

Arkansas Water Plan

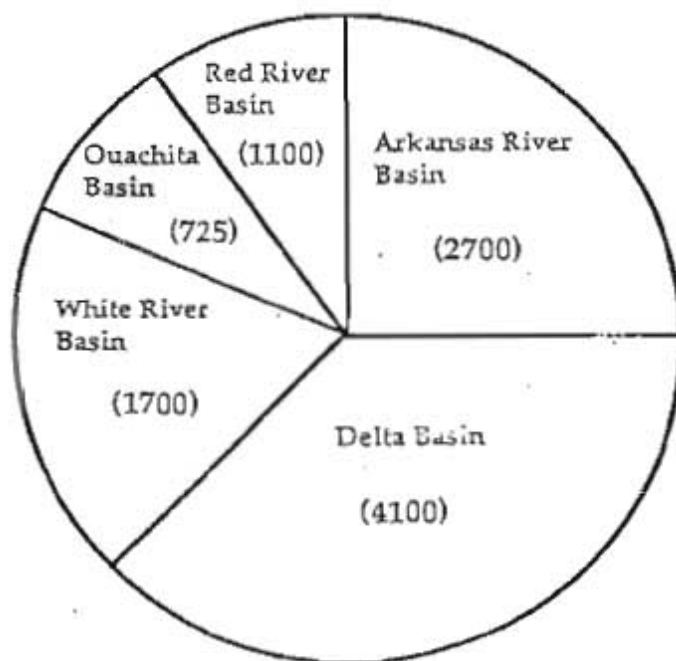
A stylized illustration of a waterfall cascading over rocks. The water is depicted with white and blue lines, creating a sense of movement and spray. The rocks are rendered in shades of grey and brown. The background is a light, textured grey.

Executive Summary

ERATA SHEET FOR EXECUTIVE SUMMARY

This sheet contains corrections to the Executive Summary. Please notice the page number and the corrections as shown.

p.25



p.21



Figure IVB1

Alluvial Aquifer Saturated Thickness Current

p.42

UNDER: (r) Excess Surface Water:

ADD: (2) The water needs of federal water projects as they existed on June 28, 1985.

p.45

CURRENTLY: Section 302.2 REPORT CONTENT
SHOULD BE: Section 302.3 REPORT CONTENT

p.45

CURRENTLY: Section 302.7 REVIEW OF FORM
SHOULD BE: Section 302.6 REVIEW OF FORM

STATE OF ARKANSAS

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I. PREFACE

The Arkansas Soil and Water Conservation Commission ("Commission") received statutory authority to begin work on the first Arkansas State Water Plan in 1969 Ark. Code Ann. Sec. 15-22-503 (Sec. 2 of Act 217 of 1969, as amended) gave specific authority to the Commission to be the designated agency responsible for water resources planning at the state level. This section mandated the Commission to develop and engage in a comprehensive program called the Arkansas Water Plan.

An integral part of this program is the creation of a comprehensive master plan of sufficient detail to serve as the primary water policy document for the protection, development and management of water resources in the State of Arkansas. Ark. Code Ann. Sec. 15-22-504 (Sec. 2 of Act 555 of 1975) requires the Commission to publish this primary document as the State Water Plan. This section also requires the Commission to update the State Water Plan when needed. The first plan was published in 1975. It included five appendices that addressed specific problems and needs in the state. As more data becomes available, it is apparent that the ever-changing nature of water-resource problems and potential solutions requires the planning process to be dynamic and that periodic revisions to the plan are necessary for the Commission to meet its planning responsibilities.

In 1985, the Arkansas General Assembly enacted Ark. Code Ann. Sec. 15-22-301 (Sec. 2 of Act 1051 of 1985). This Section broadened the Commission's planning responsibilities to include: (1) an inventory of the State's water resources, including areas in which water use has or will become critical in the next thirty years; (2) the determination of the current needs and the projection of future needs of all water uses in the State; and, (3) the determination of whether excess surface water exists that might be put to beneficial use.

In 1986, the Commission undertook a major revision and update, including its new responsibilities of the State Water Plan. Eight basin reports covering the entire State have been prepared. These reports inventory the water resources of the basins, identify current and future water problems within the basins, and recommend the actions.

This executive summary is a compilation of the information gained in the basin reports into a concise volume of statewide interest. It is the Commission's hope that this executive summary will: (1) provide the citizenry of the State information about the State's water resources; (2) encourage public discussion of water resource problems and solutions; and, (3) provide the decision makers with the necessary information so that, with the public input, they might make informed decisions which are in compliance with the State Water Plan and will promote the wise use of the State's water resources for now and the future.

II. INTRODUCTION

A. Vision Statement

"Where there is no Vision, the people perish."

Proverbs 29:18

The vision for Arkansas is that every individual in the State will have all of the water they need for any beneficial purpose. Land is wealth, but land without water is much less valuable. Arkansas is rich in water resources. The State's economic prosperity and quality of life are closely tied to water. We must plan and act to provide adequate water distribution to each area of the State where water is needed. Similarly, we must be faithful stewards of our water resources and move to prevent pollution and degradation of our waters and the systems they support.

Arkansas must have a progressive, forward-looking strategy to use, protect, and enhance its water resources. This will involve a continuing comprehensive planning process to identify and remedy water resource problems before they become serious and unmanageable. Each segment of society is in part dependent upon another. Therefore, water for municipal, industrial and agricultural use must be supplied, pollution must be abated, instream needs protected, and wetlands must be preserved. In evaluating these often competing uses, a balance must be struck that will yield the greatest benefit to our people. Human needs must be satisfied on an economically affordable basis with the least deleterious effect upon the natural environment.

B. General Description of State

1. Basins

Vast amounts of water are contained in both the streams and aquifer systems in Arkansas. Both are renewable resources in that they are sustained by the abundant precipitation that falls on the surface of the State. Aquifer systems are hidden from view and are controlled by the variations in texture of the soils and rocks in which they occur. Surface sources are readily observed and measured and water moves within a clearly defined boundary. Thus management policies and practices can most easily be developed and implemented on the basis of watersheds. For this summary, the State has been divided into five areas (Figure IIB1) which define the drainage basins of the principal rivers flowing through and adjacent to the State. The Delta Basin is a composite of watersheds in the Mississippi alluvial plain which include the St. Francis, Black, Cache, Lower White, Bayou Meto, Plum Bayou, Bayou Bartholomew, and Bayou Boeuf Basins.

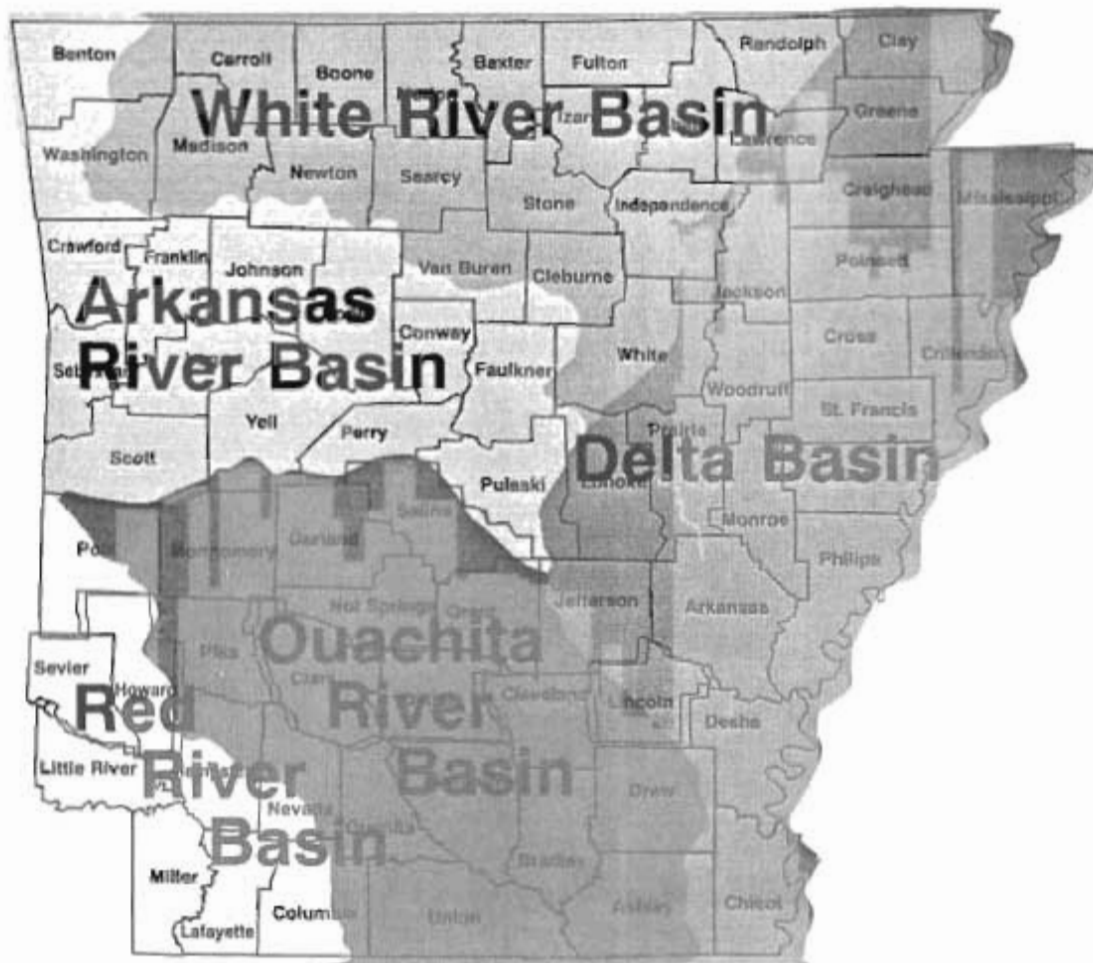


Figure IIB1

The Basin of Arkansas

2. Landforms and Geology

Arkansas may be divided into two nearly equal parts based on the physical features in the State (Figure IIB2). The southeastern half (Gulf Coastal Plain) is characterized by flat to gently rolling topographic relief while hilly to mountainous terrain predominates in the northwestern half (Interior Highlands). Surface features of the two sections are a reflection of the types of rocks that underlie the respective areas. Unconsolidated sediments which are easily eroded underlie the Coastal Plain while the Highlands are underlain by tightly-cemented consolidated rock which resist erosion and thus form the steep slopes and high ridges that are characteristic of the hilly part of Arkansas.

The sediments that make up the Coastal Plain consist of unconsolidated sequences of sand, silt, and clay, with local occurrences of limestone and lignite. Alluvial deposits blanket much of eastern Arkansas, the Red and Ouachita River valleys and isolated areas along the Arkansas River between Little Rock and Fort Smith. The alluvium is as much as 250 feet thick and is composed of coarse sand and gravel at the base grading upward to silt and clay at the surface.

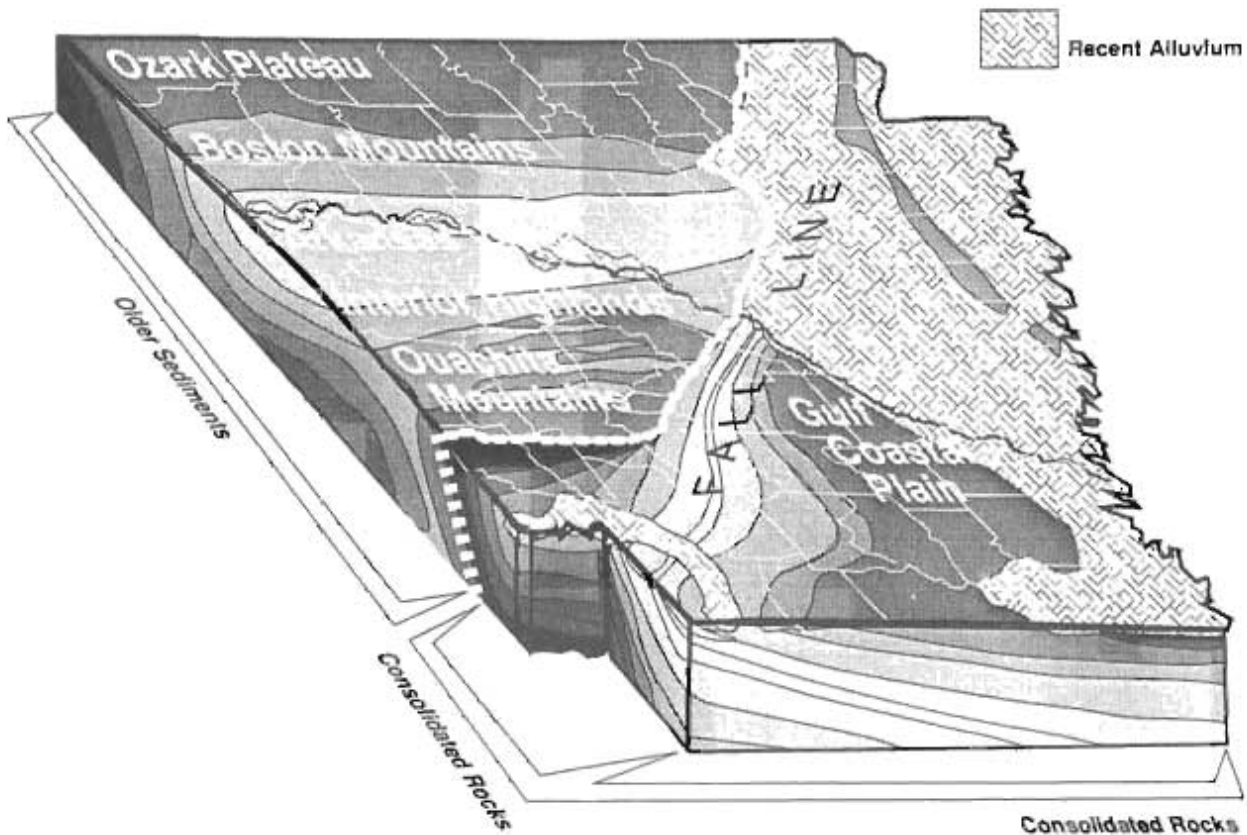


Figure IIB-2
General Geology

The older sequences, consisting mainly of sand, silt and clay crop out in bands of varying width roughly parallel to the Fall line (the dividing line separating the Gulf Coastal Plain and the Interior Highlands), and dip gently beneath the surface to the south and southeast. They are as much as several thousand feet thick at the Arkansas-Louisiana state line.

The Interior Highlands are underlain by thick sequences of consolidated rocks. Limestone and dolomite rocks underlie the Ozarks Plateaus in the northern part of the State while sandstones and shales constitute the bedrock in the Boston Mountains, Arkansas Valley, and Ouachita Mountains. The rocks are extensively folded and faulted and the original porosity of the rocks has been greatly reduced by compaction due to deep burial and to cementation.

3. Climate

Arkansas lies in a semi-humid region characterized by long summers, relatively short winters, and a wide range in temperatures. Extremes in air temperature may vary from winter lows around 0 degrees Fahrenheit, which are usually caused by Canadian air

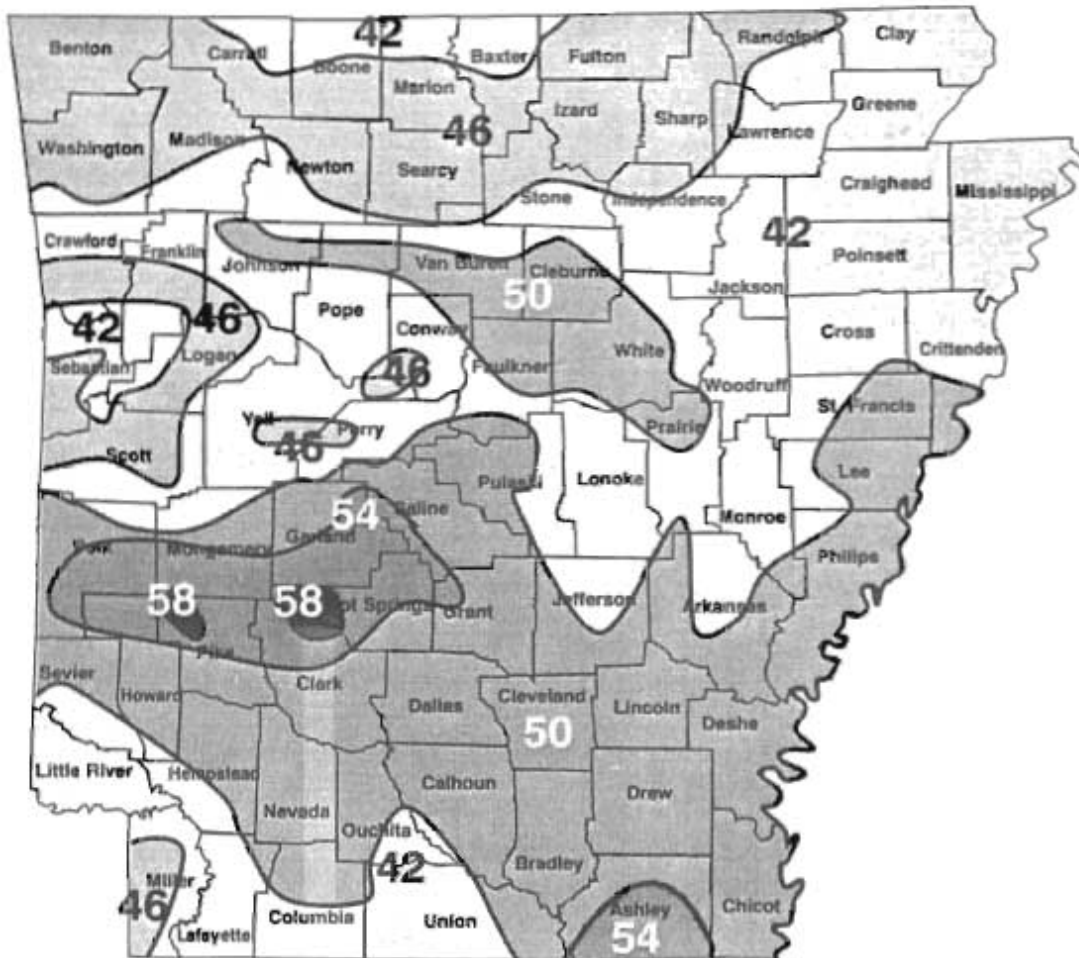


Figure IIB3
Average Annual Precipitation
(In Inches)

masses, to summer highs above 100 degrees Fahrenheit. The growing season ranges from an average of 183 days in the north to 228 days in the southeast corner of the State.

Precipitation is fairly well distributed throughout the year. However, droughts of short duration are frequent and are accentuated by high evaporation rates during the growing season. Average annual precipitation in the State ranges from 40 to 58 inches per year (Figure IIB3). Both extremes occur in the west-central part of the State; the lowest in the vicinity of Ft. Smith and the highest a short distance to the south in the higher elevations of the Ouachita Mountains.

4. Land Use

Topography and soil type are the principal factors governing the use of land. Steep slopes and thin soils, such as those which exist in the Highlands, preclude the development of cropland and favors the development of forests and grassland. Conversely, the flat terrain and deep soils of the Delta are conducive to the maximum development of cropland. Land-use patterns for the five basins (Figure IIB4) reflect these conditions and graphically

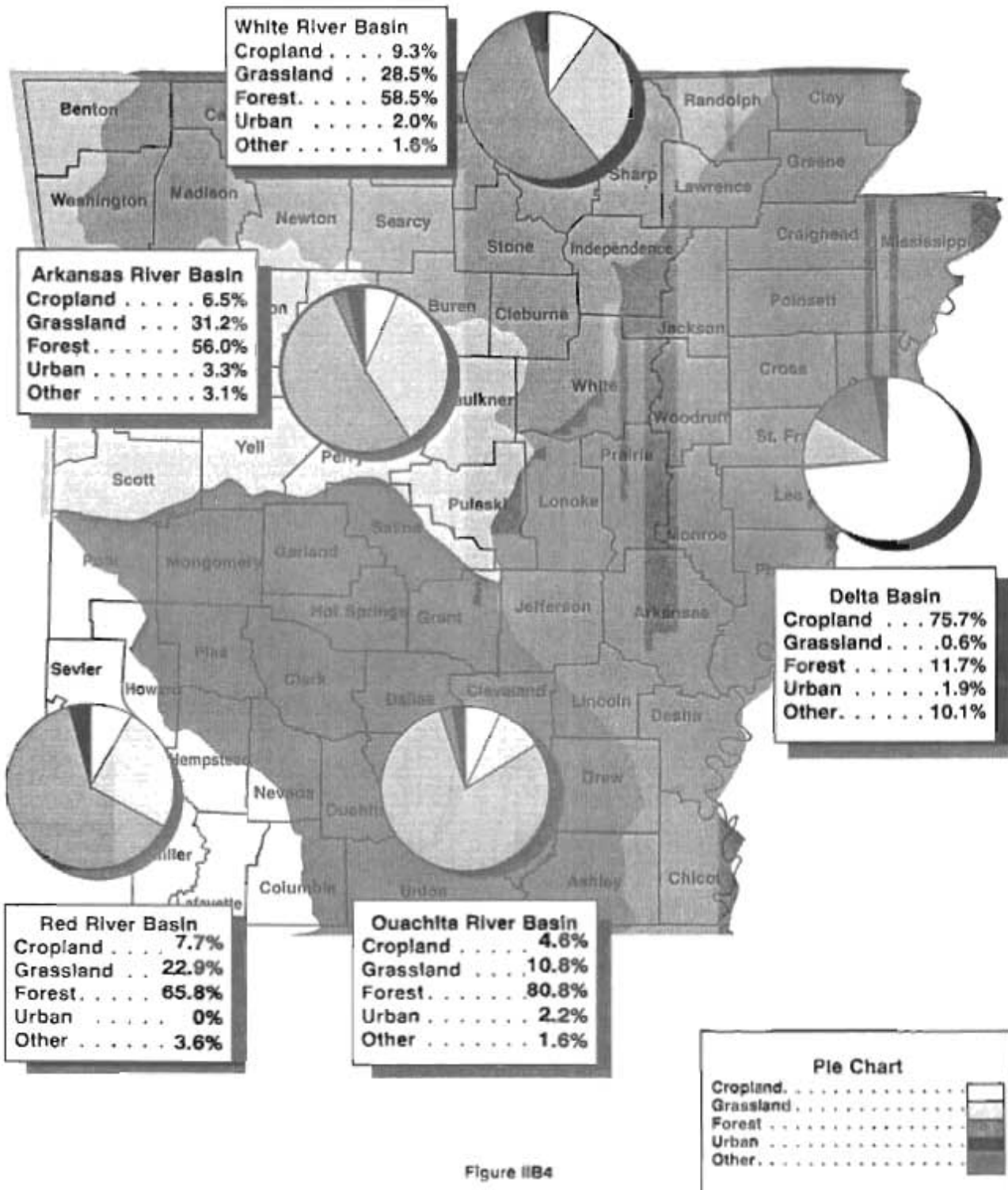


Figure 11B4
 Land Use Within The Basin



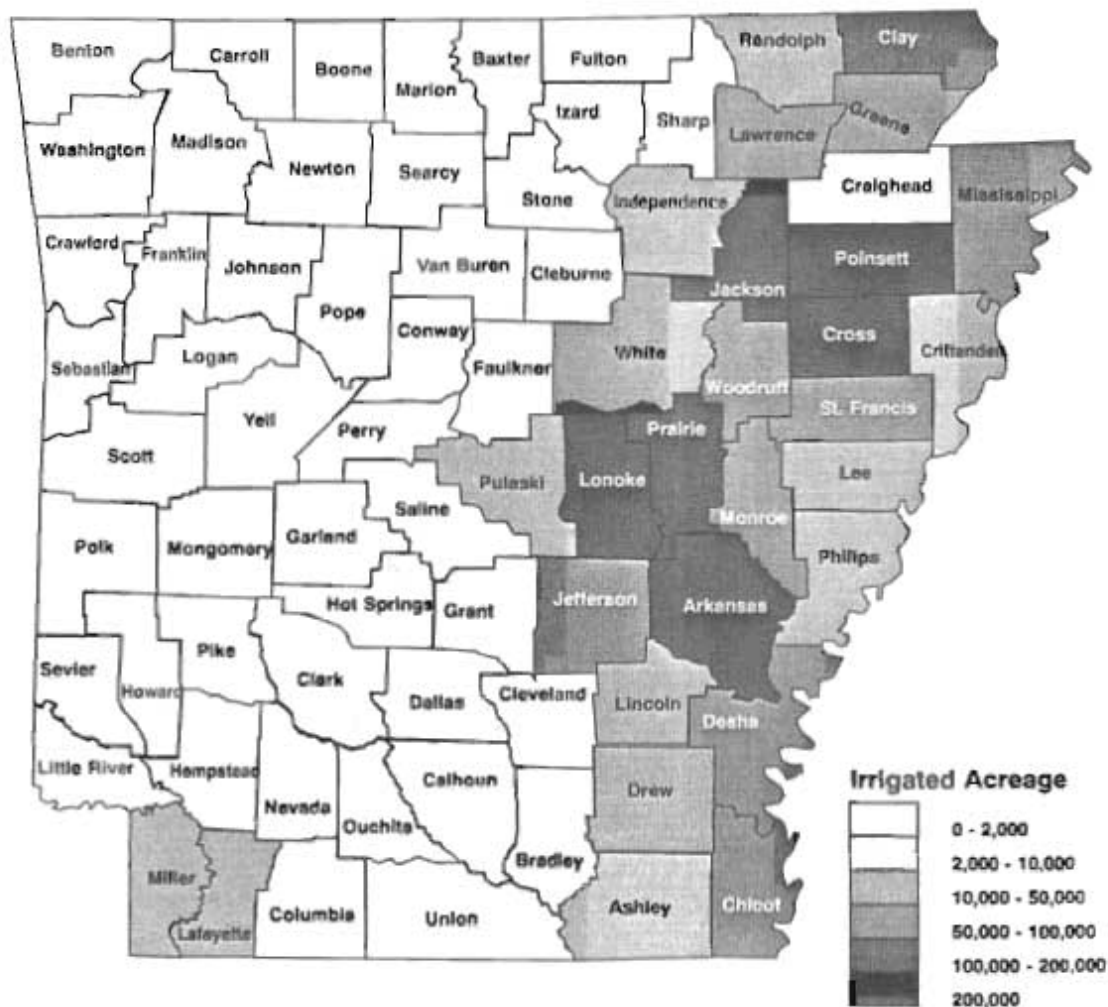


Figure IIB5

Irrigated Cropland in Arkansas

show the transition from the intense use of land for forests and grassland in the western two-thirds of the State to the predominant use for cropland in the Delta Basin.

Figure IIB5 shows the irrigated cropland in the State. There is no anticipation of converting other lands to cropland, but all cropland that is suitable for irrigation is projected to be under irrigation by the year 2030.

C. Surface Water

I. Streamflow Characteristics

An estimated 280 billion gallons of surface water flows through the State's rivers every day. The majority of this water is in the Mississippi River, but other rivers such as the Arkansas, White, Red, and Ouachita also carry a significant portion. The average lows of the major streams in the State are shown in Figure IIV1.

Streamflow is generally lowest during June through October, the period of highest water demand. The ability of a stream to satisfy a specified demand without storage depends primarily on the amount of flow that is available during extended dry periods. Tributary streams that are incised into the ground water system or are spring-fed generally can be expected to provide a dependable water supply year-round to the extent of their sustained baseflow. (Figure IIC2) Conversely, storage must be developed to provide a dependable supply from those streams which do not have a sustained flow. Generally, tributary streams in the Springfield-Salem plateau and in the Ouachita Mountains have the highest sustained stream flow, while those in the Arkansas Valley go dry when surface runoff stops.

Streamflow is generally highest during the winter and late spring months with all areas of the State subject to periodic flooding. In fact, approximately one-fourth of the total area of the State lies within flood-prone areas. Damage from flooding in the Interior Highlands is usually inundation. Since streams are generally sluggish, high streamflows recede slowly causing significant agricultural losses in many areas of the Coastal Plain. Total damages resulting from flooding in the State are estimated to be 242 million dollars annually, over half of which occurs in the Delta Basin.

2. Impoundments

The water stored in impoundments is used for many purposes such as water supply, hydropower, irrigation, flood control, and recreation. Reservoirs are constructed and water utilized for specific purposes, however, in Federal impoundments, a change in purpose or authorized use can be made by reallocating storage through Federal action.

The following table displays the total storage in Corps of Engineers impoundments, the water supply storage and reported use. The table points out that only about ten percent (56 mgd) of the estimated yield (557 mgd) was used in 1987.

Impoundments in Arkansas contain in excess of 15 million acre-feet of storage at normal pool level. Approximately 79 percent of this amount is stored in Corps of Engineers reservoirs, almost three-fourths of which are located in the White River Basin.

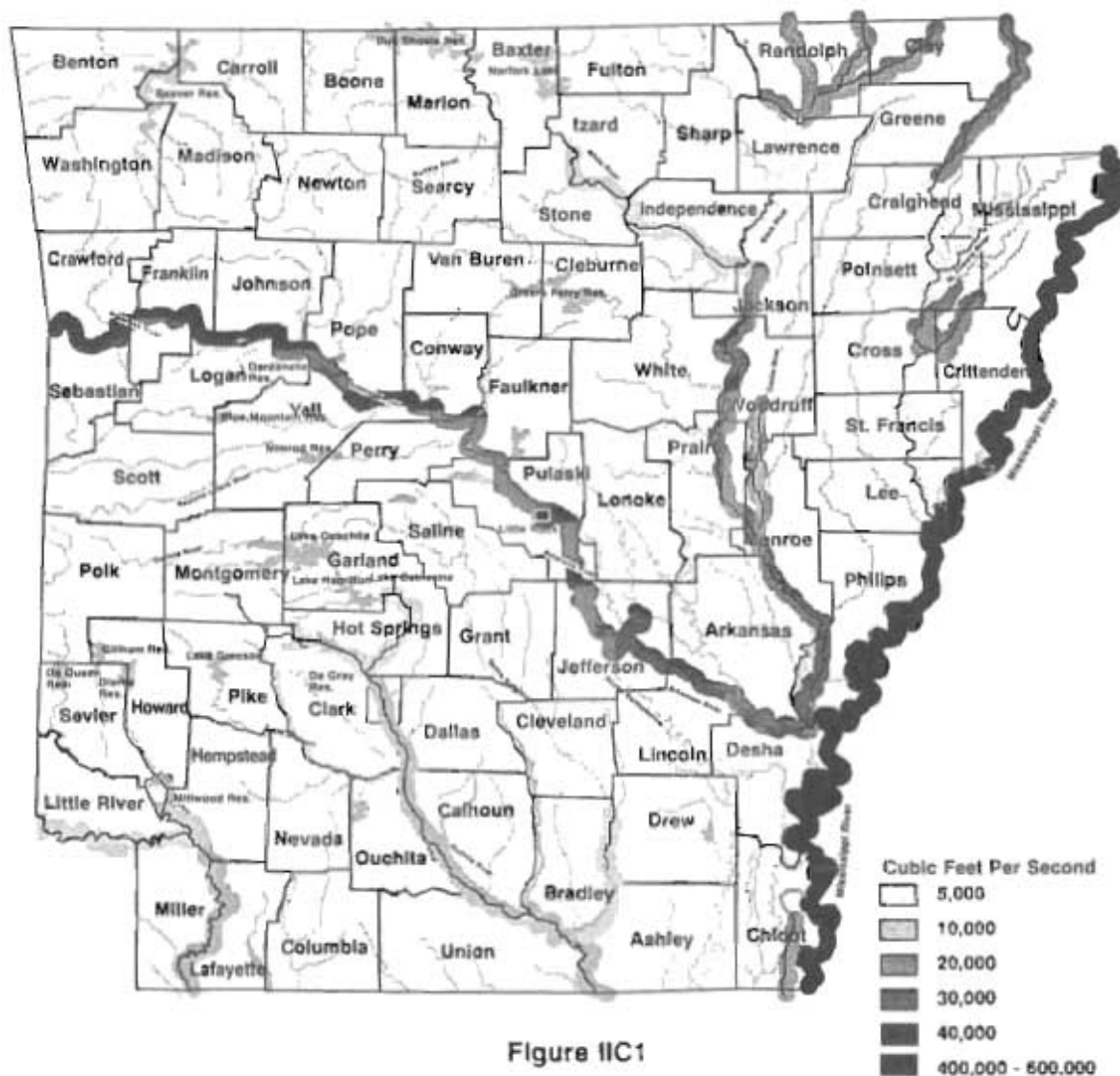


Figure IIC1
Average Discharge of Arkansas Rivers

Storage in Corps of Engineers Reservoirs				
	TOTAL STORAGE (Including flood storage) (AC-FT)	WATER SUPPLY STORAGE UNDER CONTRACT (AC-FT)	ESTIMATED YIELD (MGD)	WATER SUPPLY USE (MGD) REPORTED IN 1987
Ouachita River Basin	4,052,000	*.....	152	0
Arkansas River Basin	1,228,000	33	0.6	0.04
White River Basin	12,187,000	120,525	86	27.41
Red River Basin	2,211,000	180,700	318	28.64
Delta Basin
TOTAL	19,778,000	301,258	556.6	56.09
* DeGray Lake has a joint water supply and hydropower purpose which totals 393,200 ac-ft.				

3. Quality

The natural quality of streams and lakes in Arkansas is such that the waters can be used for most beneficial uses. Water quality of "natural" streams throughout the Interior Highlands is exceptional. Surface waters in this region usually contain relatively small amounts of dissolved minerals and sediment. Streamflow in the Gulf Coastal Plain region characteristically is more mineralized and often carries significant amounts of sediment. Water quality of the Arkansas and Red Rivers is affected by naturally occurring salt-bearing rocks in Oklahoma which contribute to excessively high chloride concentrations in the two rivers.

Man's activities in the State have a significant impact on the water quality of streams in many areas with problems arising from silviculture, mining, construction, urban runoff, road surface and road ditch erosion, residential, land disposal sites, stream bank erosion and agriculture. Agricultural operations associated with the production of crops in the Delta and Red River Basins contribute to a significant increase in streamflow sediment as well as nutrient and pesticide concentrations. The water quality of some streams and lakes in northwest Arkansas is being degraded by runoff from confined animal operations and sewage effluent. Surface water quality in the Ouachita Basin is impacted by municipal, industrial, and oil field brine discharges in the basin. Degradation of the water quality of streams and lakes in Arkansas resulting from man's activities limits some beneficial uses of surface waters in the State.



Figure IIC2

Areas of Sustained Streamflow of Tributary Streams

D. Ground Water

1. Aquifer Characteristics

The occurrence of ground water and its related problems are closely associated with the geologic units underlying an area. Figure IID1 illustrates the general hydrogeology of the State.

The Interior Highlands is a mountainous region of consolidated rock formations, which encompass about 31,000 square miles of northwestern Arkansas. Ground water in the Interior Highlands occurs primarily in fractures, solution openings, and along bedding

planes. The area is characterized by low yields of water to wells, generally less than 10 gallons per minute. The only high yielding aquifers in the Highlands, are the Roubidoux and Gunter aquifers, which commonly occur at depths greater than 1,000 ft. in the Ozark Plateaus Region, and the alluvial aquifer along the Arkansas River.

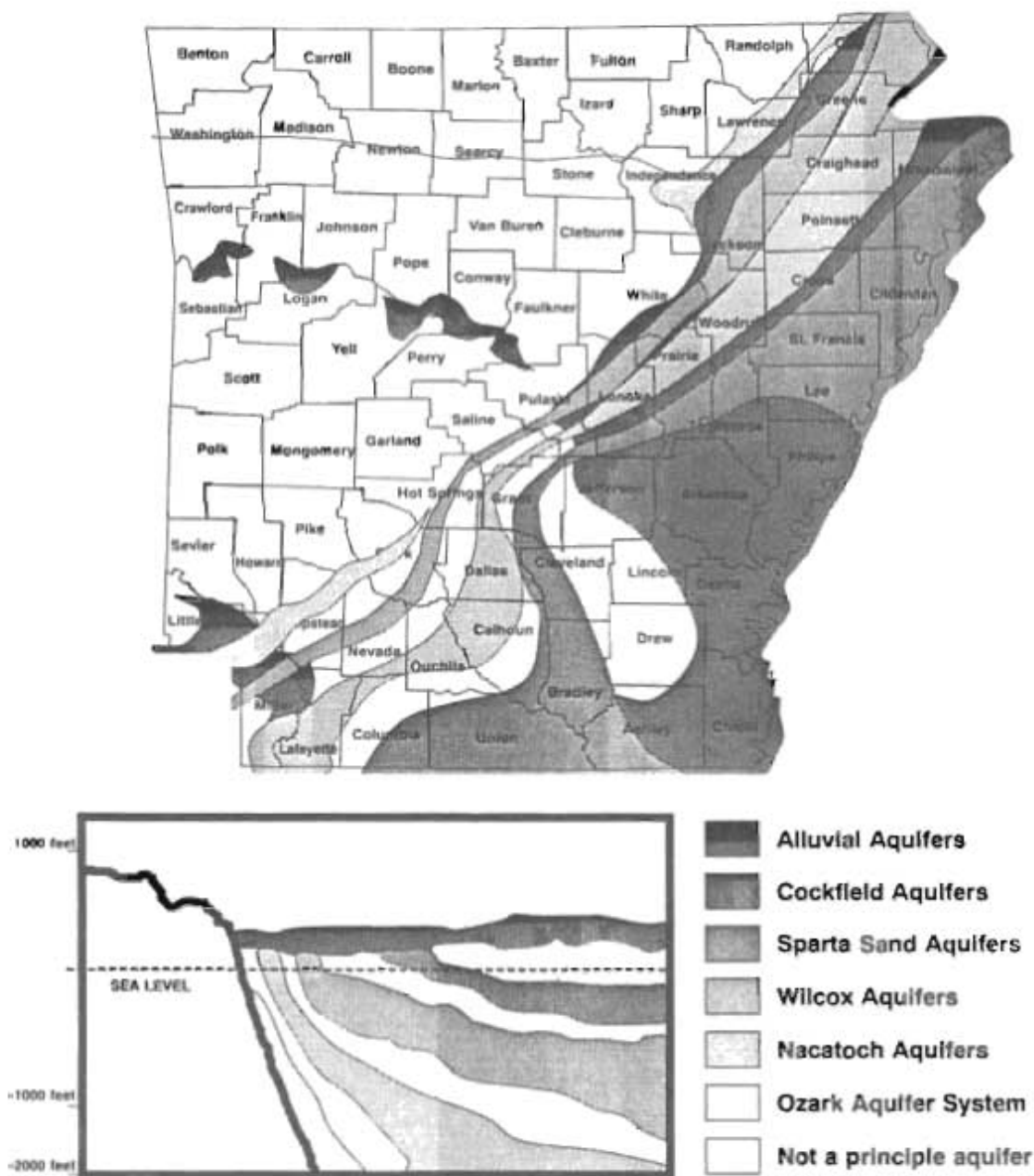


Figure IID1

Principal Aquifers in Arkansas

The Gulf Coastal Plain encompasses approximately 27,000 square miles in southern and eastern Arkansas. This area consists of unconsolidated strata of primarily clay, silt, sand, and gravel. Several of the layers are composed of sand and gravel and function as high-yielding aquifers. The two most significant aquifers in the Gulf Coastal Plain are the alluvial aquifer, which commonly yields 1,000 to 2,000 gallons per minute (GPM) of water to wells, and the Sparta Sand aquifer which commonly yields 500 to 1,500 GPM. Other significant water-bearing units include the Cockfield aquifer which is tapped for municipal supplies in southeastern Arkansas, the Wilcox aquifer which is an important source of fresh water in the eastern and northeastern part of the State, and the Nacatoch Sand aquifer which is the source for several municipal supplies in southwest and in extreme northeast Arkansas.

The alluvial aquifer is particularly important because it is the principal source of ground water for agriculture and agriculture in the Gulf Coastal Plain. In 1985, about 93 percent of the ground water used in Arkansas was pumped from the alluvial aquifer. The Sparta sand aquifer is the main source of water for municipal and industrial use in the southern and southeastern part of the State. In 1985, about 4 percent of the ground water used in Arkansas was pumped from the Sparta Sand aquifer. The large withdrawals from these two important aquifers has resulted in large declines in water levels and the intrusion of salt water in several places. At current pumping rates, withdrawals from the alluvial aquifer of eastern Arkansas are 17 percent greater than the rate of recharge. (Eastern Arkansas Region Comprehensive Study, U.S. Army Corps of Engineers, Memphis District, 1985).

2. Quality

Ground water in the principal aquifers of Arkansas is generally of good quality for most uses in some areas of the State. Ground water naturally contains excessive amounts of iron, hardness, and dissolved solids. Contamination from sewage, animal waste, and some fertilizers causes nitrate concentrations to be excessive in certain localized areas. High bacteria counts occur in local areas as a result of the influx of human and animal wastes from improperly constructed wells or wells located in or near contaminated ground water areas. Figure IID2 summarizes the quality of ground water in Arkansas.

E. Water Resources Management

Management of water resources in Arkansas is governed by the legal and institutional framework at the Federal, State, and Local levels. Water management in the past has been relatively fragmented and designed to solve localized ground water and surface water problems. A significant increase in water-resource problems in the State has contributed to the progressive development toward a coordinated and comprehensive scheme for water-resource management.

1. Legal Framework

Management of the quantity of surface water and ground water in the State is primarily guided by existing state laws, except that, Federally appropriated water preempts all other uses of the water. For example, navigation of the Arkansas River, which has been authorized by Congress, preempts other beneficial uses of water from the river, such as withdrawals for irrigation development of water in the Arkansas River and distributaries

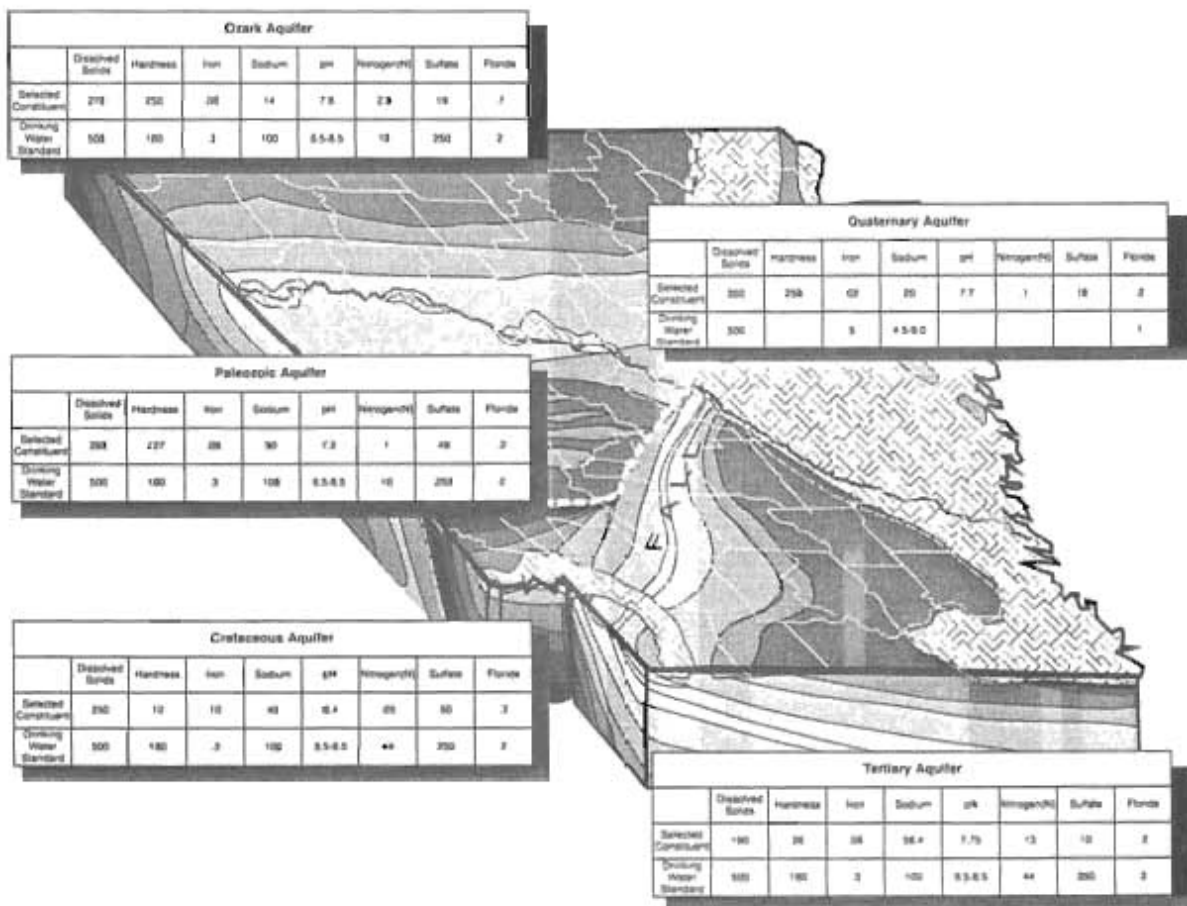


Figure IID2

Ground Water Quality in Arkansas * (IN mg/L Except pH)

is also restricted by water requirements established in the Arkansas River Compact. The Arkansas River Compact is a Congressionally authorized interstate agreement to provide for the equitable apportionment of the waters of the Arkansas River between the states of Arkansas and Oklahoma. Arkansas is also a signatory state in the Congressionally approved Red River Compact which apportions water of the Red River and its tributaries among the states of Arkansas, Louisiana, Oklahoma, and Texas. Surface water required to satisfy these Federal navigation, flood control, and interstate compact needs is preemptive and is not available for other beneficial uses within the State.

State water law is based on the "reasonable use theory" of the riparian doctrine. The reasonable use theory specifies that all landowners along a stream have free and unrestricted use of stream flow provided that due regard is afforded to the effect of that use upon other riparian ones and upon the public in general. Similarly, landowners have the right to reasonable use of ground water as long as that use does not adversely affect other riparian water users. The Arkansas Supreme Court has not rigidly defined reasonable use. Therefore, the courts decide which uses are reasonable or unreasonable on a case-by-case

basis as conflicts arise. However, case law has established that the right to use water for domestic purposes is superior to all other lawful uses of water.

Many modifications have been made to the legal framework of water management in the past. However, two significant changes enacted by the Arkansas General Assembly are unique because they generally are not characteristic of "riparian doctrine" water law. The first major modification was introduced by Act 81 of 1957 which authorized the allocation of surface water among water users during periods of shortage. Rules and regulations governing surface-water allocation have been developed so that when a shortage of streamflow exists, the available streamflow is allocated so that each water user affected by the shortage may obtain a fair share of the available streamflow. In allocating water in such a case, reasonable preferences are given to different uses based on the priorities of sustaining life, maintaining health, and increasing wealth. A second major change in the legal framework was made with the enactment of Act 1051 of 1985 which authorized the interbasin transfer of surplus water and the transportation of excess surface water to non-riparians for their use. These two recent changes in the water law have modified the Arkansas riparian doctrine and have provided water management agencies with additional guidelines and opportunities for the protection, management, and development of the State's water resources.

Management of the quality of surface water and ground water in the State is primarily governed by Federal Legislation. The Clean Water Act provides for the establishment of a permit system for point source discharges. The Safe Drinking Water Act sets primary drinking water standards and requires designation of wellhead protection areas to protect public drinking water supplies from contamination. The Resource Conservation and Recovery Act (RCRA) regulates solid and hazardous wastes. The Comprehensive Environmental Response, Compensation, and Liability Act (commonly known as "Superfund") facilitates the cleanup of abandoned hazardous waste sites. The Federal Insecticide, Fungicide, and Rodenticide Act regulates pesticides through a registration system. The Surface Mining Control and Reclamation Act regulates strip mining of coal. The Toxic Substances Control Act regulates the manufacture, distribution, and use of chemicals such as PCB's. The Environmental Protection Agency (EPA) is responsible for administering these Acts, however, the EPA has delegated some of this authority to State agencies.

2. Institutional Framework

Governmental responsibility in the area of resource management is split among many agencies and on three levels (Federal, State and Local). Because authority and responsibility is vested in diverse agencies, problems which arise in the management of resources must be coordinated and negotiated through several agencies. Figure IIE1 lists some of the main organizations and their major water management responsibilities.

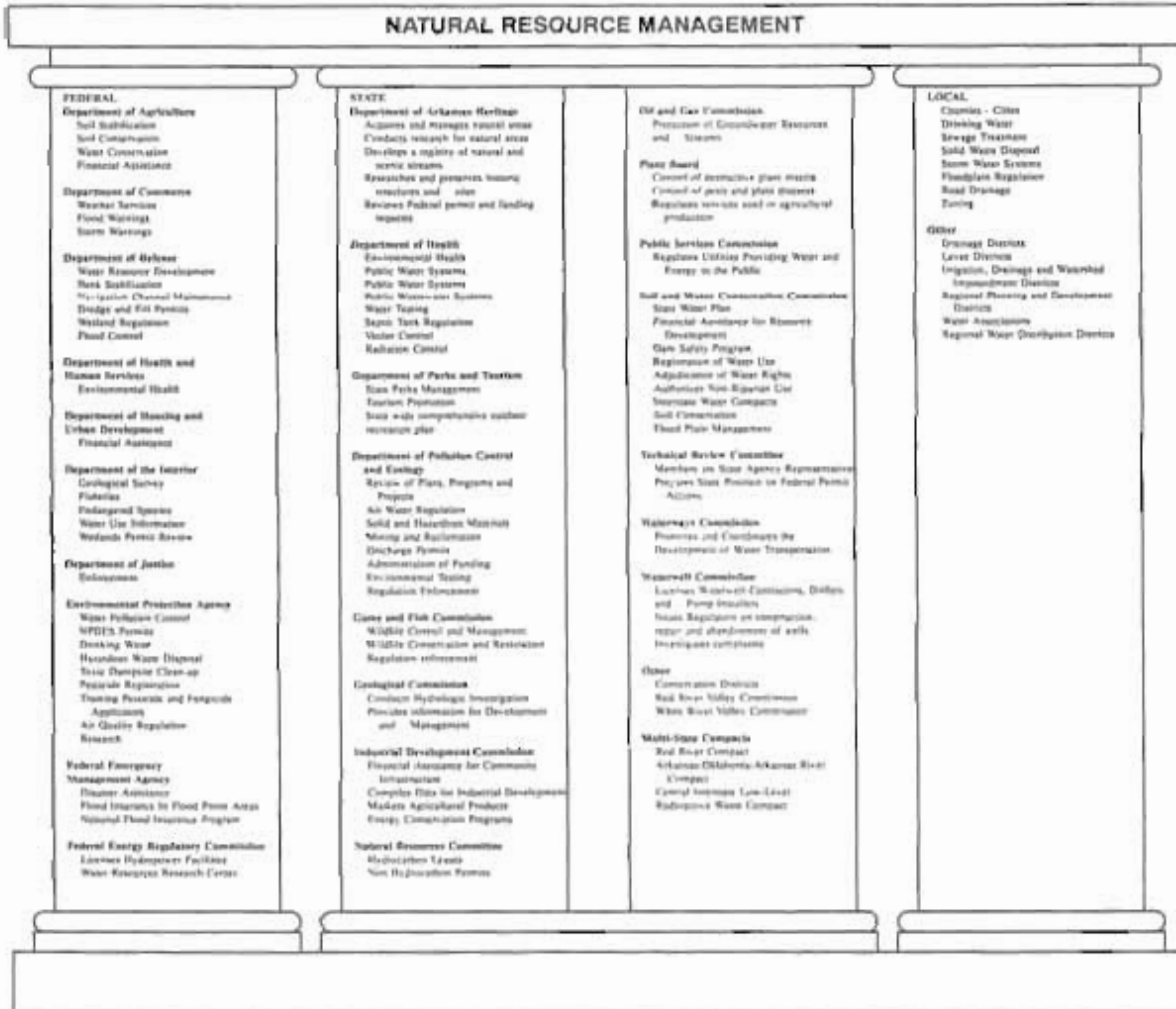


Figure IIE1

Columns of Project Support

III. WATER NEEDS

Use of water in Arkansas is closely related to economic growth and development. From the turn of the century when rice irrigation was first introduced in the State, water use has steadily increased. Figure IIIA1 illustrates that over the past two decades, water use has nearly tripled, and that current use is expected to increase by about 140 percent in the future.

A. Current Use

Current water use in Arkansas is 4,760 million gallons per day (MGD), with ground water sources supplying 80 percent of the water necessary to satisfy present demands (Figure IIIA2). The majority of the ground water is withdrawn from aquifers in the Delta Basin and is used for irrigation.

Water used for power generation (61,000 MGD) overshadows the amount used for all other purposes. However, water used in the production of thermoelectric and hydroelectric power is a nonconsumptive use because the majority of the water is not permanently removed from the watercourse. Therefore, water use for power generation is not included in the current consumptive water use figures.

B. Future Needs

The demand for water in the future is anticipated to increase dramatically. Most of the increase is expected to occur in the Delta Basin for additional irrigated cropland. Surface water sources will be used to satisfy the increased irrigation needs, particularly in those areas where ground water depletion is already a serious problem.

Some of the flow in streams and rivers of the State will not be affordable to satisfy the additional off-stream needs. Certain amounts of water will need to remain in the streams to satisfy nonconsumptive uses such as navigation, hydropower generation, and interstate compacts. The establishment of minimum streamflows (as mandated by Act. 1051 of 1985) will also reserve some of the streamflow to maintain fish and wildlife habitat, water quality standards, and aesthetic qualities of the streams.

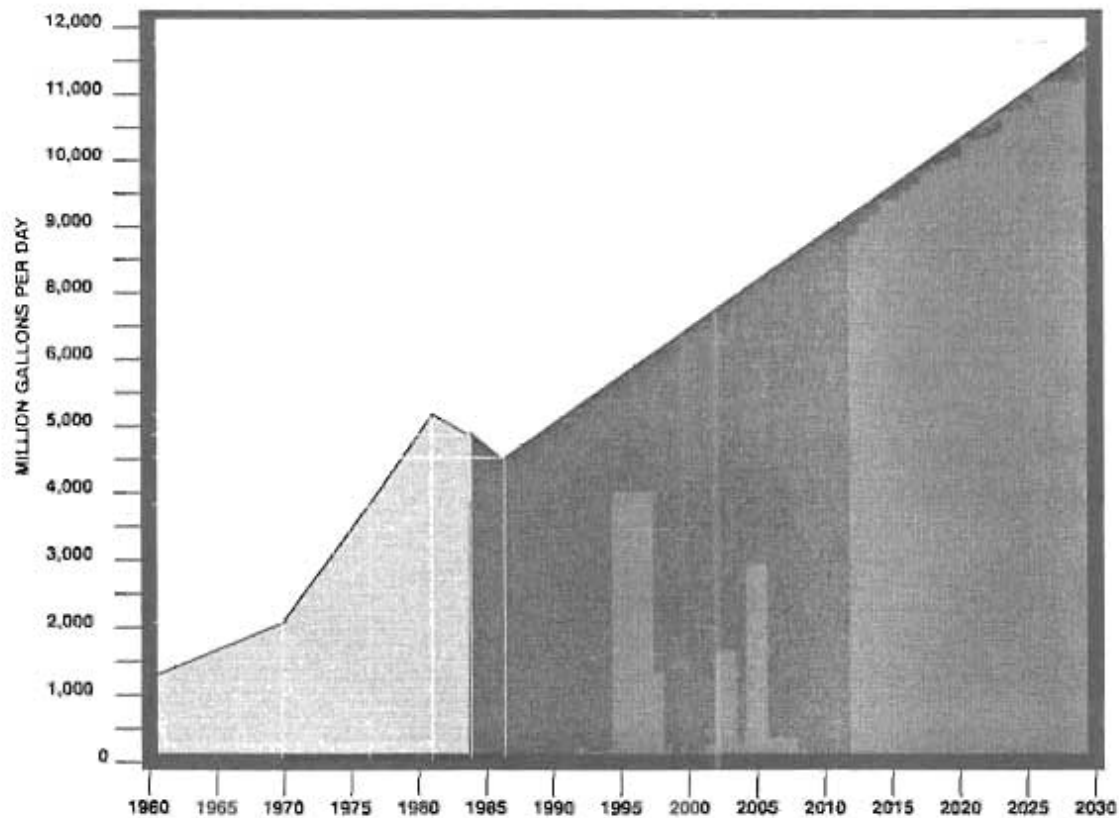


Figure IIIA1

Total Water Use & Projected 2030 Use

Fish and wildlife instream requirements on intrabasin levels will be determined as a site specific flow based upon historical use, riparian rights, streamflow characteristics, and alternatives available. There is a significant difference between streams in the different ecoregions as defined in the current Arkansas Department of Pollution Control and Ecology's Regulation Number 2, which is the regulation establishing water quality standards for surface waters of the State of Arkansas. Therefore, a given procedure or percentage is not applicable to all streams. Fish and wildlife instream requirements for interbasin determinations was computed as 60% of mean monthly flow for November through March; 70% of mean monthly flow for April through June, and 50% of mean monthly flow for July through October. This was used as the criterion for flow to exceed before interbasin transfer will be allowed.

The Arkansas streams which have a specified navigation requirements are the Arkansas River, White River and the Red River. The Ouachita River has not had a flow requirement designated for navigation but requires 100 cfs for lockage, leakage and evaporation. The Arkansas River requires 3,000 cfs for navigation. The White River requires 7,700 cfs for navigation. The Red River requires 2,500 cfs for navigation.

IV. SAFE YIELD

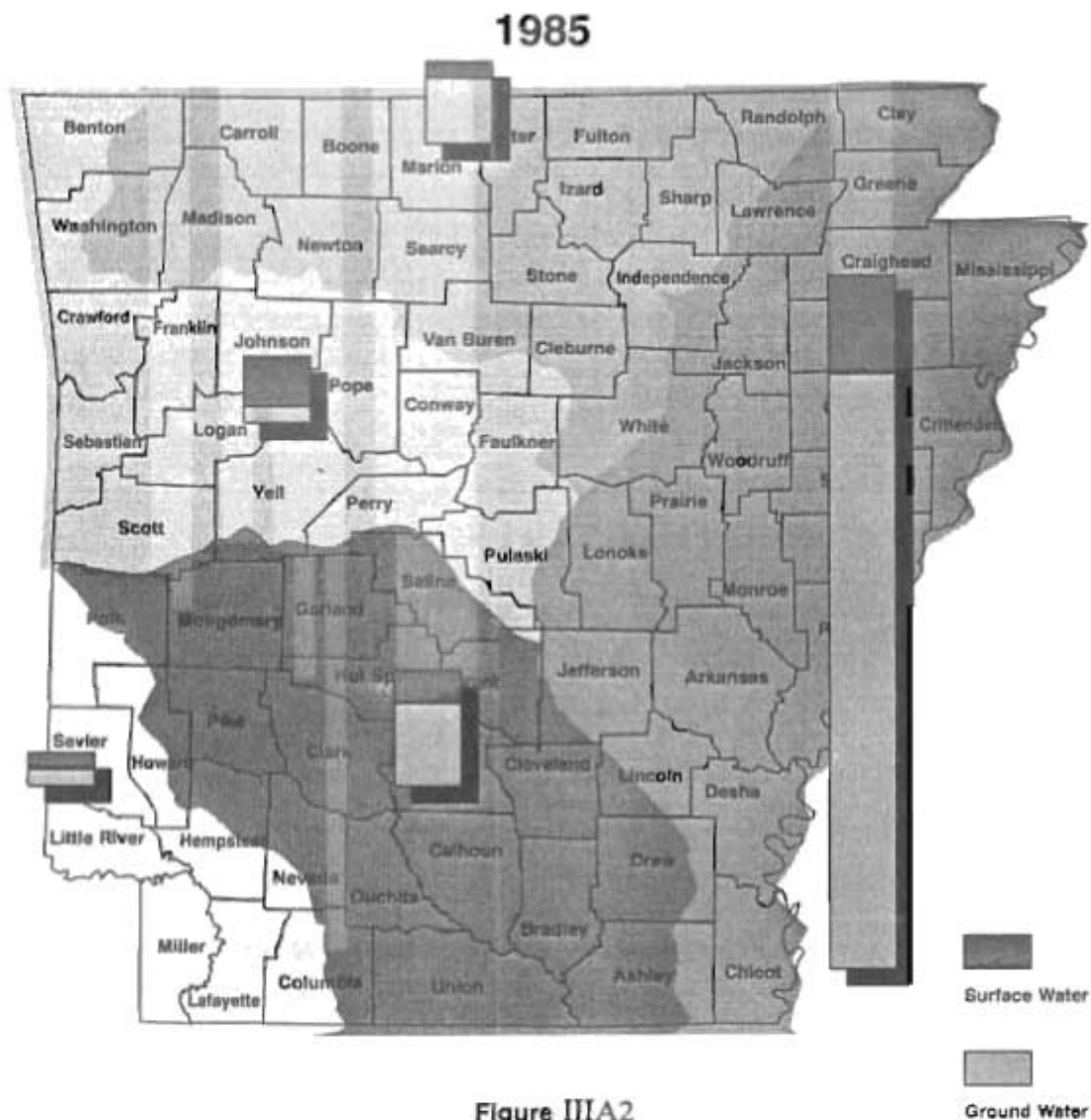
A. Surface Water

The safe yield of a stream or river is the amount of water available on a dependable basis that can be developed for a surface water supply. Dependable streamflow is the flow that is present in a stream 95 percent of the time during the year. Not all of this dependable streamflow is actually available for use, however, since some flow must remain in the stream to satisfy instream flow requirements (minimum streamflow). Therefore, the safe yield of a stream is the discharge which can be expected 95 percent of the time minus the discharge necessary to maintain minimum streamflow conditions.

Many streams in the State have a safe yield less than 10 cfs, as shown in Figure IVA. The instream flow requirements for these streams equal or exceed the dependable flow of the stream. Therefore, direct diversion from these streams will not be possible during low flow condition. For instance, the dependable flow of the Arkansas River is less than 3000 cfs which is the instream flow requirement for navigation on the river. Since the Arkansas River has no safe yield, impoundment or other sources of water may need to be developed to supply the needs of water users in the area.

B. Ground Water

The amount of water that can be withdrawn from an aquifer on a continuing basis without causing serious depletion effects is considered to be the safe yield of the aquifer. Withdrawals in excess of the safe yield will result in reduced well yields an influx of poor-quality water, and ultimately the total loss of the use of the aquifer as the amount of water remaining decreases to the point where wells go dry. The recommended minimum level of 20 feet saturated thickness of the alluvial aquifer in eastern Arkansas has already been exceeded in some places and is illustrated in Figure IVB1. Assuming current pump-



age continues to the year 2030, Figure IVB2 illustrates the saturated thickness of this alluvial aquifer. Areas with less than the recommended minimum level are outlined.

In order to maintain an amount of water in the alluvial aquifer so that it will remain a viable resource in the future, a sustained yield pumping strategy has been developed for the aquifer in eastern Arkansas. The strategy establishes the optimum amount of water that can be withdrawn. The optimum withdrawal rate is defined as the amount of water that will maintain a minimum of 20 feet of saturated thickness of aquifer. A target level of 20 feet is considered to be the safe level of saturated thickness because it provides for optimum aquifer use while allowing for draw down from pumping wells. Figure IVB8 shows a sustained-yield pumping strategy where the effect of a twenty percent reduction in current pumping rates has been projected to the year 2030. The principal effect of the



Figure IVB3

**Alluvial Aquifer Saturated Thickness
2030 — 20% Pumpage Reduction**

strategy will be to slightly enlarge the areas already at the target saturation level. Irrigation supplies in the affected areas will need to be supplemented from surface sources.

Large water-level declines have been developed in the Sparta Sand aquifer around centers of heavy pumpage at El Dorado, Magnolia, Pine Bluff, and near Stuttgart. Digital model studies of the Sparta Aquifer indicate that water levels in the aquifer are currently under steady-state conditions in these areas. Although no sustained yield pumping strategy has been developed for the Sparta Aquifer, model analyses indicate that current pumping rates in the Pine Bluff and Stuttgart areas could be doubled without causing serious depletion of water in these areas. Additional amounts of water could be withdrawn from the Sparta Band in the El Dorado and Magnolia areas, but the additional points of withdrawal would have to be relocated and dispersed to avoid further declines around pumping centers. The Sparta Sand aquifer doesn't have the storage capacity that the alluvium contains. In 1985, 175,840 acre-feet was pumped from the Sparta Sand aquifer. This is equivalent to 4% of the volume of water pumped from the alluvium. Obviously, it is unreasonable to turn to the Sparta Sand as a water supply alternative for agricultural needs in the Gulf Coastal Plain of Arkansas.



Figure VA1

Critical Surface Water Areas

Inasmuch as no other areas of serious ground water depletion exist in the State, the safe yield of other aquifers has not been exceeded and is not expected to be exceeded. Thus, no other pumping strategies have been developed.

V. CRITICAL WATER AREAS

A. Surface Water

Critical surface water areas in the State are those areas which have serious surface water supply problems at the present time. These areas are illustrated in Figure VA1. The shortage of useful water in these critical areas are often a result of off-stream water withdrawals, water quality degradation, or water management constraints. The withdrawal of streamflow for irrigation use in the Delta Basin often causes streams such as Bayou



Figure IVB1

Alluvial Aquifer Saturated Thickness Current

Meto, Bayou DeView, Plum Bayou, Bayou Bartholomew, Bayou Macon, and the Boeuf River to have insufficient flow during the summer months. Water quality degradation from point and nonpoint pollution sources is reducing the beneficial uses of surface water in many areas, and specifically in the northwestern corner of the State. Water-supply problems also exist in most areas adjacent to the Arkansas River and in areas along the Fall Line from Searcy to near Arkadelphia. Problems in these areas are a result of the limited availability of good quality ground water in relation to local needs, in addition to the constraints that exist in the development of tributary streams as sources of supply.

B. Ground Water

Critical ground water areas are those areas where the quantity of ground water is rapidly becoming depleted or the quality is being degraded. Areas which have the most serious ground water depletion problems include the alluvial aquifer in Lonoke, Prairie, Craighead, Poinsett, Drew, and Ashley Counties. These are illustrated in Figure VBI. In some locations, water levels in the alluvial aquifer have declined such that as little as 20 feet of saturated thickness of the aquifer remains. Ground water withdrawals from the Sparta Sand aquifer for public supplies and industrial needs have severely depleted the aquifer in Union and Columbia Counties. Withdrawals for irrigation have caused significant declines in the Memphis Sand aquifer in Poinsett and Cross Counties.

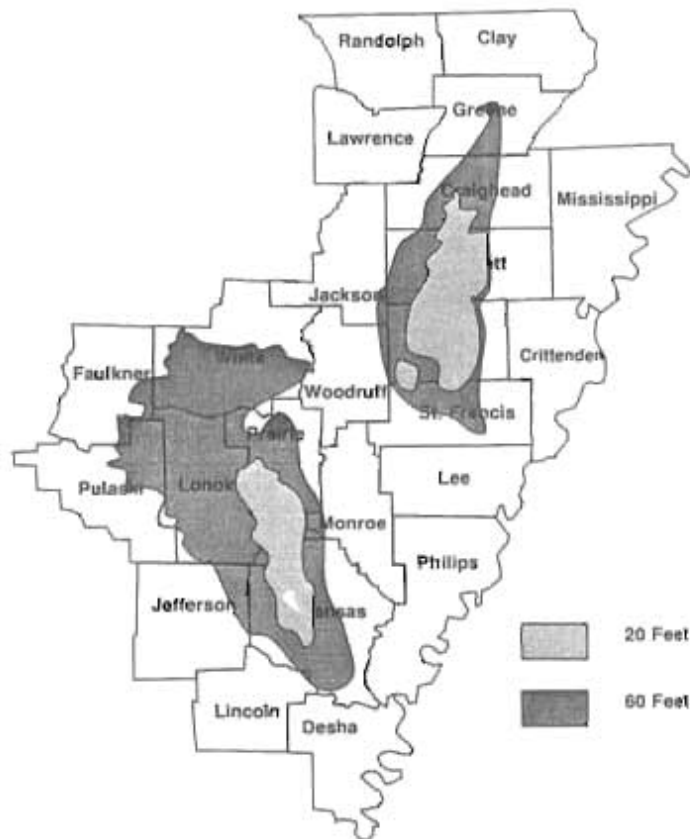


Figure IVB2

Alluvial Aquifer Saturated Thickness 2030 — Current Pumpage

Water quality constraints restrict the use of water from the Sparta Sand aquifer in Lee and Phillips Counties. The ground water resource is also being jeopardized by the migration of saltwater into the alluvial aquifer in Lincoln, Desha, Monroe, Chicot, Miller, and Lafayette Counties. Continued withdrawals for irrigation in the vicinity have compounded this problem.

VI. EXCESS SURFACE WATER

Arkansas has an excess of streamflow on an average annual basis for a normal year. Excess surface water, as defined in Act 1051 of 1985, i.e. limited to 25 percent of the amount of water available on an average annual basis for any watershed above the amount required to satisfy current and projected water needs within the basin of origin. The problems are that the excess is not where it is needed nor does it occur when it is needed.

The excess water was calculated for each of the five basins or areas of the State. This is illustrated in Figure VII. The excess represents the amount of water available for interba-



Figure IVA

Safe Yield of Arkansas Rivers

sin, non-riparian diversion. The instream flow requirements for fish and wildlife, navigation, riparian and intrabasin non-riparian uses were projected to the year 2030. These needs were subtracted from average annual flow and then 25 percent of the remainder is calculated as excess. It is probable that off-stream storage or some other catchment scheme should be employed to retain over year storage so that the water will be available during drought years when streamflow is below average.

Figure VI2 illustrates the necessity of a storage system which can hold excess water during the wet months until it is needed in the high demand season when water is not as readily available.



Figure VB1

Critical Ground Water Areas

VII. WATER RESOURCE ISSUES

A. Ground Water Depletion

1. ISSUE: Ground water levels are declining in the alluvial aquifer in the Grand Prairie Region and the area west of Crowley's Ridge. In the areas of most intensive withdrawals, cones of depression have developed which indicate the threat of permanently dewatering the aquifers or inducing saltwater migration.

RECOMMENDATION: The most efficient response to the problem of declining water levels, is conversion from ground water to surface water, and employment of a conjunctive use management strategy. Excess water should be provided from the White River and

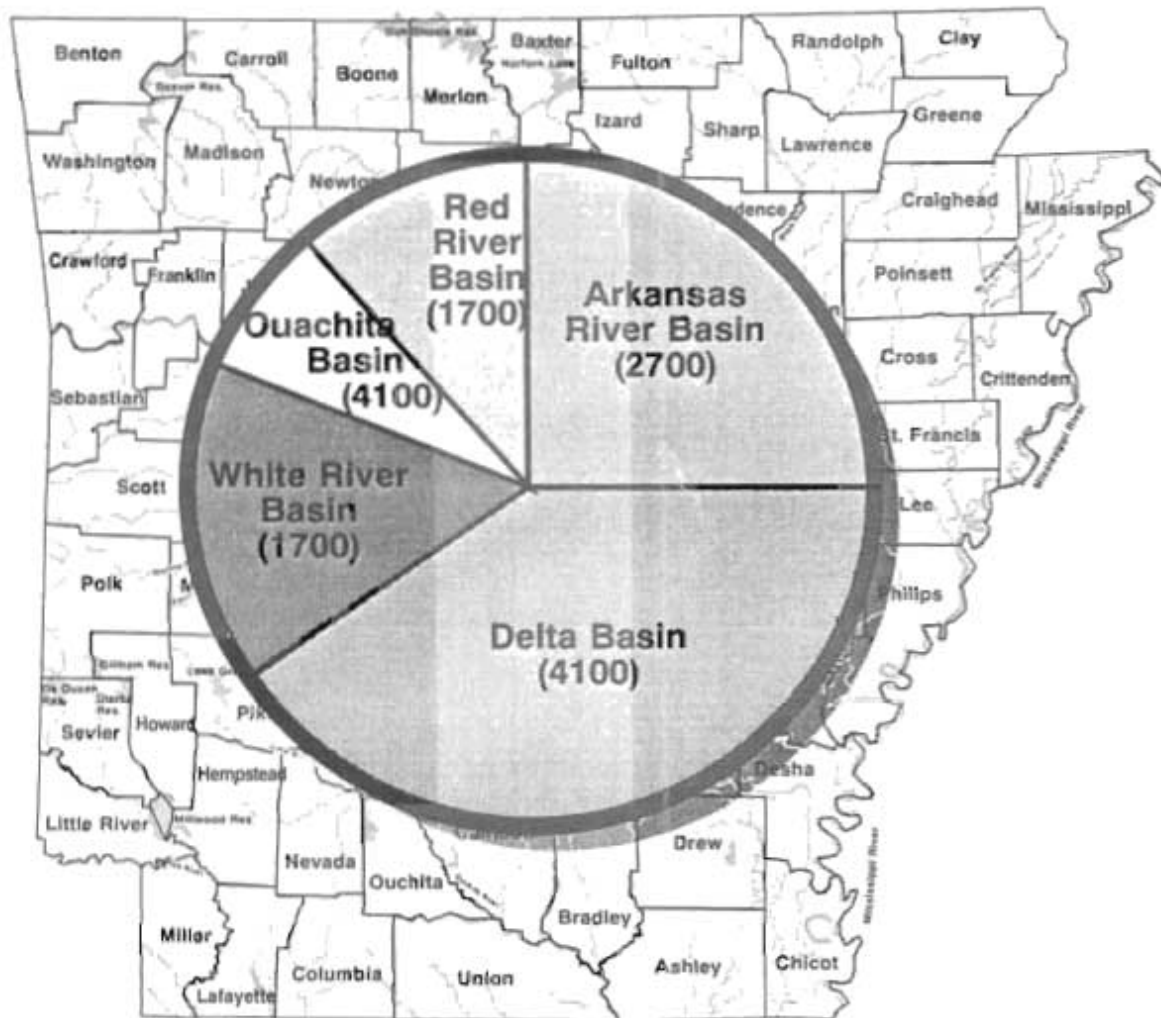
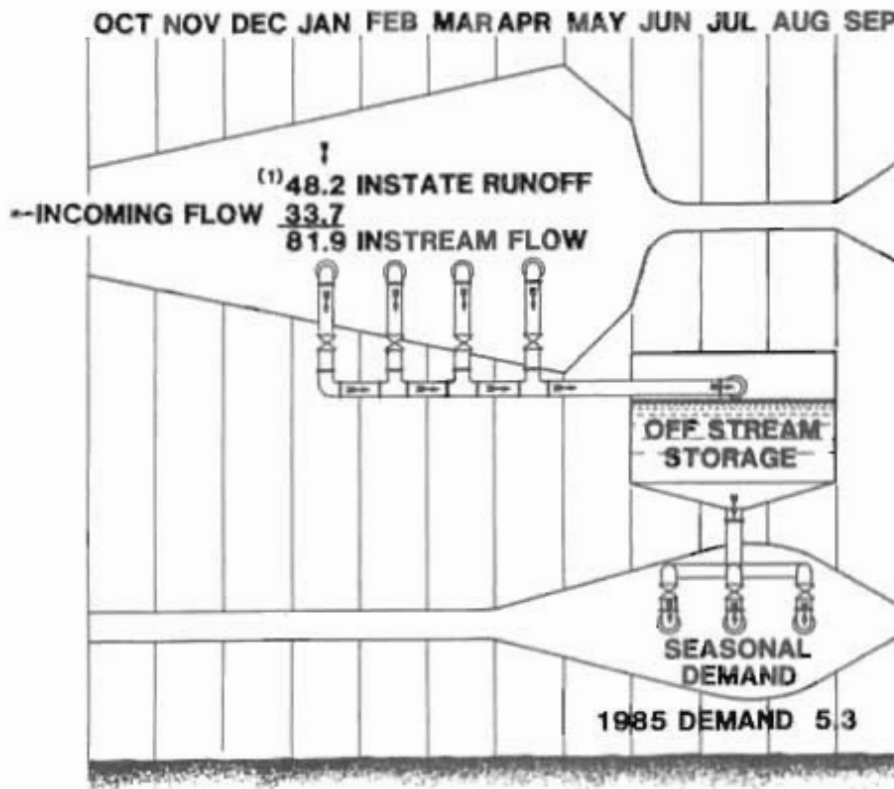


Figure VI1

Excess Surface Water
(Acre Feet X 1000)

Arkansas River for use in the Grand Prairie Region. Excess water should also be diverted from the Black River through the Cache River, Bayou DeView and L'Anguille River to supplant the use of ground water in this area. The feasibility of these alternatives is being evaluated under the Eastern Arkansas Regional Comprehensive Study being conducted jointly by the Arkansas Soil and Water Conservation Commission and the Corps of Engineers with assistance from the Soil Conservation Service and U. S. Geological Survey.

Ideally, ground water withdrawals should be guided by a sustained yield pumping strategy. All water needs which are in excess of that provided from ground water will be supplied through surface water alternatives.



2030 Demand 12.9
 Ground Water Safe Yield -4.0
 Surface Water 8.9

(1) Based on - State Area 53,104 Sq. Mi.
 Run off - 17" Per Sq. Mi. Per Year

Ground Water Safe Yield .75% of Total Water Use

Figure V12

Annual Predictable Instream Volume and Demand (Million Acre Feet)

An examination of voluntary compliance with reducing ground water withdrawals should be made prior to the 1995 Regular Session of the General Assembly of Arkansas.

2. ISSUE: Water levels are declining in the Sparta Sand aquifer of the Gulf Coastal Plain. Cones of depression have developed in the El Dorado and Magnolia areas, which indicate the threat of permanently dewatering the aquifer or inducing saltwater encroachment.

RECOMMENDATION: The most efficient response to the problem of declining water levels, is conversion from ground water to surface water, and employment of a

conjunctive use management strategy. Ideally, ground water withdrawals should be guided by a sustained yield pumping strategy. Management tools are being developed to aid managers in the decision-making process.

B. Surface-Water Depletion

1. ISSUE: Water use along Bayou Meto and Plum Bayou far exceeds the supply in Bayou Meto and Plum Bayou during the irrigation season.

RECOMMENDATION: Excess water should be provided from the Arkansas River to Plum Bayou and Bayou Meto. The feasibility of this alternative is being evaluated under the Eastern Arkansas Regional Comprehensive Study being conducted jointly by the Arkansas Soil and Water Conservation Commission and the Corps of Engineers.

2. ISSUE: Water demand in the Boeuf Basin and Bayou Bartholomew exceeds available supplies during the irrigation season.

RECOMMENDATION: Excess water should be provided from the Arkansas River for use in the Boeuf Basin and Bayou Bartholomew. A study of the Boeuf-Tensas Region is currently being conducted by the Corps of Engineers. Current plans are to investigate this diversion in conjunction with the Soil Conservation Service.

3. ISSUE: Use of excess surface water will be required in order to reduce current ground water pumpage by approximately 20% and to provide for future needs. Authorization of such use must be provided in a manner so as to negate adverse impacts to instream needs.

RECOMMENDATION: Implement Rules and Regulations as defined in Appendix A.

C. Water Quality

1. ISSUE: Much of the problem in water-quality degradation is from nonpoint pollution.

RECOMMENDATION: The Soil and Water Conservation Commission in cooperation with the Conservation Districts in eastern and northwestern Arkansas and with technical assistance provided by the USDA Soil Conservation Service should initiate an aggressive information and education program to encourage implementation of best management practices (BMP's) to curtail nonpoint sources of pollution. The Conservation Reserve Program (CRP) that is provided by the enactment of the Food Security Act of 1985 is having a positive effect on maintaining the soil on Highly Erodible Land (HEL). This program should be further implemented primarily in the row-crop regions of eastern Arkansas.

Animal waste disposal in western and northwest Arkansas should conform to Land Application Standards as set forth in the State Water Quality Management Plan.

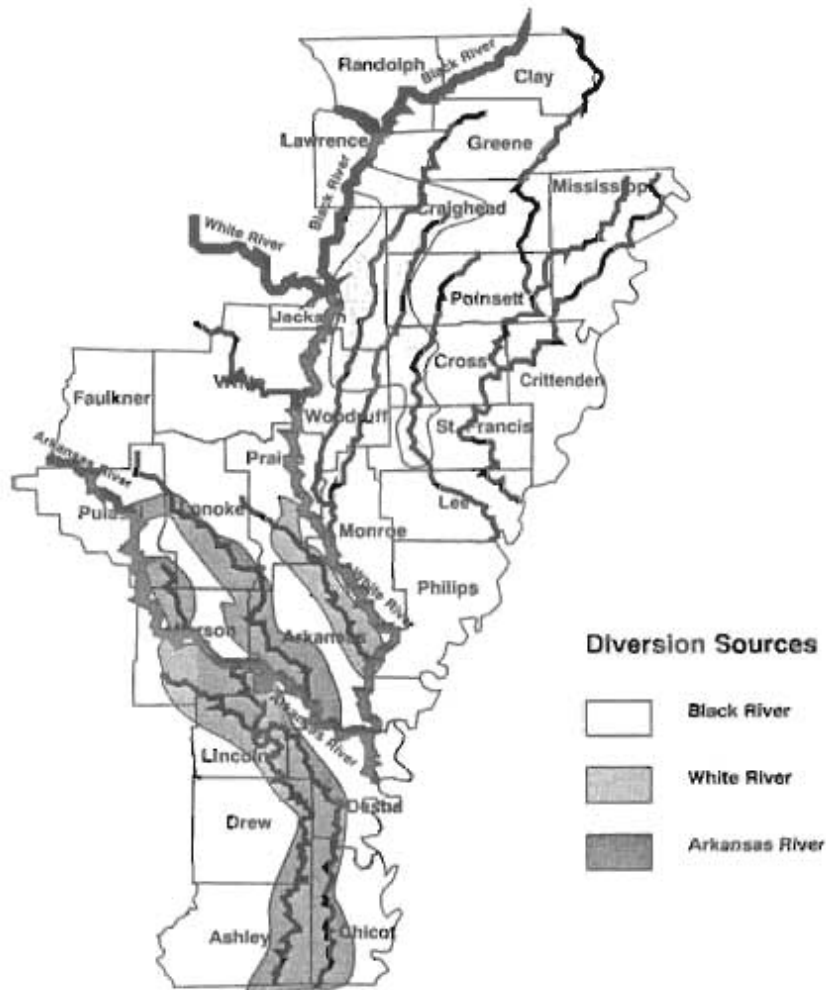


Figure VIII
Diversion Projects

The northwest Arkansas counties have well known pollution problems affecting both surface and ground water to the extent that human health problems may result. Due to the area's fractured limestone, the ground water is being polluted by septic tank effluent and surface applied litter. The Northwest Arkansas Water Quality Project must be implemented in order to help prevent the human health problems that will inevitably occur.

2. ISSUE: Saltwater intrusion is a significant problem in several aquifers of Arkansas as described in Section V.B. Saltwater contamination also occurs where oil, gas, and water wells penetrate saltwater aquifers which are under artesian pressure. Under artesian pressure, the saltwater rises in the well and flows into upper freshwater aquifers.

RECOMMENDATION: Halting the migration of saltwater into freshwater zones can be accomplished by reducing ground water withdrawals in the areas where migration is occurring, and by better well construction and abandonment practices. Ideally, ground

water withdrawals should be guided by a sustained yield pumping strategy. Existing regulatory agencies should be given continued support. Federal regulations will likely be imposed if the State does not act.

3. ISSUE: Poorly constructed and abandoned oil, gas, and water wells threaten the water quality of our ground water throughout the State.

RECOMMENDATION: Programs to encourage location of abandoned wells should be implemented to lessen ground water contamination potential from surface runoff. County-wide projects should be given financial and technical assistance.

4. ISSUE: A statewide program should be initiated to monitor comprehensively the quality of ground water in order to identify possible problem areas. A comprehensive Solid Waste Management program should be adopted. Expanded jurisdiction over site selection for solid waste disposal facilities is needed in order to address socioeconomic concerns, in addition to traditional air and water quality issues. Existing regulations should be enforced.

RECOMMENDATION: The solutions to this problem are continued research, monitoring efforts, and enforced regulation.

D. Water Management

1. ISSUE: Water may not be available from natural flows for direct diversion from surface sources for irrigation in dry years.

RECOMMENDATION: Storage reservoirs, both public and private, should be constructed and present storage reallocated to provide low flow augmentation during the irrigation season. Incentives under a Federal program should be provided for on-farm storage.

2. ISSUE: The authority to manage excess surface water at the local level is ambiguous.

RECOMMENDATION: Regional irrigation districts should be able to regulate the withdrawal in terms of time, point of withdrawal, and point of diversion. The same districts would obtain authorization or permit for withdrawal from the Arkansas Soil and Water Conservation Commission. Rules and Regulations are recommended for adoption to implement provision for authorization of non-riparian use of excess surface water.

3. ISSUE: Water conservation needs to be more aggressively used as an alternative to development to meet future needs.

RECOMMENDATION: Water conservation methods must be encouraged by providing both education about current methods and technical assistance from the Soil and Water Conservation Commission and Conservation Districts. Conservation plans shall be developed and implemented as a condition of eligibility for Commission programs.

4. ISSUE: Over 26 million acre-feet of water is being allowed to flow downstream due to the 25% limit on water transfer in Act 1051.

RECOMMENDATION: It is recommended that the percentage that may be transferred be raised to seventy-five percent.

E. Legal and Institutional

1. ISSUE: The Arkansas Soil and Water Conservation Commission is charged by the legislature with the "duty of preparing, developing, and formulating and engaging 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 State Water Plan is the State policy for the development of water and developers of any water project must take the State Water Plan into consideration and file project plans with the Commission. However, the Arkansas Soil and Water Conservation Commission lacks the authority to require conformance with the Plan. Federal Water Policy requires cost sharing by local sponsors, who in turn request State assistance. The need exists to prioritize these projects.

RECOMMENDATION: Amend Act 217 of 1969, as amended, to require State Water Plan compliance and provide for a mechanism for establishment of a state priority when assistance is requested and/or required under a Federal program.

2. ISSUE: Some levee and drainage districts fail to perform proper maintenance after the debt service is paid off. This leads to improper drainage and flooding problems with the result that the local interests return to state and federal agencies seeking assistance in resolving the problem.

RECOMMENDATION: Oversight control to ensure proper operation and maintenance should be authorized at the state level under the jurisdiction of the Arkansas Soil and Water Conservation Commission.

3. ISSUE: Crop data reporting from the several agencies are not in agreement. There are at least four different sources of crop data. The divergence among reported data makes irrigation needs' planning difficult. In addition, water use reporting is required by legislation, however, the accuracy of the data being reported is questionable.

RECOMMENDATION: There must be a greater degree of accuracy in crop and water use data. Additional technical assistance and flow measurement equipment is needed in order for Conservation Districts to provide the level of service necessary to attain the degree of accuracy required. A penalty should be assessed for not reporting a water use of more than 5 acre-feet (1,629,500 gallons).

4. ISSUE: Act 14 of 1963 treated the Soil and Water Commission and gave it powers of the old Water Conservation Commission under Act 81 of 1957. Both these acts have been amended several times and are in some instances, in conflict with themselves.

Administrative law has advanced in areas such as judicial review of agency decisions. The Commission's legislation does not reflect these advancements.

RECOMMENDATION: Acts 217 and 81 should be updated to resolve any conflicts and to reflect the current status of administrative law.

F. Financial Assistance Needs for Water Development

1. ISSUE: Local governments participating with the federal government in water resource development projects must enter into a local cooperation agreement (LCA) which require varying rates of cost sharing which cannot be provided without assistance from some source. Current state financial assistance programs contain restrictions on type of assistance available to local sponsor and type of water resources projects which may be funded.

RECOMMENDATION: Authorize a water resources development project funding program under the authority and management of ASWCC specifically for the purpose of assisting local entities in meeting their obligations under the terms of LCA(s).

2. ISSUE: Most water and wastewater projects across the State cannot be financed by loan funds only, since required water and sewer rates would be excessive to produce enough revenue to repay the debt and operate the systems. To keep water and sewer rates within acceptable levels, sources of grant or deferred loan funds must be established and maintained.

RECOMMENDATION: Additional funding of the Water Development Fund and the water Sewer and Solid Waste Fund must be appropriated. Dam permit fees are deposited into the Water Development Fund. Therefore, amending Act 81 of 1957 to set the minimum dam permit fee at \$25,00; raising the fee per acre-foot to \$0.05; and establishing application review fee of 1% of estimated construction costs with a minimum fee of \$100.00, and a maximum fee of \$500.00 will increase revenues to the fund by \$21,000/yr.

3. ISSUE: Arkansas communities need an estimated \$460 million to construct currently needed sewage collection and treatment facilities. The Farmers Home Administration - the traditional source of loan funds for both water and sewer projects has insufficient funds to fill this need.

RECOMMENDATION: Implement issuance of bonds under the Arkansas Waste Disposal and Pollution Abatement General Obligation Bond Program, which was passed by the legislature in 1947.

4. ISSUE: Legislation which established the Water, Sewer and Solid Waste Fund (Act 274 of 1975) specifies that monies from the fund must be used to cost-share with Federal funds; thus, after, Sewer and Solid Waste Fund monies cannot be used to supplement loan funds from other sources, such as the Water Resource Development Bond program and the proposed Pollution Abatement Bond Program.

RECOMMENDATION: Amend Act 274 of 1975 so that monies from the Water, Sewer and Solid Waste Fund can be utilized to cost-share with other State loan funds as well as Federal loan and grant funds.

G. Drinking Water-Supply Deficiencies

1. ISSUE: Cities and towns along Hwy. 67 from Searcy to near Arkadelphia presently lack or will, in the future, lack adequate water supplies to support economic expansion because ground water supplies are limited, to nonexistent, along the corridor.

RECOMMENDATION: Develop and implement a master plan for distribution of water from existing reservoirs and development of new reservoir sites as needed to satisfy projected needs.

2. ISSUE: Many areas along the Arkansas River have insufficient sources of water for municipal, industrial, and agricultural uses. Where water is not suitable due to economic or quality reasons, the development of off stream tributaries or off stream storage to catch water of the Arkansas River, when quality is acceptable, should be encouraged.

RECOMMENDATION: Develop and implement a master plan for distribution of water from the Arkansas River as well as from existing reservoirs, and development of new reservoir sites as needed to satisfy projected needs. A study is underway to assess the suitability of Arkansas River water for these uses. Preliminary results indicate the water is useful for agricultural and some industrial uses. Greater use of the River for municipal purposes should be encouraged if the current study indicates the water is suitable. Where the water is not suitable due to economic or quality reasons, the development of stream tributaries or off stream storage to catch waters of the Arkansas River when quality is acceptable should be encouraged.

3. ISSUE: The most extensive ground water problem in the Interior Highlands of Arkansas is the naturally occurring low yield of water and poor quality in shallow formations. In this part of the state, shallow wells commonly yield less than 5 gallons per minute. Individuals cannot afford deep wells.

RECOMMENDATION: There are two solutions to this problem; Drill deeper wells into the high yielding aquifers such as the Roubidoux and Gunter, in the areas where the aquifers are available and contain good quality water; and development of surface water resources by importation or construction of impoundments. With either solution, individuals must be served by regional water systems to keep costs reasonable.

H. Impaired Drainage and Floodwater Damages

ISSUE: Impaired drainage and floodwater damages are continuing to greatly limit agricultural production in Arkansas. Approximately 3,350,000 of the 8,040,000 acres of cropland are being adversely affected. The report further estimates that impaired drainage and flood damages are reducing Arkansas' agricultural production by about \$160,000,000 annually.

RECOMMENDATION: The Arkansas Soil and Water Conservation Commission should cooperate with Federal agencies and local communities to provide appropriate assistance in addressing the adverse effects on agricultural production caused by impaired drainage and floodwaters.

I. Environmental and Recreational Considerations

1. ISSUE: Proposals to develop surface water supply sources are often in conflict with efforts dedicated to the preservation and conservation of significant streams so they can be enjoyed by present and future generations.

RECOMMENDATION: If it is determined to be in the interest of the State to construct impoundments, a recreation/conservation purpose should be included in the project.

2. ISSUE: Water resources development projects often have significant environmental effects.

RECOMMENDATION: Water resources development projects can and must be designed to minimize takeoffs between economic and environmental concerns.

J. Public Awareness to Resource problems

ISSUE: The public is generally unaware of the nature of problems associated with effective conservation and use of our water resources. Many individuals with legal and planning responsibilities at the local level are not trained in resource management.

RECOMMENDATION: Legislative and Executive action is needed to provide finances and personnel for the development of a statewide information, education, and awareness program which will train local authorities and managers about water issues and their broad implications for resources planning.

VIII ACTIONS RECOMMENDED

A. Adoption Rules and Regulations

1. RULES FOR THE UTILIZATION OF SURFACE WATER (FULL TEXT IN APPENDIX A)

I. General

- A. Purpose
- B. Enabling and Pertinent Legislation
- C. Definitions

II. Surface Water Diversion Registration

- A. Exemptions
- B. Procedure for Registration by Riparian Landowner
- C. Procedure for Application for and Issuance of Surface Water Permit to Non riparian Intrabasin Landowner
- D. Interbasin Transfers
- E. Interstate Transfer

III. Allocation of Surface Water During Periods of Water Shortage

- A. Water Usable Without Allocation

- B. Right to Receive an Allocation
- C. Procedures for Making Allocations
- D. Criteria for Allocation
- E. Implementation of Allocation Plan
- F. Penalties
- G. Emergency Allocations
- H. Appellate Review

**2. RULES FOR GROUND WATER USE REPORTING
(FULL TEXT IN APPENDIX B)**

I. General

- A. Purpose
- B. Enabling and Pertinent Legislation
- C. Definitions

II. Ground water Diversion Registration

- A. Requirement to Register
- B. Exemptions
- C. Reports Shall Contain the Following Information

B. Recommended Legislation

1. **ISSUE D. 2:** Provide additional authority to local improvement districts for management of excess surface water.
2. **ISSUE D. 4:** Amend Act 105 to change the 25 percent limitation on use of excess surface water to 75 percent.
3. **ISSUE E. 1:** Amend Act 217 of 1969 to require compliance with the State Water Plan.
4. **ISSUE E. 2:** Enacting legislation to give ASWCC oversight of improvement districts regarding review of financial records and performance of sponsorship obligations.
5. **ISSUE E. 3:** Amend Act 81 of 1957 and Act 105 of 1985 to give authority to assess penalty for not reporting water use of more than five acre-feet.
6. **ISSUE E. 4:** Amend Act 217 of 1985 and Act 81 of 1985 to select current status of administrative law and resolve conflicts.
7. **ISSUE F. 1:** Authorize a water resource development project funding program for assisting entities in meeting obligations of local cooperative agreements.
8. **ISSUE F. 2:** Increase funding of Water Development Fund and the Water, Sewer and Solid Waste Fund. Amend Act 81 of 1957 to increase Dam Permit Fees.
9. **ISSUE F.3:** Amend Act 274 of 1975 in order that monies from the Water, Sewer and Solid Waste Fund can be utilized with other state loan funds as well as Federal loan and grant funds.

C. Education

1. **ISSUE J. 1:** Initiation by the Arkansas Soil and Water Conservation Commission of a continuing water education program with the initial focus on the following:
 1. Initiation of a water awareness program.
 2. Training program for Conservation District Directors and other locally elected/appointed Improvement District Directors.

IX. Appendices

- A. Rules for the Utilization of Surface Water**
- B. Rules for Ground Water Use Reporting**
- C. Excerpts from Arkansas Code of 1987
Annotated Title 15 Chapter 2**

RULES FOR THE UTILIZATION OF SURFACE WATER

[As Adopted December 20, 1989]

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RULES FOR THE UTILIZATION OF SURFACE WATER

[As Adopted December 20, 1989]

SUBTITLE I. GENERAL.

Section 301.1. PURPOSE.

- (a) In keeping with the policy of the State of Arkansas, the purpose of these rules is to encourage and facilitate the conservation, development and efficient use of surface water. Sensitivity to the public interest by the entire state requires the protection of: existing surface water uses; needs of all existing federal water projects; firm yield of all existing reservoirs; instream needs; and future water needs.
- (b) In pursuit of these objectives, these rules establish a procedure for surface water diversion registration, authorization of intrabasin and interbasin diversion by non-riparian owners, interstate transfers of water and allocations during times of water shortages.

Section 301.2. ENABLING AND PERTINENT LEGISLATION.

- (a) Ark. Code Ann. 15-22-201, et seq., Allocation and Use of Water.
- (b) Ark. Code Ann. 15-22-301 et seq., Determination of Water Use Requirements.
- (c) Ark. Code Ann. 15-22-501 et seq., Water Development Protects Generally.
- (d) Ark. Code Ann. 15-20-201 et seq., Soil and Water Conservation Commission.
- (e) Ark. Code Ann. 15-23-401 et seq., Arkansas River Compact.
- (f) Ark. Code Ann. 15-23-501 et seq., Red River Compact.
- (g) Ark. Code Ann. 25-15-201 et seq., Arkansas Administrative Procedure Act.

Section 301.3. DEFINITIONS. The following definitions shall apply to all parts of these rules:

- (a) **Affected Persons:** Persons, other than the Petitioner, whose water rights could reasonably be affected by permitting or allocation of water under these rules.
- (b) **Allocation:** The assignment of an allowance of a specific quantity of water that may be removed from any given stream and transported away from the stream or a designated beneficial use during times of shortage.
- (c) **Allocation Level:** The level of a stream at which a water shortage occurs and the allocation process begins.
- (d) **Arkansas Water Plan:** The comprehensive program for the orderly development and management of the State's water and related land resources developed by the Commission.
- (e) **Average Annual Yield:** The average of the quantity of water passing through a watershed each year during the applicable period of record. In the event adequate records are not available for an arithmetic average, a suitable estimate may be computed.
- (f) **Basin of Origin:** The water basin from which an interbasin transfer of surface water is diverted.

- (g) **Beneficial Use:** The instream and offstream uses of water in such quantity as is economical and efficient and which use is for a purpose and in a manner which is reasonable, not wasteful, and compatible with the public interest.
- (h) **Commission:** The Arkansas Soil and Water Conservation Commission as defined in Ark. code Ann. 15-20-201 et seq.
- (i) **Commissioner:** A member of the Arkansas Soil and Water Conservation Commission, as defined in Ark. code Ann. 15-20-201
- (j) **Conservation District:** A district created under the Conservation Districts Law, Title 14, Chapter 125 of the Arkansas code of 1987 Annotated.
- (k) **Conservation Plan:** Plan as evidenced by written document for implementation of economical and technically feasible practices for improving the efficiency of water use. At a minimum, the Plan shall address the following concerns where applicable: leakage loss control, water reuse, promotion of water saving devices, drought emergency plans, irrigation system efficiency and tailwater recovery.
- (l) **Critical Surface Water Area:** An area where current water use, projected water use or quality degradation has or will cause a shortage of useful water within a relatively short period of time for a sufficient length of time to be expected to cause prolonged economic or environmental problems.
- (m) **Diffused Surface Water:** Water occurring naturally on the surface of the ground other than in natural or altered stream channels, lakes or ponds.
- (n) **Director:** The Executive Director of the Arkansas Soil and Water Conservation Commission, as defined in Ark. code Ann. 15-20-201 et seq.
- (o) **District:** Conservation district or regional water district.
- (p) **Diverter:** Any person that removes water from any source and makes any use thereof.
- (q) **Domestic Use:** The use of water for ordinary household purposes including human consumption, washing, the watering of domestic livestock, poultry and animals and the watering of home gardens for consumption by the household.
- (r) **Excess Surface Water:** Twenty-five percent (25%) (to automatically increase to any higher percentage authorized by the Arkansas General Assembly simultaneous with the effective date of any such Act) of the average annual yield from any watershed above that amount, as determined by the Commission, required to satisfy all of the following that are applicable:
- (1) Riparian and non-riparian usage reported for the 1989 water year as provided for in Title III Subtitle II. The water needs of federal water projects as they existed on June 28, 1985.
 - (3) The firm yield of all affected reservoirs existing on June 28, 1985.
 - (4) Maintenance of minimum streamflows for the following streams (these constitute an initial phrase. Other streams will be added as needs arise and resources are made available):
 - (A) Arkansas River from Oklahoma boundary to mouth.
 - (B) Black River from Missouri boundary to mouth.
 - (C) Eleven Point River from Missouri boundary to mouth.
 - (D) Ouachita River from Lake Catherine to Louisiana boundary.
 - (E) Red River from Texas boundary to Louisiana boundary.
 - (F) St. Francis River from Marked Tree to mouth.

- (G) Spring River from Missouri boundary to mouth.
- (H) White River below Bull Shoals Lake to mouth.
- (5) Future water needs of the watershed as projected in the Arkansas Water Plan.
- (s) **Firm Yield:** The maximum amount of water the reservoir will yield based upon the worst period of record, recognizing that a more severe drought than any on record may occur.
- (t) **Interbasin Transfer:** The transfer of water between basins, except transfers across a basin boundary by a riparian, as described in Title III Subtitle V.
- (u) **Intermittent Stream:** Those streams whose flow is seasonal in nature and does not flow continuously. (The intent of the Commission is to define intermittent streams by a statistical method once sufficient streamflow data is available at the conclusion of the "Low flow characteristics of Arkansas streams study").
- (v) **Intrabasin Transfer:** The transfer of water within a basin, as described in Title III Subtitle IV.
- (w) **Minimum Stream Flow:** The quantity of water required to meet the largest of the following instream flow needs as determined on a case by case basis:
 - (1) Aquifer recharge.
 - (2) Fish and wildlife.
 - (3) Interstate compacts.
 - (4) Navigation.
 - (5) Water quality.
- (x) **Municipal Domestic Use:** The use of water for ordinary household purposes including human consumption, laundry, bathroom facilities, fire protection, and the watering of home gardens, which is distributed by a central distribution system.
- (y) **Navigable Stream:** Any watercourse that the federal government or the laws of the State of Arkansas declare to be navigable or that can be found to be navigable as a matter of fact
- (z) **Non-Consumptive Use:** The withdrawal of water for use in a manner that results in an approximately equal volume of water being returned to the same surface water body from which it was withdrawn.
- (aa) **Non-Riparian Owner:** The owner of land that is not contiguous to surface water and who has not obtained access to surface water by lease, easement or other method prior to March 1, 1990.
- (bb) **Non-Riparian Water Right:** A permit issued under these regulations to use excess surface water.
- (cc) **Permittee:** The holder of a water right permit
- (dd) **Person:** Any natural person, partnership, firm, association, cooperative, municipality, county, public or private corporation, and any federal, state or local governmental agency.
- (ee) **Petitioner:** A person, other than the Commission, who seeks allocation of water through the Commission's Rules.
- (ff) **Regional Water District:** A district created under the Regional Water Distribution Act, Title 14, Chapter 116 of the Arkansas code of 1987 Annotated.

- (gg) **Riparian Landowner:** The holder in fee, leasehold, easement or other acquired access of any land that is continuous to surface water in the State of Arkansas. Provided, however, that the leasehold, easement or other acquired access must have been acquired prior to March 1, 1990. Flowage easements will not invalidate the riparian rights of the landowner.
- (hh) **Riparian Water Rights:** Rights to water that accrue to riparian landowners.
- (ii) **Shortage:** When there is not sufficient water in a stream to meet all beneficial uses.
- (jj) **Stream:** A stream of water and its channel, including springs, lakes, or marshes in which the stream originates or through which it flows, where the stream flows in a reasonably definite channel, but excluding a depression, swale, or gully, through which diffused water flows.
- (kk) **Surface Water:** Water occurring on the surface of the ground in lakes, ponds and in natural or channelized streams.
- (ll) **Tailwater Recovery System:** A system or recovery and reuse of water by the same diverter.
- (mm) **Water Year:** A twelve (12) month period beginning on October 1 of any year.
- (nn) **Watershed:** The drainage area of a stream and its tributaries.

Section 301.4. RULES TO SUPPORT COMPACTS. Any procedure contained in these rules may be used to support and comply with the Red River Compact or the Arkansas River Compact.

Section 301.5. DELEGATION OF AUTHORITY. The Commission may delegate its authority under these rules to a local district. The exercise of this delegation shall be reserved until such time as the Commission adopts rules and regulations prescribing the implementation of this section.

SUBTITLE II. SURFACE WATER DIVERSION REGISTRATION.

Section 302.1. REQUIREMENT TO REGISTER.

- (a) All persons who divert surface water, except as hereinafter exempted, shall report the diversion no later than March 1st for the prior water year.
- (b) The reports shall be made on forms provided by the Commission and shall be made to the Commission or to their local Conservation District.
- (c) Late registrations will be accepted only upon the payment of the appropriate fee as established by Section 302.7.

Section 302.2. EXEMPTIONS: The following diversions are exempt from the requirement of registration:

- (a) Diversions by any person of less than 325,900 gallons (1 acre-foot of water in any water year).
- (b) Water diverted from natural lakes or ponds in the exclusive ownership of one person.
- (c) Diffused surface water.

Section 302.2 REPORT CONTENT.

- (a) The reports shall contain all information requested including the following information:
 - (1) The name and post office address of the registrant.
 - (2) The source of water supply and location of the point of diversion, the manner of diversion, whether a dam is utilized, and the size and location of any such dam.
 - (3) The purpose of the water diversion.
 - (4) The estimated quantity of water diverted for direct use, and the quantity of water stored away from the point of diversion for use when needed.
 - (5) The location of the land on which the water is used, and, if for irrigation, the area and legal description of the lands irrigated, which may be detected by the use of appropriate maps, and the kinds of crops cultivated under irrigation during the year.
 - (6) The times during the water year that the water was diverted.
- (b) All questions shall be answered or said to be not applicable.

Section 302.4 REPORT — NO CHANGE IN WATER USE OR NO USE OF WATER.

- (a) After the initial report in compliance with this rule, persons whose water use remains unchanged from the prior water year need only report no change in water use.
- (b) In the event that no water is diverted during any water year and the diverter has registered diversions in prior years, the diverter must submit a registration form showing no diversion to maintain his priority position.

Section 302.5. CERTIFICATES OF REGISTRATION.

- (a) Before July 1st of the water year following the water year being reported, the Commission shall furnish to the registrant a certificate of registration containing all the pertinent information set forth by the registrant.
- (b) Registrants submitting registration forms after March 1st for the prior water year or registering water that is exempt from registration will not receive Certificates of Registration for that water year.
- (c) The Commission shall record the information received in all cases of diversions reported even if a Certificate of Registration is not issued thereon.

Section 302.7. REVIEW OF FORM. The Director shall annually review the form used in obtaining the information required in registering diversions of surface water and shall alter or amend such form as necessary to comply with laws of the State of Arkansas and the rules of the Commission.

Section 302.7. FAILURE TO REGISTER.

- (a) Any person who fails to timely register surface water diversion as required by law and these rules shall pay fees as follows

<i>CLASSIFICATION</i>	<i>FEE FOR FAILURE TO REGISTER BY SPECIFIED DUE DATE</i>
<i>First Failure</i>	<i>No Fee - Written Notice to Timely Register</i>
<i>Second Failure</i>	<i>\$ 50.00</i>
<i>Third Failure</i>	<i>\$250.00</i>
<i>Fourth and Subsequent Failure</i>	<i>\$500.00</i>

- (b) Each prior late registration of surface water or ground water under the Rules for Utilization of Ground Water shall be considered a late registration for classification purposes under these rules.
- (c) For first and second late registration classifications, all late registered ground water withdrawals and surface water diversions by a single person in a single water shall be considered one late registration for fee purposes.
- (d) For third, fourth and subsequent late registration classification, each late registered ground water withdrawal and surface water diversion for each water year may be considered a separate late registration for fee purposes.

SUBTITLE III. MINIMUM STREAMFLOW. [RESERVED]**SUBTITLE IV. PROCEDURE FOR ISSUANCE OF SURFACE WATER PERMITS FOR INTRABASIN USE BY NON-RIPARIANS.**

Section 304.1. AUTHORITY. A person shall be authorized to divert excess surface water for non-riparian use upon proper application and the granting of a permit by the Director.

Section 304.2. DETERMINE TO GRANT PERMIT. The Director shall grant a permit after he determines that the water to be used is excess surface water, as defined herein, is for a reasonable and beneficial intended use, and will cause no significant adverse environmental impact. The water may be diverted for storage to meet future needs in determining the reasonability of the proposed use the Director may consider the following:

- (a) The lack of availability at a reasonable cost of alternative sources of water.
- (b) The environmental impact of the proposed transfer.
- (c) The effect of the proposed transfer on other lawful water uses.

Section 304.3. APPLICATION.

- (a) Applications for a permit shall be on a form furnished by the Director and shall be filed with the Director. The applicant shall disclose:
- (1) The quantity of water to be diverted for direct use.
 - (2) The quantity of water to be stored away from the point of diversion.
 - (3) The total amount of water to be diverted.
 - (4) The proposed time or times of diversion.
 - (5) The purpose for which the water is to be diverted.

- (6) The location of the land on which the water is to be used.
- (7) The proposed conservation plan.
- (8) If for irrigation:
 - (A) The area and legal description of the lands irrigated.
 - (B) The types of crops to be cultivated under irrigation during the water year.
- (9) Any other reasonable information requested by the Director.
- (b) All other questions contained on the form shall be answered or stated to be not applicable.

Section 304.4. FEE.

- (a) The Director may require a reasonable fee to be paid with the application for a permit to make an intrabasin water transfer. If charged, such fees shall be used to help defray administration expenses and the cost of flow monitoring gage(s) and their installation near the point of diversion, if required.
- (b) If the permit is not granted, the portion of the fee applicable to the cost and installation of the flow monitoring gage(s) shall be refunded.

Section 304.5. PERMIT CONDITIONS. If approved, the Director shall issue a permit and shall designate thereon:

- (a) The amount of water permitted.
- (b) The authorized use.
- (c) The point of approved diversion.
- (d) A legal description of the land of intended use.
- (e) Approval of the conservation plan.

Section 304.6. SPECIAL CONDITIONS. The Director may place upon a permit any special conditions necessary to ensure that the water to be diverted is excess surface water and to guarantee a reasonable and beneficial use of the water. The special conditions may include any other reasonable limitations or conditions to protect the environment of the watershed of origin and to ensure against an unacceptable adverse impact of the transfer on other lawful water uses. An example would be limitations on season or time of withdrawal.

Section 304.7. LENGTH OF PERMIT. Permits or intrabasin transfer may be issued for a period fixed by the Director, taking into consideration the investment required by the permittee to utilize the water and the period reasonably required to amortize such investment, but in no event in excess of fifty (50) years.

Section 304.8. FILING.

- (a) Upon the issuance of a permit to divert to non-riparian uses, the Director shall furnish the permit to the applicant, a copy to the Commissioners and cause a copy to be retained in the Commission's records at the office of the Commission.
- (b) The permittee shall record his permit in the office of the circuit clerk of the county of the point of diversion.

Section 304.9. PERMITTEE WATER USE REPORT. All permittees shall report the amount of water diverted during each water year of the permit pursuant to Title III Subtitle II of these rules.

Section 304.10. CHANGE IN PERMIT CONDITIONS.

- (a) Permittee shall notify the Director of his desire to transfer the permit to another person. Permits are freely transferable.
- (b) Permittee wishing to make other changes in permit conditions shall seek prior approval of the Director. The procedures set out in these rules shall be used for permit modification other than as set out in Subsection (a).

Section 304.11. CANCELLATION-MISUSE. The Commission may cancel any permit for violation of any condition contained in the permit, that is used for a purpose other than stated in the permit or that is used for the diversion of more water than permitted.

Section 304.12. CANCELLATION-NONUSE. The Commission may cancel any permit issued for a period in excess of three (3) years if the permittee fails to take reasonable steps to obtain the ability to utilize the water permitted within two (2) years from the date of issuance of the permit.

Section 304.13. IRRIGATION PERMITS RUN WITH LAND. Irrigation permits run with the land described in the permit and can only be assigned to a subsequent owner or lessee of the land. These permits may not be sold separate and apart from the land, and any such attempts shall void the permit.

Section 304.14. PREDETERMINED ALLOCATION PLAN. After an application for a permit to make an intrabasin transfer is received, the Director where deemed desirable and appropriate shall initiate a study consistent with the provisions of Title III Subtitles VII, VIII, IX hereof to determine the allocations that should be made if a water shortage should occur. The purpose of this advance determination is to allow immediate implementation of allocations if a water shortage does occur. In selecting the watershed to be studied, preference shall be given to those areas where a water shortage is most likely to occur.

Section 304.15. WATER LEVEL MONITORING.

- (a) The Director may, as he determines to be necessary, cause a staff gage to be securely placed in the stream at the point of diversion. Each staff gage shall have the following clearly marked herein:
 - (1) **Minimum Streamflow** - A zone marked in red. If the water level is at or below this mark, all diversions shall cease except diversions for domestic and municipal domestic use.
 - (2) **Allocation Level** - A zone marked in yellow. If the water level is in the yellow zone, only water lawfully diverted that has not yet become subjected to reduction by allocation. Water that has been allocated or water usable without allocation (as defined hereinafter in Section 307.2) may be diverted from the stream.

- (3) **Normal Diversion Level** - A zone marked in green. If the water level is in the green portion of the staff gage at the point of diversion, all allocations shall cease. Riparian may resume water diversions and the non-riparian permittees may divert such water as shall have been permitted to them.
- (4) Other pertinent water level markings deemed appropriate by the Director.
- (b) It shall be unlawful for anyone to remove or alter any staff gages placed for these purposes and all such staff gages shall indicate on them that they are the property of the Commission.

Section 304.16. APPEAL OF PERMIT DECISION. The applicant for a water rights permit or any affected person shall have the right to protest the action of the Director in either granting or denying the application for a permit or to protest any special conditions that may be placed thereon and a permittee shall have the right to protest the cancellation of a permit if a protest is filed by the applicant within ten (10) days of the action of the Director or is filed by an affected person within twenty (20) days of filing of the permit in the office of the circuit clerk of the county of the point of diversion, a hearing shall be scheduled before the Commission or a hearing officer that may be designated by the Commission for review of the Director's action in the issuance, nonissuance or inclusion of special conditions on the permit.

SUBTITLE V. PROCEDURE FOR ISSUANCE OF SURFACE WATER PERMITS FOR INTERBASIN USE BY NON-RIPARIANS.

Section 305.1. BASINS DEFINED. For purposes of interbasin transfers under this Subtitle, the state shall be divided into five (5) basins as listed below and depicted in Exhibit 1:

- (a) Arkansas River Basin.
- (b) Delta Basin.
- (c) Ouachita River Basin.
- (d) Red River Basin.
- (e) White River Basin.

Section 305.2. AUTHORITY. A person shall be authorized to divert and transfer excess surface water for interbasin use upon proper application and the granting of a permit by the Director. Water may be diverted for storage to meet future needs.

Section 305.3. APPLICATION.

- (a) Applications for a permit shall be on a form furnished by the Director and shall be filed with the Director. The applicant shall disclose:
 - (1) The quantity of water to be diverted for direct use.
 - (2) The quantity of water to be stored away from the point of diversion when needed.
 - (3) The total amount of water to be diverted.
 - (4) The proposed time or times of diversion.
 - (5) The purpose for which the water is to be diverted.
 - (6) The location of the land on which the water is to be used.

- (7) The proposed conservation plan.
 - (8) If for irrigation:
 - (A) The area and legal description of the lands irrigated.
 - (B) The kinds of crops to be cultivated under irrigation during the water year.
 - (9) Any other reasonable information requested by the Director.
- (b) All other questions contained on the form shall be answered or stated to be not applicable.

Section 305.4. NOTICE AND HEARING

- (a) Upon receipt of an application for the interbasin transfer of water, the Director shall cause to be published a Notice of Application. The notice shall be published at the expense of the applicant at least once a week for two consecutive weeks in the newspaper having the largest circulation in the county from which the diversion would be made, in the county to which the diversion would be made, and in any other county through which the diversion would pass. The notice shall be in the form and shall set forth all pertinent information prescribed by the Commission.
- (b) The application shall be heard by the Director at a time and place to be set by the Director.

Section 305.5. COMMISSION STAFF DETERMINATION. Prior to the hearing the Commission shall have made the following determinations:

- (a) The supply of water available in the basin of origin and in the basin to which proposed diversion is to be made.
- (b) The amount of excess surface water at the point of diversion of the basin of origin.
- (c) The present and future water demands of water users in the basin of origin.
- (d) Whether there are water shortages in the basin at the point of proposed use.
- (e) The availability at a reasonable cost of alternative sources of water.

Section 305.6. APPLICANT TO PROVE. The applicant shall be prepared to prove at the hearing that:

- (a) The water that is the subject of the proposed transfer can be feasibly transported out of the basin of origin to alleviate water shortages existing at the point of proposed use.
- (b) That other available supplies and sources of water in the watershed to which it is being diverted are inadequate.
- (c) That the demands placed upon available water supplies in the watershed to which it is being diverted exceed the water available for beneficial use.
- (d) That no significant damages should result to the basin of origin as a result of the proposed transfer.

Section 305.7. DIRECTOR'S DECISION.

- (a) Within thirty (30) days following the hearing, the Director shall render his decision in granting or denying the application for interbasin transfer of water,

with any special conditions to be placed thereon to protect the watershed of the basin of origin and to ensure against an adverse impact of the transfer on other lawful water users.

- (b) The Director shall grant a permit after he determines that:
 - (1) The water to be used interbasin by a non-riparian will be excess surface water, as defined herein.
 - (2) The proposed use is a reasonable and beneficial intended use.
 - (3) The transfer will cause no significant adverse environmental impact in the basin of origin.
- (c) In determining the reasonableness of the proposed use the Director may consider the following:
 - (1) The lack of availability at a reasonable cost of alternative sources of water.
 - (2) The environmental impact of the proposed transfer.
 - (3) The effect of the proposed transfer on other lawful water uses.

Section 305.8. PERMIT CONDITIONS.

If approved, the Director shall issue a permit and shall designate thereon:

- (a) The amount of water permitted.
- (b) The authorized use.
- (c) The point of approved diversion.
- (d) Legal description of the land of intended use.
- (e) Approval of the conservation plan.

Section 305.9. SPECIAL CONDITIONS.

- (a) The Director may place upon a permit any special conditions necessary to ensure that the water to be diverted is excess surface water and to guarantee a reasonable and beneficial use of the water. The special conditions may include any reasonable limitations or conditions to protect the environment of the watershed of origin and to ensure against an unacceptable adverse impact of the transfer on other lawful water uses. An example would be limitations on season or time of withdrawal.
- (b) The Director may require the applicant to transfer more water than the applicant plans to use so that it may be made available to others in the immediate vicinity of the proposed route of transportation. The permittee may also be required to contract with other users for the transportation of a specific quantity of water, for a specific period, at a reasonable price to be paid to the permittee by the other users. The price must be based only on the cost of transportation of the water and not for the water itself.

Section 305.10. LENGTH OF PERMIT. Permits for interbasin transfer may be issued for a period fixed by the Director, taking into consideration the investment required by the permittee to utilize the water and the period reasonably required to amortize such investment, but in no event in excess of fifty (50) years.

Section 305.11. FILING. Upon the issuance of a permit to divert to non-riparian uses, the Director shall furnish the permit to the applicant, a copy to the Commissioners and

cause a copy thereof to be retained in the Commission's records at the office of the Commission. The permittee shall record his permit in the office of the circuit clerk in each county through which the diverted water shall pass.

Section 305.12. PERMITTEE WATER USE REPORT. All permittees shall report the amount of water diverted during each water year of the permit pursuant to Title III Subtitle II of these rules.

Section 305.13. CHANGE IN PERMIT CONDITIONS.

- (a) Permittee shall notify the Director of his desire to transfer the permit to another person. Permits are freely transferable.
- (b) Permittee wishing to make other changes in permit conditions shall seek prior approval of the Director. The procedures set out in these rules shall be used for permit modification other than as set out in Subsection (a).

Section 305.14. FEE.

- (a) The Director may require a reasonable fee to be paid with the application for a permit to make an interbasin water transfer to help defray administration expenses including the investigation and study required to evaluate the application, and the cost of a water flow gage(s) and its installation near the point of diversion.
- (b) If the application is not approved, the portion of the fee applicable to the cost of the water flow gage(s) and its installation shall be refunded.

Section 305.15. CANCELLATION-MISUSE. The Commission may cancel any permit for violation of any condition contained in the permit, that is used for a purpose other than stated in the permit or that is used for the diversion of more water than permitted.

Section 305.16. CANCELLATION-NONUSE. The Commission may cancel any permit issued for a period in excess of three (3) years to take reasonable steps to obtain the ability to utilize the water permitted within two (2) years from the date of issuance of the permit.

Section 305.17. IRRIGATION PERMITS RUN WITH LAND. Irrigation permits run with the land described in the permit and can only be assigned to a subsequent owner or lessee of the land. Permits may not be sold separate and apart from the land, and any such attempts shall void the permit.

Section 305.18. PREDETERMINED ALLOCATION PLAN. After an application for a permit to make an interbasin transfer is received, the Director, where deemed desirable and appropriate, shall initiate a study consistent with the provisions of Title III Subtitles VII, VIII, IX hereof to determine the allocations that should be made if a water shortage should occur. The purpose of this advance determination is to allow immediate implementation of allocations if a water shortage does occur. In selecting the watershed to be studied, preference shall be given to those areas where a water shortage is most likely to occur.

Section 305.19. WATER LEVEL MONITORING. The same procedure established herein in Section 304.15 for water flow gage(s) at the point of diversion of water by a non-riparian for intrabasin transfers shall be applicable to transfers by a non-riparian for interbasin transfers.

Section 305.20. APPEAL. The applicant or any affected person shall have the right to protest the decision of the Director in granting or denying the application or the interbasin transfer of surface water or to protest any special conditions placed on the approval. The appeals procedure is set out in Title I Subtitle V of the Commission's Rules of Organization and General Operations. No interbasin transfer of water shall be made until the time for appeal has expired.

SUBTITLE VI. INTERSTATE TRANSFER.

Section 306.1. APPLICATION. No application or interstate transfer shall be considered by the Commission unless it contains all information requested by the Commission including the following:

- (a) Amount of water to be transferred.
- (b) Certification has been filed with the appropriate agency of the water receiving state.
- (c) Method and route of transfer.
- (d) Point(s) of proposed diversion.
- (e) Point(s) of use.
- (f) Purpose of use.
- (g) Water quality impact of proposed diversion.

Section 306.2. FEE. The Commission may require a reasonable fee to be paid by the State or out of State entity making the formal request at the time of the request to help defray administration expenses including the investigation and study required to evaluate the request for an interstate transfer.

Section 306.3. COMMISSION NOTIFICATION. Upon receiving an application, containing the information listed in the above paragraph, the Director shall notify the Commission at its next regular meeting.

Section 306.4. NOTICE AND HEARING. The Commission shall schedule a public hearing on the request as soon as reasonably possible. Notice of the hearing shall be published a least once a week or two (2) consecutive weeks in the newspaper having the greatest circulation in each of the counties involved.

Section 306.5. COMMISSION DETERMINATION. Within 120 days after the hearing the Commission must determine whether the out of state water transfer would be in the public interest of the citizens of Arkansas. In reaching that decision, the Commission must consider the following factors:

- (a) The supply of water available in Arkansas.
- (b) The present and future water demands of water users in Arkansas.
- (c) Whether there are water shortages in Arkansas.

- (d) Whether the water to be transported could feasibly be transported to alleviate water shortages within Arkansas.
- (e) The supply and source of water available to the applicant in the state of intended use.
- (f) The demands placed upon the applicant's supply in the state of intended use.

Section 306.6. REPORT AND RECOMMENDATION.

- (a) The Commission shall submit its report and recommendations to the next Regular Session of the Arkansas General Assembly.
- (b) If the Commission recommends the price to be paid to the State of Arkansas for all water transferred and how allocation procedures will apply during times of water shortage.
- (c) Assembly, a compact should be negotiated with the state of intended use and any other state through which the water would be transported.

SUBTITLE VII. ALLOCATION OF SURFACE WATER DURING PERIODS OF WATER SHORTAGE—IN GENERAL.

Section 307.1. ALLOCATION DURING SHORTAGES. Whenever a shortage of water in any stream exists the Commission may on its own initiative, or on the petition of any person claiming to be affected by such shortage of water, after notice and hearing, allocate the available water among the uses affected by the shortage of water in a manner that each may obtain an equitable portion of the available water.

Section 307.2. WATER USABLE WITHOUT ALLOCATION. The following water is usable without allocation:

- (a) Diversions by any persons of less than 325,900 gallons (1 acre-foot) of water in any water year.
- (b) Water captured by tailwater recovery systems.
- (c) Water diverted from lakes, ponds, reservoirs, or springs in the exclusive ownership of one person.
- (d) Water previously captured whether transmitted by ditch, channel or pipe.
- (e) Water diverted from intermittent streams.
- (f) Diffused surface water.
- (g) Water captured by instream pit reservoirs, dams constructed pursuant to a lawful permit, or low water weirs and water stored in federal impoundments.
- (h) Non-consumptive usage.

Section 307.3. RESERVED WATER. The following uses and needs shall have a reserved water right, prior to allocations for other uses and needs:

- (a) Domestic and municipal domestic.
- (b) Minimum streamflow.
- (c) Federal water rights.

Section 307.4. CRITERIA FOR ALLOCATION. All allocations shall give reasonable preference first to sustaining life, then to maintaining health, and finally to increasing wealth. The allocations shall reserve the water required for domestic and municipal

domestic use, federal water rights and for minimum streamflow and shall then give preference in the following order for water uses and for types of water diversions:

- (a) Priority of Water Use:
 - (1) Agriculture.
 - (2) Industry.
 - (3) Hydropower.
 - (4) Recreation.
- (b) Priority of Water Diversions:
 - (1) Riparian.
 - (2) Non-riparian intrabasin transfer.
 - (3) Non-riparian interbasin transfer.
 - (4) Out of state transfer.

Section 307.5. RESERVED WATER-PUBLIC SYSTEMS. Water systems historically dependent upon the affected stream shall receive a reserved water right for municipal domestic water use prior to allocations for other uses.

Section 307.6. RESERVED WATER-MINIMUM STREAMFLOWS. Minimum streamflows as established pursuant to Title III Subtitle III of these rules shall receive a reserved water right prior to allocations for other uses.

Section 307.7. RESERVED WATER-FEDERAL WATER RIGHTS. There may be some water over which the United States has a preemptive right that is superior to rights of others.

Section 307.8. REGISTERED RIPARIAN USER. Any riparian landowner who has property registered a water diversion with the Commission in compliance with Ark. Code Ann. 15-22-215 and the rules of the Commission shall be granted an allocation of water.

Section 307.9. UNREGISTERED RIPARIAN USER. Any riparian landowner who has not previously diverted water nor timely registered any previous water diversions with the Commission, may not be granted any allocation of water during times of shortage above that required for domestic use.

Section 307.10. PERMITTED NON-RIPARIAN USER. Non-riparian uses, including intrabasin, interbasin, and interstate transfers, previously authorized by the Commission which are beneficial and which do not interfere with the uses enumerated herein in Section 307.5, 307.6, 307.7, 307.8 and 307.9 may be granted an allocation.

SUBTITLE VIII. PROCEDURE FOR THE ALLOCATION OF SURFACE WATER DURING PERIODS OF SHORTAGE.

Section 308.1. INFORMATION REQUIRED IN THE PETITION. The following information must be included in any petition for allocation:

- (a) Name, address, telephone number of petitioner.
- (b) Water diversion registration certificate numbers of petitioner from previous years, if any.

- (c) Current water permit number, if applicable.
- (d) Name of stream from which diversion is being made or from which diversion is sought.
- (e) Description of petitioner's land or water diversion to include county, section, township and range.
- (f) Petitioner's requirements for use of water, if for irrigation of farm crops type of crop (soybeans, rice, etc.) and acreages of each type.
- (g) Name and address of any person allegedly depriving the petitioner of his lawful water right and a full explanation of that water use.
- (h) Vicinity details on topographic or other appropriate map, with outline of irrigated acres and points of diversions.

Section 308.2. NOTICE OF PETITION AND INFORMAL RESOLUTION.

Within five (5) working days after receipt of a petition from a person the Director finds eligible to receive an allocation of water, the Director shall notify the affected persons by certified mail that a petition has been received by the Commission requesting an allocation of water. This notice will advise the affected persons of the following:

- (a) Name of petitioner and substance of the petition.
- (b) The affected persons right to discuss the matter with the petitioner and the Commission staff, as an alternative to a hearing on mandatory allocation by the Commission.

Section 308.3. INFORMAL RESOLUTION-FAILURE TO RESOLVE. If an affected person fails to either respond to the Director's invitation to discuss the complaint or does not agree to voluntarily share the available water supplies within a period of seven (7) days after receipt of notification, the Commission will then proceed to initiate the process of allocation if the Commission finds a water shortage exists or is imminent.

SUBTITLE IX. FORMAL ALLOCATION OF SURFACE WATER DURING PERIOD OF WATER SHORTAGE.

Section 309.1. HEARING DATE AND LOCATION. The Director shall establish a date or a public hearing on the matter. If matters to be considered at the hearing are of general application throughout the State, the hearing shall be held in the City of Little Rock, and notice with respect thereto shall be published in a newspaper of general circulation throughout the State. If the purpose of the hearing relates only to surface water within one county, that hearing shall be held in the county involved, and notice of the hearing shall be published in the newspaper having the greatest circulation in that county. If the purpose of the hearing is with respect to surface water in more than one county, the hearing shall be held in one of those counties and notice shall be published in one or more newspapers which together have the greatest circulation in all of the counties involved.

Section 309.2. HEARING NOTICE. A notice of this hearing will be sent by certified mail to the petitioner and all affected persons.

Section 309.3. HEARING OFFICER. The hearing will be chaired by a Commissioner, the Director or a member of the Commission's staff designated by the Director.

Section 309.4. PRE-HEARING STAFF REVIEW. Prior to the public hearing, the Commission staff, in communication with other interested Federal or State agencies will make an investigation of the alleged water shortage which shall include the following information:

- (a) Verification of information submitted by petitioner.
- (b) Water use requirements of all persons lawfully taking water from the stream.
- (c) Classification of diversions as either riparian or non-riparian.
- (d) Quantity of water in stream under varying flow levels.
- (e) Determination of in-stream beneficial uses and quantity of water required therefor.
- (f) Quantity of water available for diversion under varying flow levels.
- (g) Quantity allowable to each diverter on a daily basis.

Section 309.5. NOTICE OF DIRECTOR'S RECOMMENDATION. Prior to the public hearing, the other affected persons will be advised of the Director's findings of their water use requirements and will also be advised that the Commission will ask for verification during the public hearing.

Section 309.6. COMMISSION DECISION. All information gathered by the Commission staff and presented at the hearing shall be analyzed and considered by the Commission before making allocations. Within ten (10) working days after the public hearing, the Commission will make a determination concerning the alleged water shortage and issue the appropriate orders to the affected persons.

Section 309.7. NOTICE OF DECISION. The petitioner and all affected persons will be notified of the Commission's determination by certified mail.

Section 309.8. APPEALS. The petitioner or any affected person shall have the right to appeal decision under this subtitle. Appeals procedure is set out in Title I Subtitle V of the Commission's Rules of Organization and General Operation.

SUBTITLE X. COMMISSION INITIATED ALLOCATION.

Section 310.1. PROCEDURE. If the Commission determines that a shortage exists and decides that allocation of available water is necessary, the Director shall notify all registered and permitted diverters that the conditional allocation orders previously assigned are in effect if conditional allocation orders have not been issued, hearing procedures shall be initiated as provided herein in Title III Subtitle IX.

SUBTITLE XI. IMPLEMENTATION OF ALLOCATION PLAN.

Section 311.1. ALLOCATION PLAN-IN GENERAL. Allocations will be expressed as a percentage of available water in the stream under varying levels of flow on a daily basis. Percentages will vary from 0% (The level of minimum streamflow) to 100%. Each diverter who is assigned a water allocation will be provided a chart containing

allowable daily pumping allocations expressed both as a percentage and as a quantitative measure. If a staff gage is determined by the Director to be necessary, the charts shall also contain the corresponding applicable staff gage reading. Such streamflow staff gage at the point of diversion will have markings relevant to the chart, and diversions are permitted when the streamflow is in the yellow zone on the gage, as defined in Section 304.15.

Section 311.2. CONSERVATION PLAN. As a part of the allocation plan, the Commission shall require the development and implementation of a conservation plan by any and all diverters. The conservation plan may be required with or without a reduction in a diverter's withdrawals.

Section 311.3. INSTALLATION OF MONITORING DEVICES. Unless installed by the Commission, diverters assigned a water allocation will be responsible for the installation and maintenance of such water level gages at diversion points as the Commission may direct. Assistance in installation and maintenance of gages may be provided by the Commission.

Section 311.4. ALLOCATION LEVEL. If the streamflow reached the allocation level (Yellow zone on staff gage), whether allocations have been implemented by the Commission or not, the diverter shall comply with the allocation assigned him.

Section 311.5. NON-DIVERSION LEVEL. If the streamflow reaches the minimum stream flow (red zone on staff gage), whether allocations have been implemented by the Commission or not, all diverters must stop all pumping immediately except for water withdrawn for domestic and municipal domestic use.

Section 311.6. WATER LEVEL MONITORING. When an allocation has been implemented, it will be the responsibility of the diverter to read the gage nearest his point of diversion on a frequency to be determined by the Director.

Section 311.7. NO TIME OR RATE RESTRICTIONS PROVIDED DAILY ALLOCATIONS NOT EXCEEDED. There will be no restriction on the time or rate of pumping when the level of flow is above the diverters designated minimum staff gage reading, provided daily pumping allocations are not exceeded.

Section 311.8. CEASE ALLOCATION. When the Director determines that sufficient water exists in a stream to meet the requirements of all diverters, (at or above green zone on staff gage) the allocations will cease to be applicable and all diverters will be notified by the Director.

SUBTITLE XII PENALTIES.

Section 312.1. LOSS OF ALLOCATION. Failure to comply with the provisions of these rules will invalidate any allocation previously granted by the Commission and willful violations may prejudice their future applications for permits or allocations.

Section 312.2. ADDITIONAL PENALTIES. In addition to other penalties authorized by these rules, the Commission may invoke penalties as provided in Ark. Code Ann. 15-22-204. All penalties received shall go to the Arkansas Water Development Fund.

SUBTITLE XIII EMERGENCY ALLOCATIONS

Section 313.1. TIME FRAME COMPRESSION. When the Commission either receives a petition for allocation or determines that a shortage exists, which in the opinion of the Commission requires an immediate determination of the need for allocation, an emergency may be declared by the Commission and the time frames for actions set forth in these rules may be shortened to whatever extent the Commission deems necessary.

Section 313.2. MODIFICATION FOR PUBLIC HEALTH, SAFETY, OR WELFARE. When the Commission determines that the shortage of water is so severe that public health, safety or welfare is significantly affected, they may declare an emergency and modify any advance determination developed under Section 304.14, Section 305.18 or the priorities set out in Title III Subtitle VII such that the effects upon the public health, safety or welfare is minimized.

RULES FOR UTILIZATION OF GROUND WATER

[As Adopted September 20, 1989]

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RULES FOR UTILIZATION OF GROUND WATER

[As Adopted September 20, 1989]

SUBTITLE I. GENERAL.

Section 401.1. PURPOSE. The purpose of these rules is to establish a procedure for reporting ground water use. It is important to obtain reliable ground water use data for planning purposes to determine where the critical ground water areas exist or are likely to exist. These rules are in keeping with the policy of the State of Arkansas to encourage the conservation of ground water for use by future generations.

Section 401.2. ENABLING AND PERTINENT LEGISLATION.

- (a) Ark. Code Ann. 15-22-301 et seq., Determination of Water Use Requirements.
- (b) Ark. Code Ann. 15-20-302 et seq., Soil and Water Conservation Commission.
- (c) Ark. Code Ann. 16-22-201 et seq., Allocation and Use of Water.
- (d) Ark. Code Ann. 15-22-201 et seq., Water Development Projects Generally.

Section 401.3. DEFINITIONS. The following definitions shall apply to all parts of these rules:

- (a) **Arkansas Water Plan:** The comprehensive program for the orderly development and management of the State's water and related land resources developed by the Commission.
- (b) **Commission:** The Arkansas Soil and Water Conservation Commission as defined in Ark. code Ann. 15-20-201 et seq.
- (c) **Critical Ground Water Area:**
 - (1) For water table conditions:
 - (A) Water levels have been reduced such that fifty percent (50%) or less of the thickness of the formation, is saturated and average declines of one (1) foot or more have occurred for the preceding five (5) years; or
 - (B) Ground water quality has been degraded or trends indicate probable future degradation that would render the water unusable as a drinking water source or for the primary use of the aquifer.
 - (2) For artesian conditions:
 - (A) Potentiometric surface has declined below the top of the formation and average annual declines of one (1) foot or more have occurred for the preceding five (5) years; or
 - (B) Ground water quality has been degraded or trends indicate probable future degradation that would render the water unusable as drinking water source or for the primary use of the aquifer.
- (d) **Director:** The Executive Director of the Arkansas Soil and Water Conservation Commission, as defined in Ark. Code Ann. 15-20-201 et seq.
- (e) **Domestic Use:** The use of water for ordinary household purposes including humans consumption, washing, the watering of domestic livestock, poultry and animals and the watering of home gardens or consumption by the household.
- (f) **Ground Water:** Water beneath the surface of the ground, whether or not flowing through known and definite channels.

- (g) **Person:** Any natural person, partnership, firm, association, cooperative, municipality, county, public or private corporation, and any federal, state or local governmental agency.
- (h) **Safe Yield of Ground Water:** The amount of water that is available on a dependable basis without lowering the water table or potentiometric surface to levels which may dewater or cause compression of the aquifer and destroy its usefulness.
- (i) **Water Year:** A twelve (12) month period beginning on October 1 of any year.

SUBTITLE II. GROUND WATER USE REGISTRATION.

Section 402.1. REQUIREMENT TO REGISTER.

- (a) All persons who withdraw ground water, except as herein after exempted, shall report the withdrawal no later than March 1st for the prior water year.
- (b) The reports shall be made on forms provided by the Commission and shall be made to the Commission or to their local Conservation District(s).

Section 402.2. EXEMPTIONS. The following withdrawals are exempt from the requirement of reporting:

- (a) Water withdrawn from individual household wells used exclusively for domestic use.
- (b) Water withdrawn from wells having a maximum potential low rate of less than fifty thousand gallons per day.

Section 402.3. REPORT CONTENT. The reports shall contain all information requested including the following information:

- (a) For Water Used for Agricultural Irrigation:
 - (1) Number and size of wells.
 - (2) Name of water users.
 - (3) Crops and acreage irrigated.
 - (4) Quantity of water used.
 - (5) Legal Description of the lands irrigated, which may be depicted by appropriate maps.
- (b) For Water Used for Other Than Agricultural Irrigation:
 - (1) Number and size of wells.
 - (2) Name of water users and location of the use.
 - (3) Use made of the water and the quantity used.

Section 402.4. REPORT-NO CHANGE IN WATER USE. After the initial report in compliance with this rule, persons whose water use remains unchanged from the prior water year need only report no change in water use.

Section 402.5. REVIEW OF FORM. The Director shall annually review the form used in obtaining the information required in registering withdrawals of ground water and shall alter or amend such form as necessary to comply with laws of the State of Arkansas and rules of the Commission.

Section 402.6. FAILURE TO REGISTER

- (a) Any person who fails to timely register ground water withdrawal as required by law and these rules shall pay reporting fees as follows:

<i>Classification</i>	<i>Fee for Failure to Register by Specified Due Date</i>
<i>First Failure</i>	<i>No Fee - Written Notice to Timely Register</i>
<i>Second Failure</i>	<i>\$ 50.00</i>
<i>Third Failure</i>	<i>\$260.00</i>
<i>Fourth and subsequent Failure</i>	<i>,\$500.00</i>

- (b) Earth prior late registration of Ground Water or Surface Water under the Rules or utilization of Surface Water shall be considered a late registration for classification purposes under these rules.
- (c) For first and second late registration classifications, all late registered ground water withdrawals and surface water diversions by a single person in a single water year shall be considered one late registration or fee purposes.
- (d) For third, fourth and subsequent late registration classification, each late registered ground water withdrawal and surface water diversion or each water year may be considered a separate late registration for fee purposes.

SUBTITLE III. CRITICAL GROUND WATER AREAS.

Section 403.1. CRITICAL GROUND WATER AREAS-DESIGNATION AND MONITORING. The Arkansas Water Plan published by the Commission delineates all current critical ground water areas of the state. The Commission shall continue to study and monitor ground water usage and designate other areas as necessary if they become critical.

Section 403.2. NOTICE OF WITHDRAWALS WITHIN CRITICAL GROUND WATER AREA.

- (a) All persons reporting the withdrawal of ground water from a critical area shall be notified by the Commission annually that the well is in a critical area.
- (b) The notice shall state that withdrawals within the critical are likely exceeding the safe yield, and that continued withdrawals at the same rate may lower the water table to make pumping uneconomical, cause injurious subsidence of the soil, degrade the water quality so that it is no longer usable, and permanently affect the ability of the aquifer to recharge.

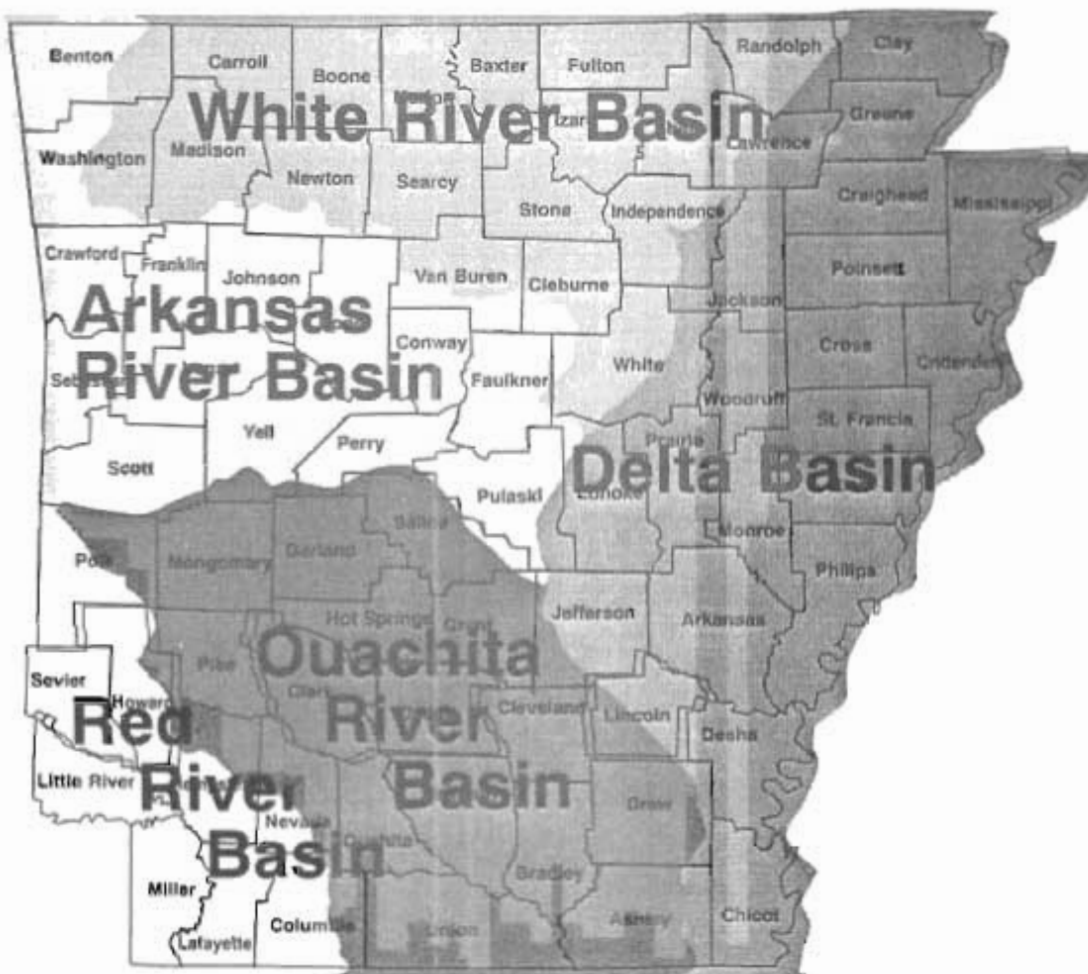


Exhibit 1
The Basin of Arkansas

Arkansas Code of 1987 Annotated Including Acts of 1989 General Assembly

Chapter 22, Subchapter 2 - Allocation and Use Generally

15-22-201. Declaration of policy.

- (a) In recognition of the fact that there is rainfall over the State of Arkansas in rainy seasons more than ample to provide sufficient surface water for the use of persons in this State during those seasons, that most of this surplus water is now wasted and completely lost, and does damage to fertile soil while being wastefully lost, and that during other periods the supply of surface water has been and may be inadequate for needed use, it is declared to be the policy of the State of Arkansas to encourage and provide methods for conserving surplus surface water for future use.
- (b) To that end it is declared to be the purpose of this subchapter to permit and regulate the construction of facilities to store surplus surface water for future use, to protect the rights of all persons equitably and reasonably interested in the use and disposition of surface water to maintain the normal flow of all streams and preserve the fish therein, to prevent harmful overflows and flooding, and conserve the natural resources of the State of Arkansas.

History. Acts 1957, No. 81 § 1; A.S.A.
1947, § 21-1301.

15-22-202. Definitions.

As used in this subchapter, unless the context otherwise requires:

- (1) **"Commission"** means the Arkansas Soil and Water Conservation Commission;
- (2) **"Conservation district"** means conservation districts created under the Conservation Districts Law, § 14-125-101 et seq.;
- (3) **"Diffused surface water"** means water occurring naturally on the surface of the ground other than in natural channels, lakes, or ponds;
- (4) **"District"** means conservation district or regional water district;
- (5) **"Domestic use"** means the use of water for ordinary household purposes, including human consumption, washing, watering of domestic livestock, poultry, and animals, and watering of home gardens for consumption by the household;
- (6) **"Minimum streamflow"** means the quality of water required to meet the largest of the following instream flow needs as determined on a case-by-case basis:
 - (A) Interstate compacts;
 - (B) Navigation;
 - (C) Fish and wildlife;
 - (D) Water quality;
 - (E) Aquifer recharge;
- (7) **"Ordinary high watermark"** means the line delimiting the bed of a stream from its bank, that line at which the presence of water is continued for such length of time as to mark upon the soil and vegetation a distinct character;
- (8) **"Person"** means any natural person, partnership, firm, association, cooperative, municipality, country, public or private corporation and any State or local government agency;

- (9) **“Regional water district”** means a regional water distribution district created under the Regional Water Distribution Act, § 14-116-101 et seq.;
- (10) **“Stream”** means a stream of water and its channel, including springs, lakes, or marshes in which the stream originates or through which it flows, where the stream flows in a reasonably definite channel, excluding a depression, swale, or gully, through which diffused water flows.

History. Acts 1957, No. 81, § 2; 1963, No. 14, § 15; 1969, No. 180, § 1; A.S.A. 1947, § 21-1302; Acts 1989, No. 469, § 1.

15-22-203. Cumulative effect.

The provisions of this subchapter shall be cumulative of all existing statutes of this State with respect to matters governed by this subchapter and shall not be construed to repeal any statute or provision thereof. However, the construction and maintenance of a dam in accordance with the provisions of this subchapter shall be lawful, and no work for the construction of a dam on any stream shall be done without a permit from the Commission issued in accordance with the provisions of this subchapter.

History. Acts 1957, No. 81 § 11; A.S.A. 1947, § 21-1311.

15-22-204. Penalties - Enforcement.

- (a)(1) Any person who violates any provision of this subchapter shall be guilty of a misdemeanor and subject to imprisonment not to exceed six (6) months, or a fine not to exceed ten thousand dollars (\$10,000), or both.
- (2) For a continuing offense, each day during which the offense is committed shall be considered a separate violation.
- (b) The Commission shall enforce its regulations and orders by any or all of the following:
- (1) Revocation of any permit or suspension from any program administered by the Commission;
 - (2) Suit for injunction or for damages, or both;
 - (3) Civil penalties not to exceed ten thousand dollars (\$10,000), or both.
- (c) All penalties received shall go to the Arkansas Water Development Fund.

History. Acts 1957, No. 81, § 13; 1969, No. 217, § 16; A.S.A. 1947, § 21-1313; Acts 1989, No. 258, § 2.

15-22-205. Powers of Commission regarding waters.

- (a) The Commission shall have the power to:
- (1) Issue permits for the construction of dams to impound water;
 - (2) Issue certificates of registration of water diverted from streams; and
 - (3) Make allocations among persons taking water from streams during periods of shortage, to the extent and in the manner provided by law.

- (b) To that end it shall conduct hearings and promulgate rules, regulations, and orders under the procedure prescribed in this subchapter.

History. Acts 1957, No. 81, § 4; 1963,
No. 14, § 18; 1969, No. 180 § 2; 1985
No. 475, § 1; A.S.A. 1947, § 21-1304.

15-22-206. Procedure for making rules, regulations, and orders - Meetings.

- (a)(1) No rule, regulation, or order, including a change, renewal or extension thereof, shall be made by the Commission except after reasonable notice and public hearing with respect thereto.
- (A) If matters to be considered at a meeting are of general application throughout the State, the meeting shall be held in Little Rock, Arkansas, and notice with respect thereto shall be published in a newspaper of general circulation throughout the State.
- (B) If the purpose of the meeting relates only to waters within one (1) county, that meeting shall be held in the country involved, and notice of the meeting shall be published in a newspaper of general circulation in that county.
- (C) If the purpose of the meeting is with respect to waters in more than one (1) county, the meeting shall be held in one (1) of those counties, and notice shall be published in one (1) or more newspapers which together have general circulation in all of the counties involved.
- (2) The notice, with respect to any meeting, shall State the time and place at which the meeting will be held and the matters to be considered by the Commission at that meeting.
- (b) If the Commission elects to give notice to any person by personal service, such service shall be made by the sheriff of the county in which the meeting is to be held, by one (1) of his deputies, or by any agent of the Commission. Proof of service shall be by the affidavit of the person making personal service.
- (c) Each rule, regulation, and order made by the Commission shall be in writing and shall be entered in full in a book to be kept by the Commission for such purpose, which book shall be a public record and be open to inspection at all times during reasonable office hours. A copy of any such rule, regulation, or order, certified by a member of the Commission or the Executive Director of the Commission, shall be received in evidence in all courts of this State with the same effect as the original.

History. Acts 1957, No. 81, § 5; 1985,
No. 475, § 2; A.S.A. 1947, § 21-1305.

15-22-207. Administration of oath to witnesses.

Any member of the Commission, or its Executive Director or attorney, shall have power to administer an oath to any witness in hearing, investigation, or proceeding under the provisions of this subchapter.

History. Acts 1957, No. 81, § 3; 1963,
No. 14, § 18; A.S.A. 1947, § 21-1303.

15-22-208. Subpoenas - Refusal to testify.

- (a) The Commission, or any member thereof, is empowered to issue a subpoena for any witness to require his attendance and the giving of testimony before the Commission, and to require the production of books, papers, and records in any proceeding before the Commission which may be material to questions lawfully before the Commission.
- (b) The subpoena shall be served by the sheriff of the county in which the person subpoenaed resides, by his deputy, or by any other officer authorized by law to serve process in this State.
- (c) If any person fails or refuses to comply with a subpoena issued by the Commission, or any member thereof, or refuses to testify or answer to any matter regarding which he may be lawfully interrogated, the circuit court of the county in which the person is domiciled, on application of the Commission, may:
 - (1) I term time or vacation, issue an attachment for the person;
 - (2) Compel him to:
 - (A) Comply with the subpoena;
 - (B) Appear before the Commission;
 - (C) Produce the documents;
 - (D) Give his testimony upon such matters as may be lawfully required;
 - (3) Punish for contempt any person who fails to obey any such order, as in a case of disobedience of a like subpoena issued by or from that court or for refusal to testify therein.
- (d) With respect to any such person who is not domiciled in Arkansas, the circuit court of the county in which the hearing involved is being held, or is to be held, shall have jurisdiction.

History. Acts 1957, No. 81, § 5; A.S.A. 1947, § 21-1305.

15-22-209. Appellate review.

Any person affected by any rule, regulation, or order made by the Commission or action taken may obtain review of such action pursuant to the Arkansas Administrative Procedure Act, § 25-15-201 et seq.

History. Acts 1957, No. 81, § 12; 1969, No. 180, § 5; A.S.A. 1947, § 21-13-12; Acts 1989, No. 258, § 3.

15-22-210. Permits required for dam construction - Conditions for issuance.

No person shall have the right to construct or own a dam to impound water for any purpose unless and until he obtains a permit from the Commission to construct or own that dam on the following conditions;

- (1) Any permit granted shall be on the condition that the dam constructed under it shall be so constructed and operated that there will be impounded only surplus surface waters thereby and that there shall be discharged each day from the water impounded by it a quantity of water as may be fixed by the Commission as that necessary to preserve, from time to time, below the dam, the flow of any stream involved at a rate designed to protect the rights of any lower riparian owner, and the fish and wildlife dependent thereon; and the dam shall be constructed in such manner and

- maintained in such condition as to preserve the life of the dam and reservoir for the period of time for which the permit is issued and to adequately protect the lives and property of those persons downstream from the site of the dam;
- (2) Any representative of the Commission shall have the right, at anytime, to enter upon the land upon which the dam is built, or is to be built, to inspect work of construction thereof and the maintenance and operation of the dam after construction. If the Commission determines that the dam is unsafe, it shall request in writing that the owner of the dam perform such repair as the Commission deems necessary to assure the safety of the dam. If the owner fails to perform adequate repair within a reasonable period of time, as determined by the Commission, the Commission shall cause the dam to be repaired or breached, or cause any other necessary action to be taken and the cost incurred by the Commission in performing such repair shall be a lien against the property whereupon the dam is located. The Commission shall perfect the lien by filing a notice of the lien with the circuit clerk of the county wherein the dam is located. The notice shall constitute a lien as of the date of the expenditure of the moneys by the commission. The lien shall have priority second only to the lien of real estate taxes imposed upon the dam. Further, no action shall be brought against the State or the Commission or its agents or employees for the recovery of damages caused by the partial or total failure of any dam or reservoir or through the operation of any dam or reservoir upon the grounds that the defendant is liable by virtue of any of the following:
 - (A) The approval of the dam or reservoir, or approval of flood handling plans during construction;
 - (B) The issuance or enforcement of orders relative to maintenance and operation of the dam or reservoir;
 - (C) Control and regulation of the dam or reservoir;
 - (D) Measures taken to protect against failure during an emergency;
 - (3) Each permit shall, with reasonable definiteness, describe the location of the dam and the land necessary for impounding water by means thereof. No dam shall be constructed or operated so as to impound water on any land other than on land which the applicant for the construction thereof owns or has the right to occupy during the period for which the permit is issued. Any person who constructs and maintains a dam under the provisions of this subchapter shall have the right to occupy land in the bed of any stream, which land is owned by the State and is required to impound the water impounded by the dam;
 - (4) The permit shall be for a period fixed by the Commission not less than that found by the Commission to be necessary to permit amortization of reasonable indebtedness, if any, incurred in connection with the construction of the dam; but in no event in excess of fifty (50) years. Any such permit, for good cause shown, may be extended by the Commission by order entered not more than five (5) years prior to the expiration of that permit, the extension of the permit to be for an additional period to be fixed by the Commission, which additional period shall in no event extend longer than fifty (50) years;
 - (5) Within six (6) months after title to any dam, for which a permit is issued under the provisions of this subchapter, is purchased or inherited by, or otherwise becomes vested in, any person not holding a permit to own and operate the dam, the transferee

of the title shall so notify the Commission, which shall immediately issue a new permit to the transferee; otherwise, the permit issued hereunder shall terminate six (6) months following the transfer of title, during which time the transferee will not be deemed in violation of this subchapter.

History. Acts 1957, No. 81, § 6; 1969, No. 180, s 3; 1983, No. 339, § 1; 1985, No. 475, § 3; A.S.A. 1947, § 21-1306; Acts 1987, No. 592, § 1.

15-22-211. Permits - Application.

(a) The applicant for a dam construction permit shall file with the Commission, upon a form prescribed by the Commission, an application accompanied by plans and specifications for the construction and manner of operation and maintenance of the dam.

(b) The Commission shall examine the plans and specifications of the dam and conduct other necessary investigations for the granting or denial of the permit, including inspection of the site of the proposed construction.

(c) The application for a dam construction permit shall be accompanied by the dam permit application review fee as specified in § 15-22-219.

History. Acts 1957, No. 81, § 6; 1969, No. 180, § 3; A.S.A. 1947, § 21-1306; Acts 1989, No. 685, § 1.

15-22-212. Permits - Notice of application - Hearing.

(a) Upon receipt of the application, and before granting or denying the permit, the Commission shall cause notice of the filing thereof to be published for two (2) weeks in some newspaper published and having a general circulation in each county wherein the dam and area necessary for the impounding of water by means thereof is located. The notice shall, with reasonable definiteness, describe the size and location of the proposed dam and reservoir and shall call upon all interested persons having questions or objections pertaining thereto and desiring public hearing thereon to make their questions or objections known within twenty (20) days after publication of the notice to the Commission in writing, including their names and post office addresses.

(b) Upon the expiration of twenty (20) days after the notice provided in subsection (a) of this section, the Commission shall grant the permit. However, should a hearing be requested as provided in subsection (a) of this section or desired by the Commission, the Commission shall schedule a public hearing and shall by certified mail, return receipt requested, notify the applicant and all interested persons of the date, time, and place thereof, after which it shall either grant or, for good cause shown, deny the permit.

History. Acts 1957, No. 81, § 6; 1969, No. 180, § 1; A.S.A. 1947, § 21-1306.

15-22-213. Permits - Modification or cancellation.

Any permit, or an extension thereof, issued by the Commission may be modified or cancelled by order of the Commission after notice and hearing upon the failure of the

person holding the permit to maintain the dam adequately or to comply substantially with any condition of the permit with respect to its operation.

History. Acts 1957, No. 81, § 6; 1969, No. 180, § 3; No. 475, § A.S.A. 1947, § 21-1306.

15-22-214. Exemptions.

(a) No permit shall be required for any dam which impounds less than fifty (50) acre-feet of water or is of a height less than twenty-five (25) feet.

(b) No permit shall be required for any dam the height of which is at or below the ordinary high water mark on the stream.

(c) A permit shall be required of a dam exempted from a permit under subsection (a) or (b) of this section, if, upon petition by persons affected and after notice and hearing, the Commission determines that the proposed dam would pose a significant threat to life or property.

History. Acts 1957, No. 81, § 10; 1969, No. 180, § 4; 1985, No. 475, § 4; A.S.A. 1947, § 21-1310; Acts 1989, No. 685, § 2.

15-22-215. Certificates of registration - Water diversion - Exceptions.

(a) Any person diverting water from any stream, lake, or pond, except those natural lakes or ponds in the exclusive ownership of one (1) person, shall register the diversion with the Commission or their local conservation district.

(b) Each registration shall set forth:

- (1) The name and post office address of the registrant;
- (2) The source of water supply and location of the point of diversion, the manner of the diversion, whether a dam is utilized, and the size and location of any such dam;
- (3) The purpose for the water diversion;
- (4) The estimated quantity of water diverted for direct use, and the quantity of water stored away from the point of diversion for use when needed;
- (5) The location of the land on which the water is used, and, if for irrigation, the area and legal description of the lands irrigated, which may be depicted by the use of appropriate maps, and the kinds of crops cultivated under irrigation during the year;
- (6) The times during the water year that the water was diverted;
- (7) Any other reasonable information requested by the Commission in the performance of its duties under the laws of the State of Arkansas.

(c)(1) The registration shall be based upon a water year, the twelve (12) month period beginning October 1 and ending the next September 30.

(2) Registrations shall be submitted annually no later than March 1 for the prior water year.

(d) After the initial registration, persons whose water use remains unchanged from prior year need only report no change in water use.

(e) Upon receipt of the registration by the Commission, it shall be the duty of the Commission to furnish to the registrant a certificate of registration containing all the information as set forth by the registrant.

(f) In any proceeding before any court or the Commission for the adjudication of rights to divert water from any stream, lake, or pond, no party shall be granted any allocation of water above that required for domestic use unless he has complied with the provisions of this section. However, this section shall not operate to allow a nonriparian use of water to supersede, subordinate, or otherwise take priority or precedence over a riparian right to divert water from a stream, lake, or pond.

(g)(1) Any person who fails to register a diversion as required by subsections (a) and (b) of this section shall be subject to a late reporting fee of not more than five hundred dollars (\$500) for each year he fails to register.

(2) At the direction of the Commission, the Attorney General or the Commission's counsel shall bring suit on the relation of the State of Arkansas for the collection of the fee.

(3) All fees received shall go to the Arkansas Water Development.

History. Acts 1957, No. 81, § 18, as added by Acts 1969, No. 180 § 6; A.S.A. 1947, § 21-1326; Acts 1989, No. 408, § 1.

15-22-216. Right to take impounded water.

Any person constructing a dam under permit issued under the provisions of this subchapter shall have the exclusive right to take water from the reservoir created by that dam so long as the dam is maintained and operated under permit from the Commission, subject to his obligation to discharge water from the dam as provided in the permit, and shall have the right to exclude all persons from the water impounded by that dam.

(1) However, if the dam causes water to be impounded unlawfully on land which the person maintaining the dam does not own or have the right to occupy, the owner of the land so unlawfully occupied shall have the right to take water from the impoundment at a point on his land, so long as such water is unlawfully impounded on his land.

(2) The owner of land so unlawfully occupied by impounded waters may, in addition to the above right to use water, have the right to recover in an action at law all damages resulting from the unlawful trespass. The cause of action shall not accrue until the land shall be actually unlawfully occupied by water thus impounded.

History. Acts 1957, No. 81, § 7; A.S.A. 1947, § 21-1307.

15-22-217. Allocation during shortages.

(a) Whenever a shortage of water in any stream, or part thereof, exists to the extent that there is not sufficient water therein to meet the requirements of all water needs, the Commission, on its own initiative or on the petition of any person affected by such shortage of water, after notice and hearing, may allocate the available water therefrom among the uses of water affected by the shortage of water in a manner that each of them may obtain an equitable portion of the available water.

(b) In allocating water in such a case, the Commission may consider the use that each person involved is to make of the water allocated to that person.

(c) In making such allocations of water, reasonable preferences shall be given to different uses in the following order of preference:

(1) Sustaining life;

- (2) Maintaining health; and
- (3) Increasing wealth.

(d) Water needs shall include domestic and municipal water supply needs, agricultural and industrial water needs, and navigational, recreational, fish and wildlife, and other ecological needs.

- (e) The following priorities shall be reserved prior to allocation:
- (1) Domestic and municipal domestic;
 - (2) Minimum streamflow;
 - (3) Federal water rights.

History. Acts 1957, No. 81, § 8; A.S.A.
1947, § 21-1308; Acts 1989, No. 469, § 2.

15-22-218. Right to acquire title and use water stored in a governmental reservoir.

- (a) Any person shall have, to the full extent that the State of Arkansas can grant that right, the right to acquire absolute title to and use for any purpose water allocated for local use and stored in any reservoir created by the construction of a multipurpose dam by the Corps of Engineers, U.S. Army for the United States Government or any agency thereof.
- (b) The right shall vest in the person upon his compliance with the following conditions:
- (1) Upon filing with the Commission a notice of intent to negotiate and contract with the United States Government for the withdrawal of water from the reservoir;
 - (2) Upon the person executing a contract with the United States Government or any agency thereof for the withdrawal of water from the reservoir and filing the contract with the Commission.
- (c) The notice of intent shall set forth in detail the name of the person who is filing the notice and the place of the reservoir. The act of filing the notice of intent shall empower the person to negotiate and contract with the United States Government, or any agency thereof, for the water.
- (d) Any person who has acquired title to and use of water stored in a United States Government reservoir shall file with the Commission a certified copy of the contract made with the United States Government for the withdrawal of water, and shall annually thereafter file with the Commission a detailed report of the amount of water withdrawn and for what purpose the water is used.

History. Acts 1957, No. 81, § 9; A.S.A.
1947, § 21-1309.

15-22-219. Fees

- (a) Any person applying for a permit and having plans and specifications examined under § 15-22-211 shall, in consideration therefor, pay to the Commission an initial dam permit application review fee equal to one percent (1%) of the estimated cost of construction for the dam, which, in any case, shall not be less than one hundred dollars (\$100) nor more than five hundred dollars (\$500). The dam permit application review fee shall be assessed as an initial fee upon application for the dam permit or upon a major modification of a dam requiring the issuance of a revised permit.

- (b) Any person obtaining a permit under the provisions of § 15-22-210 shall, in consideration therefor, pay to the Commission a fee equal to five cents (\$.05) per acre-foot of water which the dam involved is designed to impound, but not less than twenty-five dollars (\$25.00). The permit shall provide that the same fee shall be paid by that person to the Commission each year thereafter during which the dam is maintained, on or before the anniversary date of the issuance of the permit.
- (c) The fees in subsections (a) and (b) of this section shall be deposited by the Commission to the Arkansas Water Development Fund to be used by the Commission as provided by law and shall not be paid into the State Treasury.

History. Acts 1957, No. 81, § 14; 1963
No. 106, § 1; A.S.A. 1947, § 21-1314;
Acts 1989, No. 685, § 3.

15-22-220. Continued water use study.

The Commission shall gather and compile, from time to time, information as to the use of surface water in this State and the needs of the citizens of this State for surface water, that the information may be available to officials of this State and to its citizens.

History. Acts 1957, No. 81, § 15; A.S.A.
1947, § 21-1315.

15-22-221. Delegation of allocation authority.

- (a) The Commission may delegate the power to allocate water during times of shortage, as provided in this subchapter, to conservation districts and regional water districts.
- (b) A district to which the Commission has delegated its authority to allocate water during shortages shall have all powers under this subchapter and shall be governed by the procedures set out in this subchapter. The Commission shall provide technical assistance and shall establish guidelines which shall be followed by districts to which the Commission has delegated powers.
- (c) The Commission shall have all the necessary power to effectuate this delegation including, but not limited to the power to determine disputes between, approve or disapprove regulations of, and hear appeals from, decisions of districts to which the Commission has delegated powers. The Commission may reserve any or all powers in itself and may withdraw its delegation of power at any time.

History. Acts 1989, No. 496, § 6.

15-22-222. Minimum streamflows.

- (a) The Commission shall establish and enforce minimum streamflows for the protection of instream water needs.
- (b)(1) Prior to the establishment of minimum streamflows, the Commission shall notify by certified mail, return receipt requested, the Arkansas State Game and Fish Commission, the Arkansas Pollution Control and Ecology Commission, and any other interested State boards and Commissions.
- (2) Within thirty (30) days of receipt of notice, the Arkansas State Game and Fish Commission and the Arkansas Pollution Control and Ecology Commission shall file written comments with the Commission.

- (c) In estimating minimum streamflows, the Commission shall follow the procedure for rulemaking, including publishing notice and the conduct of a public hearing.
- (d) Nothing in this section shall be construed to override any other duties or powers of the Commission.

History. Acts 1989, No. 469, § 5.

Subchapter 3 - Determination of Water Use Requirements

15-22-301. Duties of Commission.

The Soil and Water Conservation Commission shall:

- (1) Inventory the surface water resources and underground water resources within this State;
- (2) Determine the surface water requirements for fish and wildlife;
- (3) Determine the surface water requirements for navigation;
- (4) Establish minimum streamflows;
- (5) Determine the water needs of public water supplies;
- (6) Determine the water needs for industry;
- (7) Determine the water needs for agriculture, taking into account the decreasing ground water tables and the resulting future needs for surface water to augment ground water supplies;
- (8) Determine the water needs of all other users;
- (9) Propose a definition of critical water areas and delineate areas which are now critical or which will be critical within the next thirty (30) years;
- (10) Define the term "excess surface water" and determine the quantity of the excess surface water within the State and where it is located;
- (11) Define the term "safe yield" of a stream, river or river basin, and a ground water aquifer;
- (12) Report periodically to the Joint Interim Committee on Agriculture and Economic development;
- (13) Declare and delineate surplus or excess surface water areas within the State based on a determination that surface water in a defined geographic area is in excess of the amount required for the foreseeable economic development needs of the defined geographic area;
- (14) Develop guidelines for evaluation of any proposed interbasin transfers in order that the areas of origin would be protected from serious adverse effects during periods of low streamflow; and
- (15) Develop guidelines for determining the amount of compensation, if any, to interested parties within the area of origin who incur damages as a result of a proposed transfer, including claims of individual water-rights holders, adverse effects upon the political subdivisions involved, and adverse environmental effects.

History. Acts 1985, No. 1051, § 2;
A.S.A. 1947, § 9-128.1.

15-22-302. Withdrawal of underground water- Annual reports.

- (a) All persons who withdraw underground water, except from individual household wells used exclusively for domestic use and except from wells having a maximum

potential flow rate of less than fifty thousand (50,000) gallons per day, shall report to their local conservation district or the Arkansas Soil and Water Conservation Commission the following:

- (1) If the water is used for agricultural irrigation:
 - (A) The number and size of wells;
 - (B) The crops and acreage irrigated; and
 - (C) The legal description of the lands irrigated, which may be depicted by the use of appropriate maps;
 - (2) If the water is used for other than agricultural irrigation:
 - (A) The number and size of wells;
 - (B) The name of the water user and the location of the use; and
 - (C) The use of the water and the quantity used;
 - (3) Any other reasonable information requested by the Arkansas Soil and Water Conservation Commission in the performance of its duties under the laws of the State of Arkansas.
- (b) The reports shall be submitted annually no later than March 1, indicating the water usage for the prior water year. After the initial report, persons whose water use remains unchanged from the prior water year need only report no change in water use. A "water year" is a twelve month period beginning October 1 and ending the next September 30.
- (c) (1) Any person who fails to report a withdrawal of underground water as required by subsection (a) of this section shall be subject to a late registration fee of not more than five hundred dollars (\$500) for each year he fails to register.
- (2) At the direction of the Commission, the Attorney General or the Commission's counsel shall bring suit on the relation of the State of Arkansas for the collection of the fee.
- (3) All fees received shall go to the Arkansas Water Development Fund.

History. Acts 1985, No. 1051, § 1; A.S.A.
1947, § 9-129; Acts 1987, No. 460, § 1;
1989, No. 408, § 2.

15-22-303. Out-of-State transportation and use of water.

- (a) The State of Arkansas has long recognized the importance of the conservation of the waters within this State and the necessity to maintain adequate water supplies to meet the State's present and future water requirements. The State also recognizes that under appropriate conditions, out-of-State transportation and use of its waters is not in conflict with the public welfare of its citizens or the conservation of its waters.
- (b) Any person or entity desiring to withdraw water from any water source within this State and transport it for use outside the State shall so notify the Arkansas Soil and Water Conservation Commission. The Commission shall research the request and recommend to the General Assembly at its next regular session whether the transfer would be in the public interest of the citizens of this State.
- (c) In arriving at its conclusion the Soil and Water Conservation Commission shall consider, among other things, the following factors:
 - (1) The supply of water available in the State of Arkansas;
 - (2) The present and future water demands of water users in this State;

- (3) Whether there are water shortages within the State;
 - (4) Whether the water that is the subject of the proposed transfer could feasibly be transported to alleviate water shortages within this State;
 - (5) The supply and sources of water available to the applicant in the State where the applicant intends to use the water; and
 - (6) The demands placed upon the applicant's supply in the State where the applicant intends to use the water.
- (d) No water may be stored, withdrawn, or diverted for use outside the State of Arkansas unless approved by the General Assembly and by interState compact under the provisions of § 15- 20-207(1), except that this prohibition does not apply to:
- (1) Marketers of bottled water; and
 - (2) Public water supply systems furnishing water at any time during the 1984 calendar year for municipal or domestic use to municipalities or public water supply not located within the State of Arkansas.

History. Acts 1985, No. 1051, § 4;
A.S.A. 1947, § 9-130.

15-22-304. Transfer of excess surface water to nonriparians.

- (a) The State Soil and Water Conservation Commission may authorize the transportation of excess surface water to nonriparians of such surface water for their use.
- (b) "Excess surface water" means twenty-five percent (25%) of that amount of water available on an average annual basis from any watershed above that amount, as determined by the Commission, required to satisfy all of the following:
 - (1) Existing riparian rights as of June 28, 1985;
 - (2) The water needs of federal water projects existing on June 28, 1985;
 - (3) The firm yield of all reservoirs in existence on June 28, 1985;
 - (4) Maintenance of in-stream flows for fish and wildlife, water quality, and aquifer recharge requirements;
 - (5) Future water needs of the basin of origin as projected in the State Water Plan developed pursuant to § 15-20-207 and 15-22-501 et seq.
- (c) All applications for transfer of water to nonriparians shall be evaluated by the State Soil and Water Conservation Commission in terms of the reasonableness of the proposed nonriparian use, including but not limited to:
 - (1) The availability at reasonable cost of alternative sources of water for the proposed use;
 - (2) The environmental impact of the proposed transfer; and
 - (3) The nature and extent of the impacts of the transfer on other water uses.
- (d) The Commission may, as a condition of granting the transfer authority, require the applicants to contract for the transportation of a specified quantity of water, for a specific period, at a reasonable price to users within the immediate vicinity of the proposed route of transportation. The term "reasonable price" means only the cost of transportation of the water, not the water itself.

History. Acts 1985, No. 1051, § 5;
A.S.A. 1947, § 9-131.

15-22-501. Definitions.

As used in this subchapter, unless the context otherwise requires:

- (1) "Commission" means the Arkansas Soil and Water Conservation Commission;
- (2) "Water development project" means the construction, acquisition, ownership, replacement, operation, and maintenance of facilities, including land, easements, and works of improvement, for the protection, conservation, preservation, development, utilization, and proper disposal of the State's water resources and related land resources in order to:
 - (A) Provide for the people of the State adequate supplies of quality water for municipal, industrial, agricultural, recreational, and domestic purposes; water for navigation; and access to the State's lakes and streams, and parks and other recreational sites along their shores;
 - (B) Reclaim, preserve, and protect the State's land resources and to adequately protect the wealth of the State from disastrous floods.

History. Acts 1969, No. 217, § 1;

1973, No. 584, § 1; A.S.A.

1947, § 21-1317.

15-22-502. Construction - Surveys, reports, etc.

- (a) Nothing in this subchapter shall be so construed as to impair or restrict the right of any municipality, drainage district, water district, county, or other political subdivision or agency of this State to cooperate with the United States, or any department or agency thereof, with respect to planning water development projects, nor to impair or prevent the consummation of any contract between local interests and agencies of the federal government respecting any existing or planned water development project as of August 7, 1969, by requiring any other or additional assurances, approvals, or contracting parties.
- (b) Nothing in this Subchapter shall be construed to repeal, amend, alter, or affect any of the laws now governing levee or drainage districts or any of the powers, functions, and duties of the respective boards of any levee or drainage district in this State. However, each levee or drainage district shall file with the Commission a copy of any preliminary survey or report for any water development project being undertaken by such levee or drainage district as provided in § 15-22-503 and may otherwise cooperate with the Commission under the provisions of this subchapter.

History. Acts 1969, No. 217, § 6, 17;

A.S.A. 1947, § 21-1322, 21-1331.

15-22-503. Arkansas Water Plan.

- (a) Under such rules and regulations as it may adopt, the Commission is charged with the duty of preparing, developing, formulating, and engaging 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.
- (b) The Commission shall be governed in its preparation of the plan by a regard for the public interest of the entire State. It shall direct its efforts to protect the water resources of the State, including boundary waters, against unwarranted encroachments by other States and the United States upon its sovereignty with respect thereto.

Any attempt to transport or export any of such water against the best interests of the State of Arkansas and its inhabitants shall be strongly opposed.

- (c) The Arkansas Water Plan shall give due consideration to existing water rights of the State and its inhabitants and shall take into account modes and procedures for the equitable adjustment of individual water rights affected by the implementation of the plan. The Arkansas Water Plan shall be the State policy for the development of water and related land resources in this State and shall, from time to time, be altered, amended, or repealed to the extent necessary for the proper administration of the State's water resources.
- (d) All State agencies, Commissions, and political subdivisions shall take Arkansas Water Plan into consideration in all matters pertaining to the discharge of their respective duties and responsibilities as they may affect the comprehensive Arkansas Water Plan, but nothing in the Arkansas Water Plan shall be construed as to impair any water right existing under the laws of this State.
- (e) No political subdivision nor agency of the State shall spend any State funds on or engage in any water development project, excluding any project in which game protection funds or federal or State outdoor recreation assistance grant funds are to be spent provided such project will not diminish the benefits of any existing water development project, until a preliminary survey and report therefor, which sets forth the purpose of the project, the benefits to be expected, the general nature of the works of improvement, the necessity, feasibility and the estimated cost thereof, is filed with the Commission and is approved by the Commission to be in compliance with the Arkansas Water Plan. Upon approval of the report, no political subdivision nor agency board or Commission thereof filing the report, or designated by the Commission as having responsibility for constructing, operating, managing and maintaining the improvement, shall be dissolved, merged, abolished, or otherwise changed during the life of the water development project without prior approval of the Commission.

History. Acts 1969, No. 217, § 2;
1973, No. 584, § 2; A.S.A.
1947, § 21-1318; Acts 1989,
No. 469, § 3.

15-22-504. Publication and availability of plan.

- (a) In accordance with §§ 15-22-207, 15-22-204, and 15-22-501, the Arkansas Soil and Water Conservation Commission shall publish a "State Water Plan," which shall from time to time be revised, updated, and amended as new information, projects, and developments shall occur.
- (b) The State Water Plan shall be made available to all interested State agencies, departments, Commissions, and individuals in order to insure that the provisions of this subchapter are complied with, concerning water resources planning and development.

History. Acts 1975, No. 555, § 2;
A.S.A. 1947, § 21-1332.

15-22-505. Power and duties of Commission generally.

In addition to such other powers, authorities, and duties as are provided to it by law, the Arkansas Soil and Water Conservation Commission shall have all the powers necessary

or convenient to carry out and effectuate the purposes and provisions of this subchapter including, but not limited to, the following powers and duties:

- (1) To be responsible for the proper distribution and allocation of water stored in the ownership of the State as developed by the Commission under the provisions of this subchapter;
- (2) To approve a reasonable method of delivery and measurement of water sold from storage;
- (3) To furnish to each regular session of the General Assembly a report containing a complete accounting of all sums received and expended on water development projects included in Arkansas Water Plan, including economic justification, based upon need, estimated costs, and feasibility of any such project to be financed in whole or in part, with State funds, and an outline of benefits accruing to the eState as a whole;
- (4) To sell, assign, or lease water or water storage capacity at costs designed to return the investment to the State and to sufficiently discharge as they mature all obligations pertaining to the principle of and interest on any water development bonds issued by the Commission;
- (5) To make and execute contracts for financial assistance to political subdivisions of the State of Arkansas who are engaged as local sponsors of any water development project which is an integral part of the Arkansas Water Plan. The financial assistance shall be funded by the Water Development Fund established under § 15-22-507 and may consist of long-term loans designed to return the investment to the State, or the financial assistance may consist of the underwriting of local assurances for the payment of water development project costs;
- (6) To acquire by lease, purchase, gift, devise, or otherwise, water rights, water storage capacity, and the facilities of any water development project including lands, rights-of-way, and easements;
- (7) To invest any cash funds of the Arkansas Water Development Fund by converting the funds into bonds of the United States of America or into certificates of deposit in banks or savings and loans associations qualifying for the deposit of public funds. Provided, that if any condition shall arise whereof the investment of federal funds is restricted by the federal government, such federal funds may not be invested;
- (8) To adopt and enforce such rules and regulations as are necessary for the proper and efficient administration of this subchapter. However, all rules and regulations adopted by the Commission are subject to judicial review in accordance with the Arkansas Administrative Procedure Act, § 25-15-201 et seq.;
- (9) To institute a civil action in the Chancery Court of Pulaski County or in the chancery court of the county where the water development project is located to restrain any political subdivision or agency of the State from spending any State funds from any source on or engaging in any water development project which has been approved as in compliance with the Arkansas Water Plan, to compel compliance with the provisions of this subchapter, and to recover all costs and expenses of the Commission and any inappropriately spent State funds.

15-22-506. Cooperation with State or federal agencies - Project costs.

- (a) The Commission is authorized to engage in any water development project, or any phrase thereof, in cooperation with any political subdivision or agency of the State of Arkansas, provided it is included in and made a part of the Arkansas Water Plan.
- (b) Whenever any water development project of any federal agency is included in the Arkansas Water Plan, the Commission shall so advise the appropriate federal agency and shall obtain from that agency an estimate of the entire amounts of nonfederal costs involved in the project.
- (c) Whenever it shall make a determination, based upon such estimates and its own study that the local nonfederal costs of the project may be amortized over the life of the project, the Commission may give the appropriate federal agency constructing the project reasonable assurance, in writing, that the demands for the use of the project will be made within a period of time which will permit the paying out of the costs within the life of the project.
 - (1) Nothing in the foregoing sentence shall be construed as to commit the State government either to pay or guarantee the payment of such costs, and a Statement to that effect shall be contained in any such writing.
 - (2) Subdivision (c)(1) of this section shall not be so construed as to inhibit the right of the Commission to pay any such costs as related to anticipated future demand or need whenever it shall have been provided with funds for that purpose.
- (d) Whenever funds are appropriated for that purpose and to the extent that they are available, the Commission may use such funds for the following water development project costs;
 - (1) Planning and engineering costs;
 - (2) Costs of acquisition of-necessary lands, rights-of-way, and easements;
 - (3) Costs of necessary relocation of roads, highways, bridges, railroads, pipelines, power transmission lines, and other such properties;
 - (4) Construction costs;
 - (5) Project operation, maintenance, and replacement costs; and
 - (6) Payment of interest on unpaid balance of any of the above itemized costs.

History. Acts 1969, No. 217, § 3; 1973,
No. 584, § 3; A.S.A. 1947, § 21-1319.

15-22-507. Arkansas Development Fund.

The Commission is authorized to establish, maintain, and administer the "Arkansas Water Development Fund" which shall be used for the payment of any water development project costs set out in § 15-22-506 and to discharge obligations pertaining to the principle of and interest on any water development bond issued by the Commission. The fund may consist of the following:

- (1) Cash funds, from whatever source received, on deposit by the Commission in any one (1) or more banks qualifying for the deposit of public funds;
- (2) Savings accounts in any one (1) or more banks qualifying for such deposit of public funds;
- (3) Bonds of the United States of America.

History. Acts 1969, No. 217, § 4;
A.S.A. 1947, § 21-1320.

