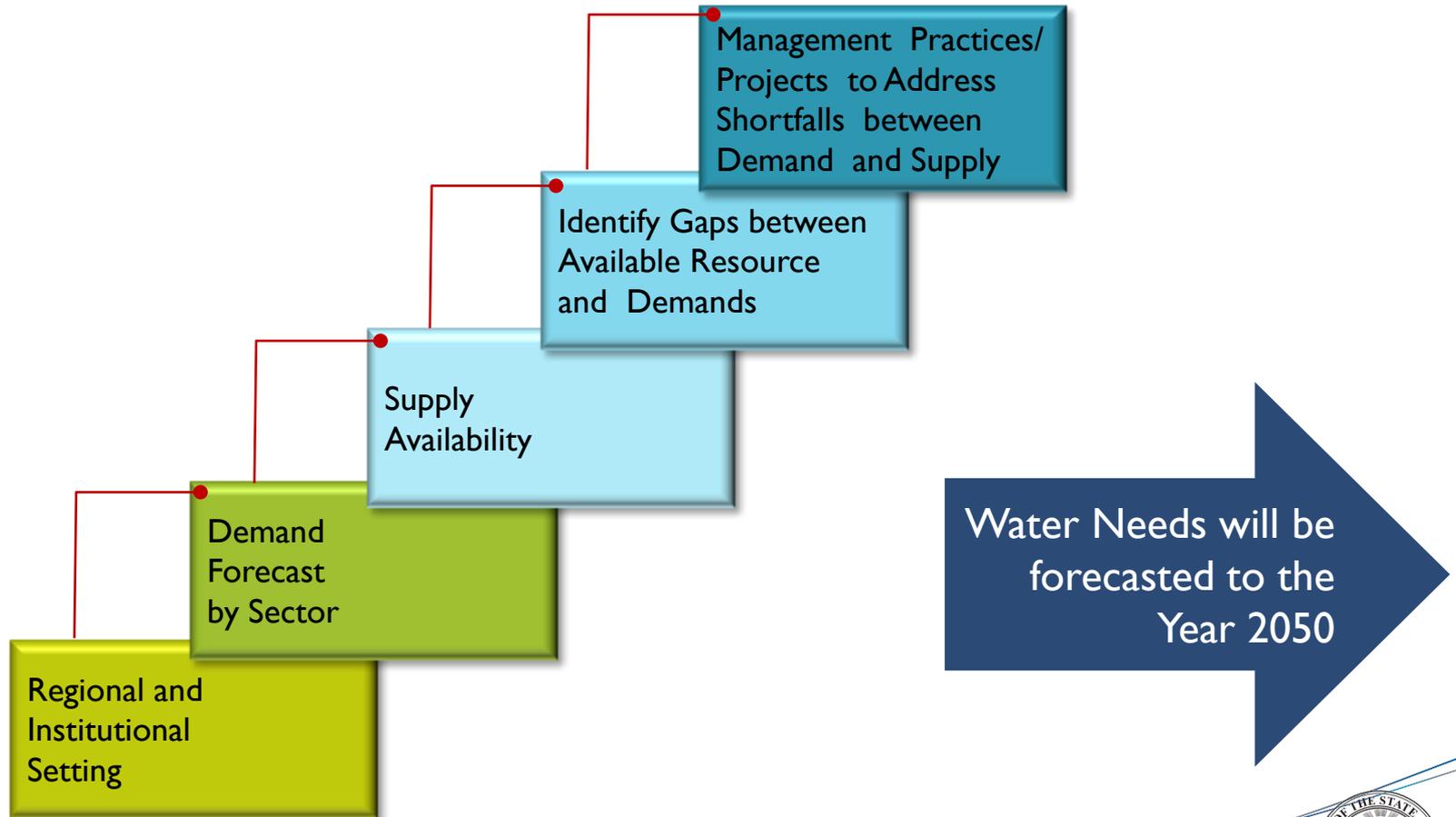
**Existing State Water Plan, State, Local, and Federal Statutes/Laws**

# **A Closer Look at the Major Technical Elements of Water Demand and Supply Quantification and Forecasting**

# What Limits our Ability to Supply Water?



# The Major Technical and Planning Elements of the Water Plan Update



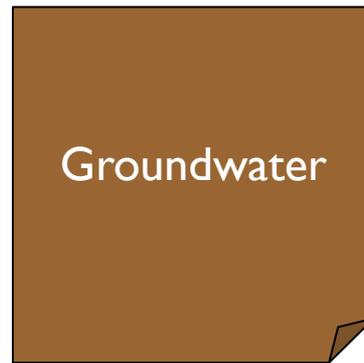
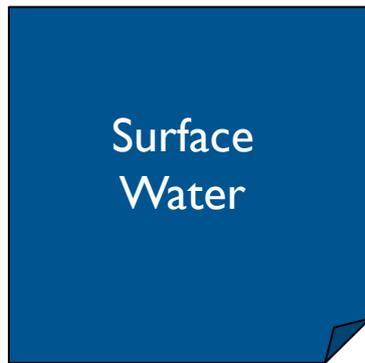
# Water Demand Forecasting

- Will answer the question of how much water do we need?
- Will be completed --
  - By demand sector for planning region
  - By source of supply surface water and groundwater
  - Summarized at the regional and statewide level



# Water Supply Assessments

- How much water do we have? What are the capacities of the water resources on which our citizens rely?



- Data summaries
- Simulation models
- Criteria to indicate unacceptable impact
- Current conditions for baseline assessment
- Apply future demands and management practices

# Fish and Wildlife Flows will be an Important Component to the Water Plan Update

Identify Common Set of Fish and Wildlife, and Recreation Resource Attributes (ANRC)

Stakeholders Provide Input on Resource Attributes

Establish Priority/Important Fish and Wildlife, and Recreation Resources

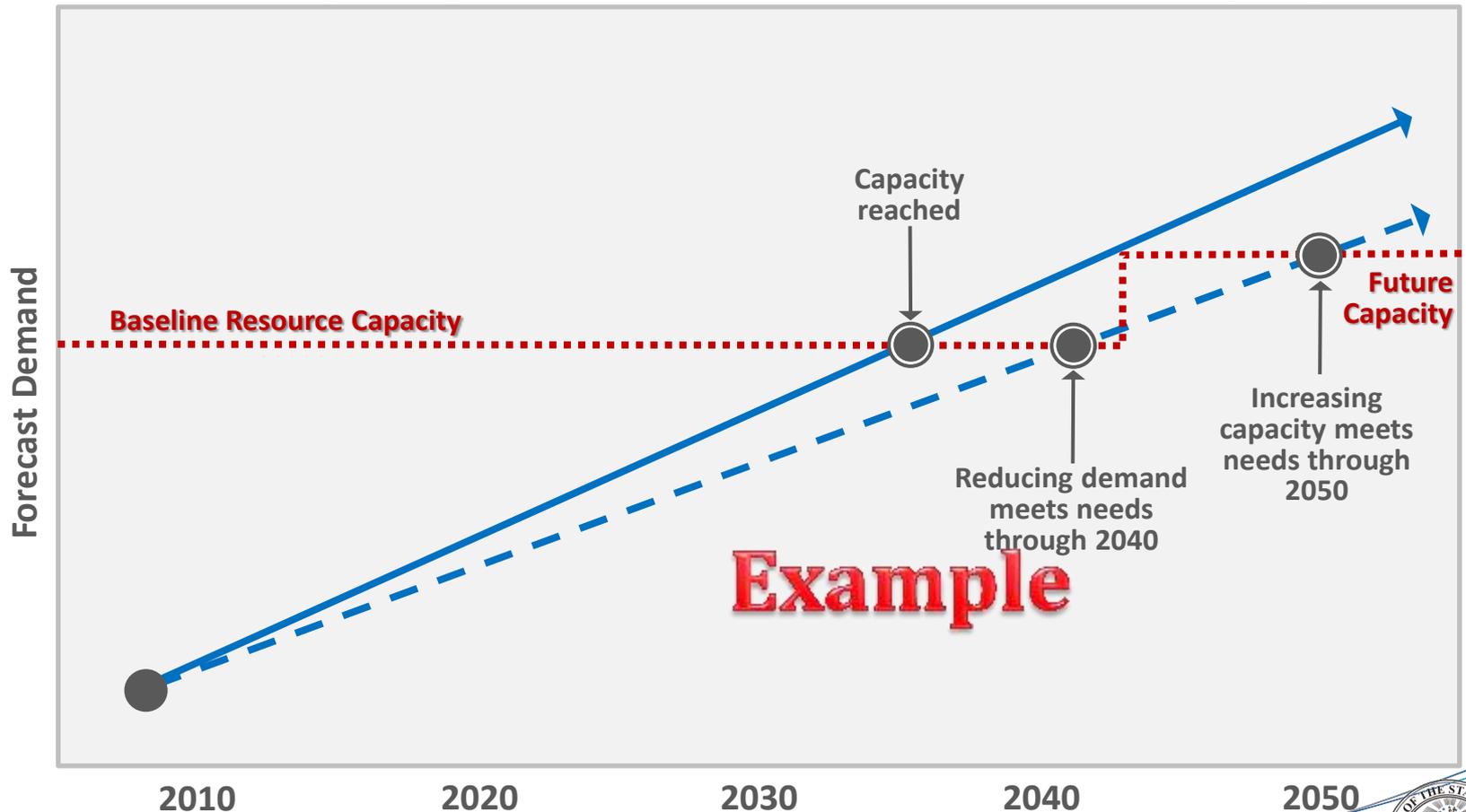
Pilot Fish and Wildlife Quantification Methods

Identify Implementation Next Steps

# Determining Water Needs and Strategies to Meet the Identified Needs

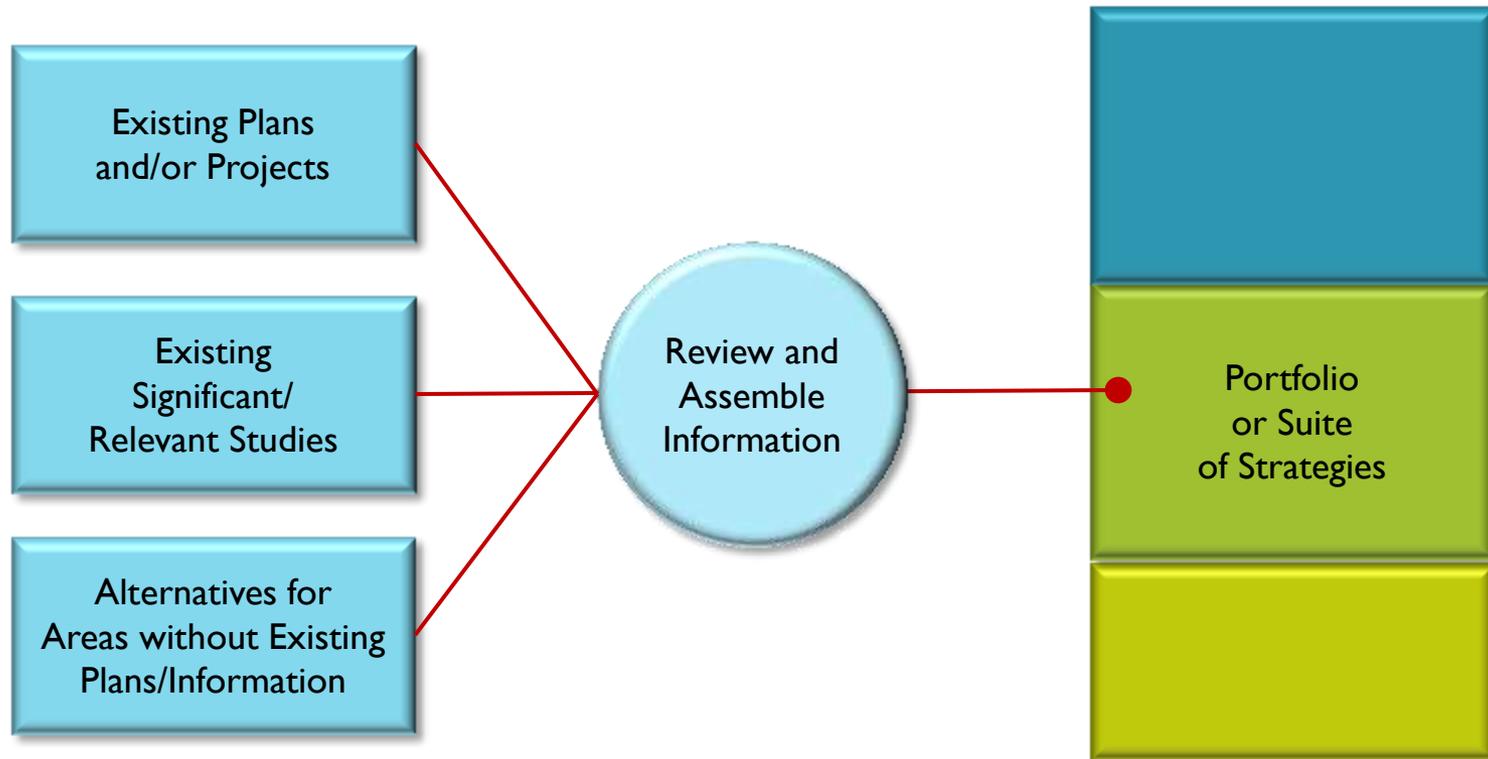
# Gap Analysis and Water Supply and Demand Strategies

Selecting Strategies to Decrease Demand & Increase Resource Capacity

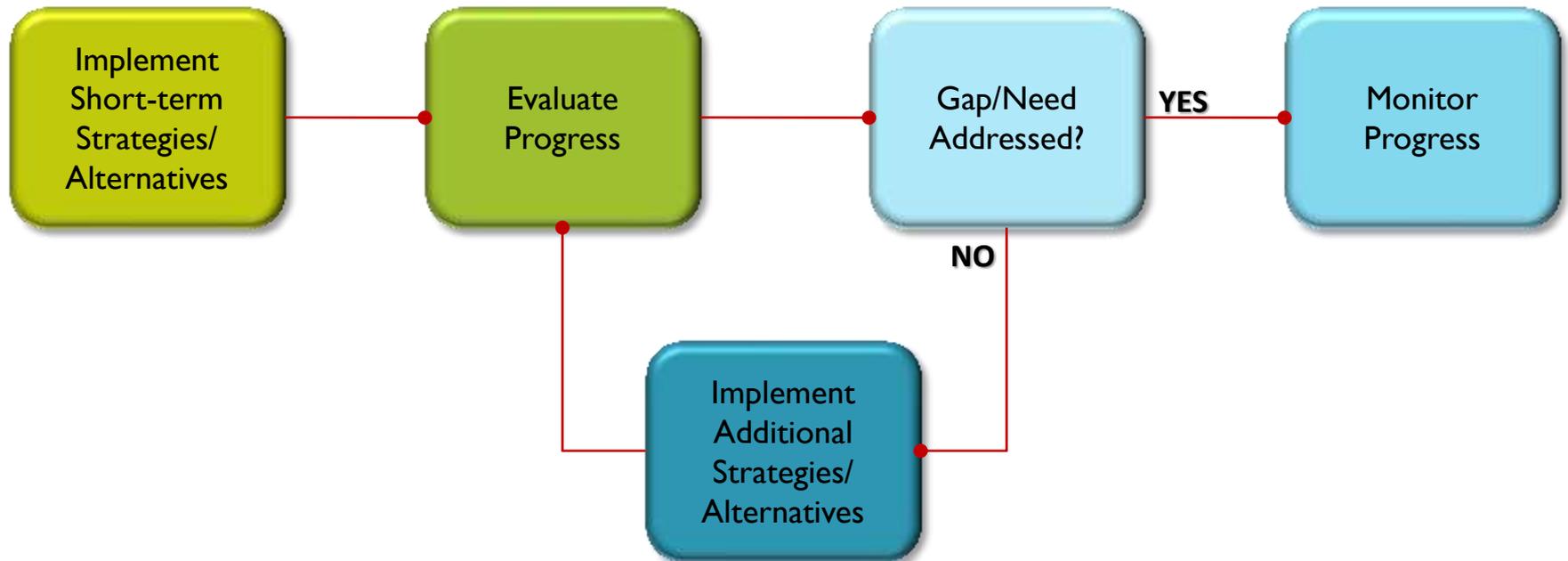


Total Demand Projection (Broken line indicates total demand with conservation)

# Identification/Selection of Water Resource Strategies/Management Actions



# Creating an Adaptive and Implementable Planning Process – for Ongoing Planning

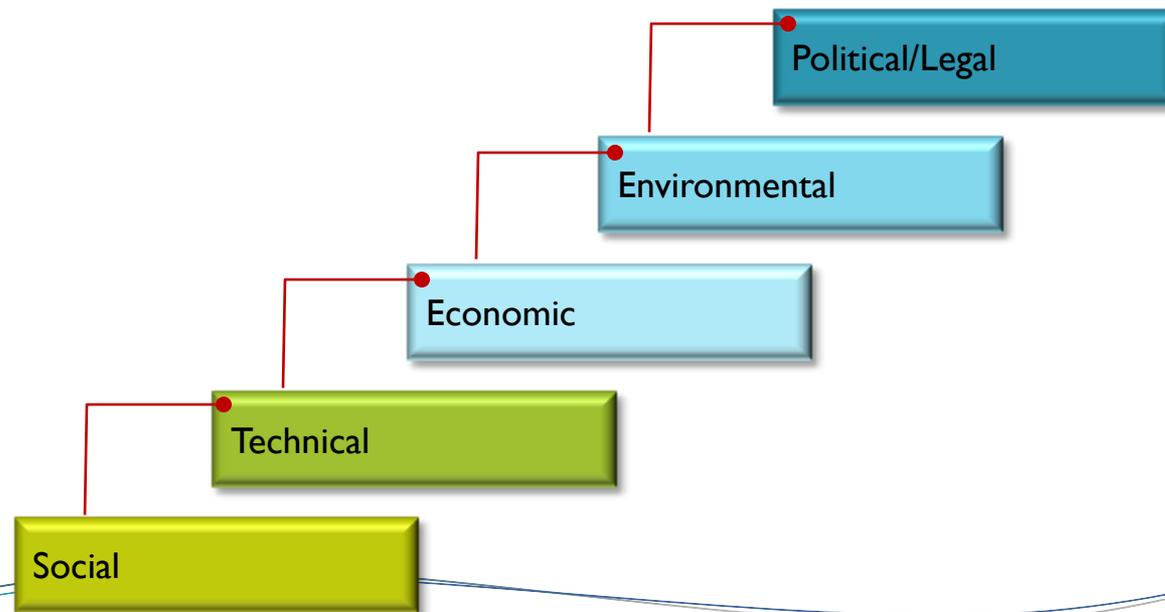


**Water Resources Management is Complex** – the Arkansas Water Plan Update will provide many answers and recommendations and will provide an ongoing process for longer term issues and needs

# Arkansas Water Plan

## *Charting the Path to a Safe and Reliable Water Future*

- What are some of the major questions that you have about Arkansas Water?
- Are there any specific water issues or needs that you would like to see the Water Plan address?



# How to Follow the Arkansas Water Planning Process and Get More Information

- Visit the Water Plan Website at: [ARWaterPlan.Arkansas.gov](http://ARWaterPlan.Arkansas.gov)
- Send an e-mail to:
  - [ArkansasWater@CDMSmith.com](mailto:ArkansasWater@CDMSmith.com)
- Provide us your address and we will send periodic updates
- Visit the ANRC website to follow Commission activities

[anrc.arkansas.gov/](http://anrc.arkansas.gov/)

**Arkansas Water Plan**  
ARKANSAS WATER PLAN UPDATE

### Kick-off Information

Welcome from Arkansas Natural Resources  
Commission Director J. Randy Young

It is my pleasure to announce the official kick-off of the Arkansas Water Plan Update. There is no resource more important to our state than water. We depend upon water for our well-being. Water grows the food we eat, provides our homes, and supports our businesses, industries, and coastal recreation. Water is equally vital to our natural environment, fisheries, wildlife, and recreation opportunities.

I invite all Arkansians to join me in this day of job-formation for the wise and efficient use, management, and development of our precious water resources. It has been over 25 years since we completed our last state water plan. The Arkansas Natural Resources Commission needs the cooperation and support of all of our citizens, our water users and farmers, and our political and business leaders to ensure a successful update to the Arkansas Water Plan by November 2014. Get involved in the public participation process and become part owner in the 2014 Arkansas Water Plan. To follow on participate in the state water planning process, go to [ArkansasWaterPlan.com](http://ArkansasWaterPlan.com) for commission updates and progress reports.

Please take a moment to read through this fact sheet to learn more about the Water Plan Update.

### What Needs to be Done?

The Arkansas Water Plan is the state's comprehensive planning process for the conservation, development, and protection of Arkansas water resources, with a goal of long-term sustainable use for the health, well-being, environmental, and economic benefit of the State of Arkansas. The Water Plan Update will be based on these principles and will follow existing Arkansas Law.

Careful planning and management is essential to assure continued availability of high quality ground and surface water by identifying and studying water problems and proposing specific solutions and recommendations to meet future water needs. The most recent data and extensive studies will guide planning objectives and potential solutions.

Statewide water planning began in Arkansas in 1989 and the first plan was completed in 1975. In 1986, the legislature directed the Arkansas Soil and Water Conservation Commission to update the original plan, and this update was completed in 1990. The 1990 Arkansas State Water Plan was successful in addressing the needs of the state over the last two decades.

Arkansas' water state has changed and from our citizens use and population has increased. According to the U.S. Census, by the year 2010 our state's population is expected to exceed 3 million residents (Figure 1).

Year	Population (Millions)
1980	~0.8
2000	~1.2
2005	~1.6
2010	~2.0

Figure 1 - Arkansas Population Growth and Projections

# Key Contacts

- Website:  
ARWaterPlan.Arkansas.gov
- E-mail:  
ArkansasWater@CDMSmith.com
- Mail:  
Arkansas Natural Resources Commission  
Attn: Arkansas Water Plan  
101 East Capitol, Suite 350,  
Little Rock, Arkansas 72201



## Public Information and Stakeholder Involvement Coordination and Meeting Plan for 2012-2014



DATE	CITY	MEETING 1: Arkansas Water Plan Update Kickoff Meetings
November 13 8:30 – 8:00 p.m.	Pauline Whitaker Aloha-Payetteville	<ul style="list-style-type: none"> <li>• Overview of the Arkansas Water Plan Update process</li> <li>• Identify important studies, water management issues and concerns</li> </ul>
November 18 8:30 – 8:00 p.m.	ASU Convocation Center-Jonesboro	<ul style="list-style-type: none"> <li>• Obtain input on draft vision and goals for the Arkansas Water Plan Update</li> </ul>
November 27 8:30 – 8:00 p.m.	AR Department of Health-Ashlanum- Little Rock	<ul style="list-style-type: none"> <li>• Finalize and implement public information and stakeholder involvement and communication process</li> </ul>
November 29 8:00 – 8:00 p.m.	Conference Center- El Dorado	
DATE	CITY	MEETING 2: Raising and Future Water Use/Needs Forecasting
May/June 2012 Dates TBD	Little Rock Springdale Silvart McGehee El Dorado Texarkana Mountain Home	<ul style="list-style-type: none"> <li>• Present initial summaries of key existing studies and regional "profile" of the area including major water uses, physical and environmental resources, social and economic considerations</li> <li>• Refine vision and goals</li> <li>• Present methodology and initial information on existing use, and current and future demand forecasting methodology</li> <li>• Discuss initial approach to quantify water quantity and quality</li> <li>• Begin identification of infrastructure, funding, and policy needs</li> </ul>
DATE	CITY	MEETING 3: Quantifying Available Water Supplies to Meet Existing and Future Water Use/Needs
October/November 2012 Dates TBD	Fort Smith Pine Bluff Forest City Jonesboro Arkadelphia Magnolia Harrison	<ul style="list-style-type: none"> <li>• Present final existing and future water use/needs forecasts</li> <li>• Refine vision and goals</li> <li>• Present initial information on quantification of water quantity and quality</li> <li>• Continue identification of infrastructure, funding, and policy needs</li> <li>• Present initial findings regarding identified shortfalls between available water resources and forecasted needs</li> <li>• Identify preliminary potential solutions and recommendations to address water resource shortfalls</li> </ul>
DATE	CITY	MEETING 4: Development of Water Resource Solutions and Recommendations
February/March 2014 Dates TBD	Little Rock Fayetteville Jonesboro Silvart Cotton Texarkana Batesville or Mountain Home or Mountain View	<ul style="list-style-type: none"> <li>• Finalize quantification of water quantity and quality</li> <li>• Finalize draft potential solutions and recommendations to address water resource shortfalls</li> <li>• Finalize vision and goals</li> <li>• Continue identification of infrastructure, funding, and policy needs</li> <li>• Discuss next steps for finalizing the Arkansas Water Plan Update and November 2014 Rulemaking</li> </ul>

# Thank You and Additional Discussion!

