Arkansas Ground Water Protection and Management Report for 2005

January 2006

STATE OF ARKANSAS

ARKANSAS NATURAL RESOURCES COMMISSION
101 EAST CAPITOL, SUITE 350
LITTLE ROCK, ARKANSAS 72201

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INTRODUCTION

The Arkansas Ground Water Protection and Management Report is produced annually by the Arkansas Natural Resources Commission (ANRC) pursuant to Arkansas Code Annotated 15-22-906. This report provides a summary of ground-water protection and conservation programs administered by the ANRC during the year 2004. Water-resources policy in Arkansas was established in the Arkansas Water Plan, 1991, in which the ANRC advocates conservation, education, and the conjunctive use of ground and surface water, along with the development of excess surface water to meet future water use needs. It is hoped that protection of the States ground-water resources can be achieved through these measures rather than management strategies that may require allocation of water. All water-use strategies must consider the wise use of our State's water resources while protecting the sustainable yield of the State's aquifers as well as the streamflow needs of the State's surface-water flow system if our water resources are to be protected for future generations to utilize and enjoy. Furthermore, the interaction of aquifers and streams must be understood and applied in all water resources programs.

Executive Summary

The Arkansas Natural Resources Commission (ANRC), United States Geological Survey (USGS), Arkansas Geological Commission (AGC), and the Natural Resource Conservation Service (NRCS) participate cooperatively in monitoring ground-water wells throughout Arkansas to determine ground-water levels as well as ground-water quality. A monitoring schedule has been established to obtain data from the alluvial aquifer and the Sparta/Memphis aquifer on an annual basis. These measurements are taken each spring so as to be the least affected by seasonal pumping for irrigation. The drawdown that results from seasonal pumping is also determined by the NRCS and ANRC taking measurements of the alluvial aquifer in both the spring and fall. Hydrologic data is collected statewide, however resources are focused on study areas

Arkansas Ground Water Study Areas

Fig. 1

where water-level declines and water quality degradation have been observed historically.

Data for this report is collected by staff of the ANRC, USGS, and NRCS. All water-level and water quality data provided in this report is collected in accordance with USGS protocol and quality control guidelines.

Each spring approximately 800 wells are monitored in the alluvial aquifer resulting in the largest number of water level measurements for any one aquifer in the state. This number will vary from year to year depending on the resources available. There are approximately 500 wells that are monitored for water levels in the Sparta/Memphis aquifer.

The general trend is that the ground-water levels in Arkansas have been slowly dropping, with a few areas that have remained constant or have risen slightly. Long-term water-level data collected over a 25-year period indicate a decline of 0.8 feet per year in the Sparta-Memphis aquifer (USGS, 2004-5055). Such long-term data is valuable in revealing water-level change trends that can be masked by short-term climate variations and local pumping rates. There are areas of the state experiencing ground-water withdrawals of such magnitude that demand on the aquifer exceeds the sustainable yield, resulting in consistently falling ground-water levels, and the development of cones of depression. These areas are depressions in the potentiometric surface, and occur in both the alluvial and Sparta/Memphis aquifers. (Fig. 2) Water-level declines are consistently observed in areas where water use is highest as indicated by recent USGS data.

The areas in the state that are of most concern are a five-county area of the Sparta aquifer in southern Arkansas that was designated a critical ground water area in 1996, the Grand Prairie area in eastern Arkansas for which both the alluvial and Sparta/Memphis aquifers were designated as critical ground water areas in 1998 (Fig.3), and the Cache Study Area in which significant declines in the alluvial aquifer have been observed. Since designation as a critical area, declines in the South Arkansas Study Area have been reduced significantly due to education and ground-water conservation and the use of excess surface water. The Grand Prairie Study Area

has continued to show significant declines in the alluvial aquifer since designation with an average change of -5.18 feet over the last ten years. There has also been a –10.21 foot average decline in the Sparta/Memphis aquifer over the last ten years in this study area.

Data from the alluvial aquifer wells show that of 237 alluvial wells monitored from 1995 to 2005, 177 (74.7%) have shown a decline during this time period. The wells showing the greatest declines in the alluvial aquifer during this 10-year period are located in the Cache Study Area with an average change of –6.25 feet, the Grand Prairie Study Area with an average change of –5.18 feet, and the Boeuf-Tensas Study Area with a change of -7.58 feet, respectively. In the Cache Study Area during the last 5 monitoring years, we have seen smaller cones of depression in western Lee County, northwest Cross County, and southwest Poinsett County expand. These cones of depression have now coalesced into a significantly larger depression extending from southwest Poinsett County, southward into Monroe County. (Fig.2)

Data from the wells monitored in the Sparta/Memphis aquifer show that of 127 wells monitored from 1995 to 2005, 89 of these (70.1%) show a decline in static water levels. The wells showing the greatest decline in the Sparta/Memphis aquifer are located in the Grand Prairie Critical Ground Water Area with an average change of –10.21 feet during this time.

Water quality data collected by the USGS in 2002 showed a trend toward increased specific conductance (>1,200 microsiemens/cm) in the alluvial aquifer in Ashley and Chicot Counties. (Reed, T.B., 2004) An increase in the level of specific conductance indicates an increased level of dissolved solids in the ground water. In certain areas these dissolved solids are chlorides leading to the ground-water becoming unsuitable for particular irrigation purposes. This trend may indicate saline water encroachment associated with the development of cones of depression.

In 2004 the Arkansas District of the US Geological Survey has released several ground-water flow modeling reports. These models provide the State with valuable information on the ground-water flow systems of the two major aquifers in Arkansas as well as an important ground-water resources tool that define areas of

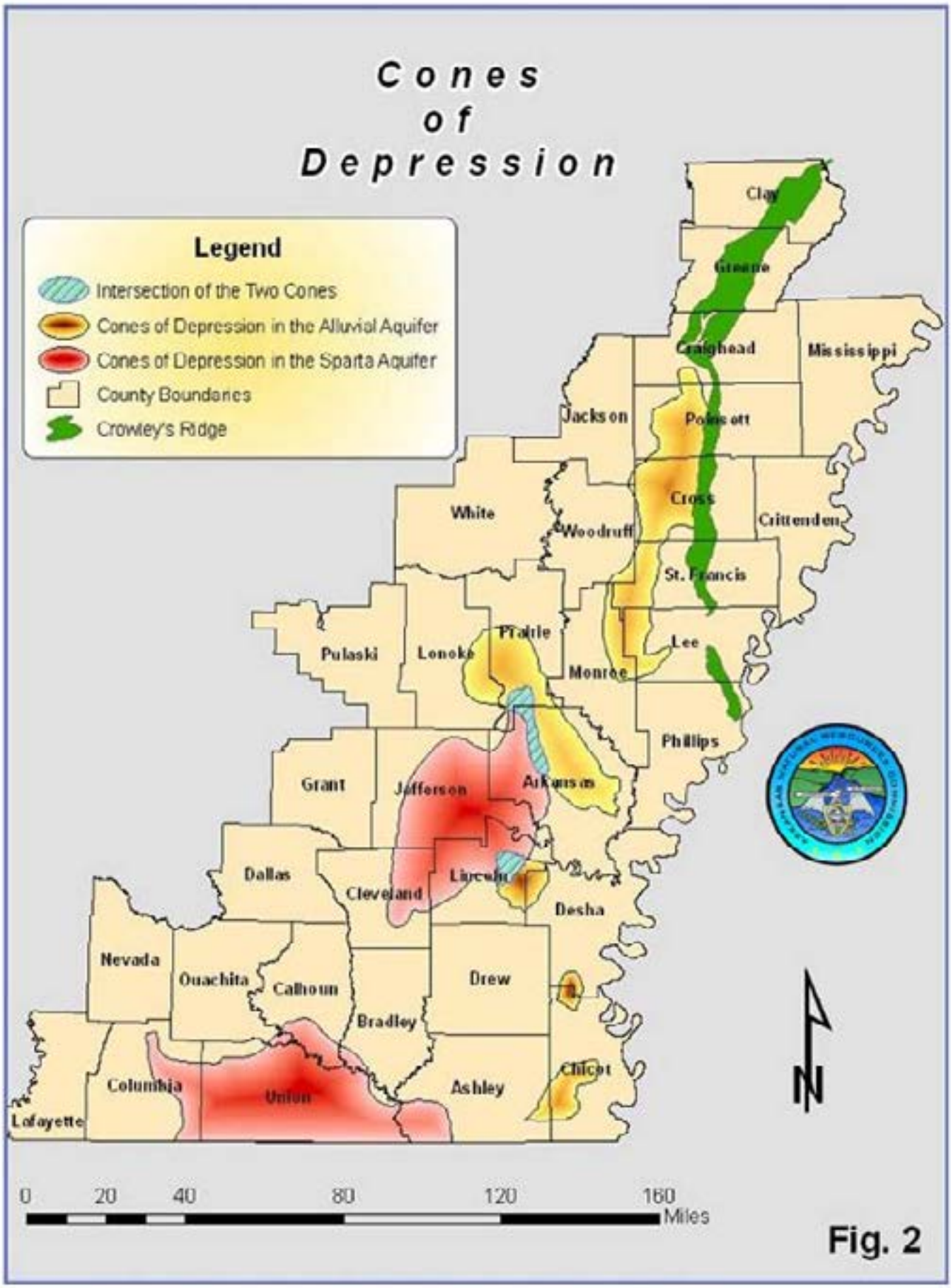

Cones of Depression
Legend
Intersection of the Two Cones
Cones of Depression in the Alluvial Aquifer
Cones of Depression in the Sparta Aquifer
County Boundaries
Crowley's Ridge
Clay
Greene
Craighead
Mississippi
Jackson
Poinsett
White
Woodruff
Cross
Crittenden
St. Francis
Pulaski
Lonoke
Prairie
Lee
Monroe
Phillips
Grant
Jefferson
Arkansas
Dallas
Cleveland
Lincoln
Desha
Nevada
Ouachita
Calhoun
Drew
Bradley
Chicot
Columbia
Union
Ashley
Lafayette
N
0
20
40
80
120
160
Miles

Fig. 2

future ground-water depletion, and quantifies a sustainable yield, along with unmet demand, based on a described set of head constraints that are consistent with current State water resources policy. Based on these model reports, it is estimated that the State is withdrawing ground water from the alluvial and Sparta aquifers in eastern and southern Arkansas at a rate, which is far above sustainable. The primary source for the unmet demand is stream capture from the major rivers hydraulically connected to the aquifer.

Based on the modeling results, it is now understood that the State of Arkansas can only sustain about 57 percent of the 1997 withdrawals from the alluvial aquifer, and approximately 49 percent from the Sparta aquifer. The aforementioned conservation efforts and the use of excess surface water in the South Arkansas Study Area is beginning to show an increase in the altitude of the potentiometric surface in the area, and may have a positive effect on the percent of withdrawal sustainable from this area in the future.

The ANRC will continue to monitor water levels and water quality throughout Arkansas with emphasis on the Cache, Grand Prairie, and Boeuf-Tensas Study Areas. Significant water-level declines have been observed in these areas. The ANRC will continue to work with other Federal, State, and local agencies to enhance ground water monitoring and research programs.

If conservation and the development of excess surface water are not successfully implemented in the impaired areas in the very near future, the State will have to consider regulatory alternatives to preserve the aquifers at a sustainable level.

Some of the programs described in this report are partially funded through federal grants from Region VI of the Environmental Protection Agency.

GROUND WATER CONSERVATION AND CRITICAL AREAS

Summary of Factors Considered in a Critical Ground Water Designation

Each year data is analyzed to determine areas that have developed, or trends which indicate they may develop significant ground water depletion and/or degradation. In a confined aquifer this analysis will examine, but not be restricted to the relative position of water levels to the top of the formation, water level declines both short and long term, and trends that may indicate degradation of water quality. Consideration will also be given to the sustainable yield of the entire aquifer, including the utilization of ground water flow and optimization models, the natural hydrologic boundaries of the aquifer, and projected water level declines. The USGS has completed work on conjunctive use modeling and sustainable yield estimations. Scenario projections and sustainable yield estimation are discussed in later sections of this report.

In an unconfined aquifer the analysis would examine, but not be restricted to the recent saturated thickness of the formation, water level declines both short and long term, and trends toward the degradation of water quality. Consideration will also be given to the sustainable yield of the aquifer, including the utilization of ground water flow models, and projected water level declines. Analysis will be done on hydrographic projections as well as conjunctive use modeling and optimization projections. The analysis would also be based on hydraulic criteria and natural hydrogeologic boundaries. This is necessary because water levels fluctuate and because ground water withdrawals in any given area can affect other hydraulically connected areas.

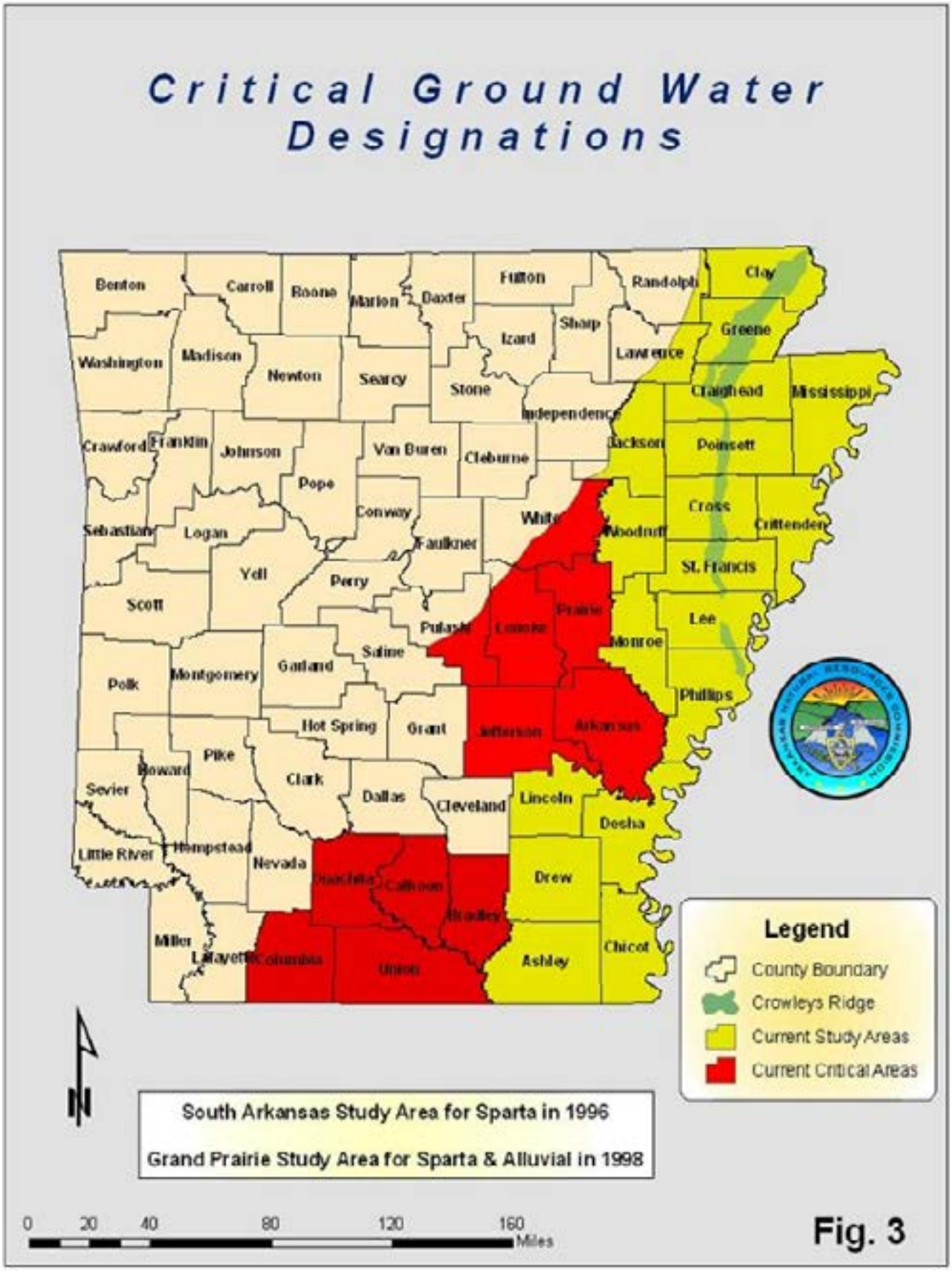

Critical Ground Water Designations
Benton
Carroll
Boone
Marion
Baxter
Fulton
Randolph
Clay
Washington
Madison
Newton
Searcy
Stone
Izard
Sharp
Lawrence
Greene
Crawford
Franklin
Johnson
Pope
Van Buren
Cleburne
Independence
Jackson
Craighead
Poinsett
Mississippi
Sebastian
Logan
Yell
Scott
Conway
Faulkner
White
Woodruff
Cross
Crittenden
St. Francis
Perry
Pulaski
Lonoke
Prairie
Lee
Monroe
Saline
Garland
Polk
Montgomery
Phillips
Hot Spring
Grant
Jefferson
Arkansas
Howard
Pike
Sevier
Clark
Dallas
Cleveland
Lincoln
Desha
Little River
Hempstead
Nevada
Ouachita
Calhoun
Drew
Bradley
Miller
Lafayette
Columbia
Union
Ashley
Chicot
Legend
County Boundary
Crowleys Ridge
Current Study Areas
Current Critical Areas
South Arkansas Study Area for Sparta in 1996
Grand Prairie Study Area for Sparta & Alluvial in 1998
0
20
40
80
120
160
Miles

Fig. 3

Hydrogeology

Alluvial Aquifer

The Mississippi River Valley alluvial aquifer extends north from Arkansas into Missouri, south into Louisiana, and under the Mississippi River into Tennessee and Mississippi. For the purpose of this report, the term alluvial aquifer refers to the portion of the aquifer inside the state boundaries of Arkansas. This area generally is bounded by the Fall-Line or contact with outcropping Tertiary formations to the west, the Mississippi River to the east, and the state lines to the north and south. The aquifer is the uppermost aquifer in the Mississippi Embayment and is composed of 50 to 150 feet of sand and gravel, grading from coarse gravel at the bottom to fine sand at the top. It generally is overlain by the Mississippi River Confining Unit, which is composed of 0 to 50 feet of fine-grained sand, silt, and clay. The alluvial aquifer is underlain by confining units composed of aquifers and confining units of the Mississippi Embayment, which are less permeable than the alluvial aquifer. The alluvial aquifer is connected hydraulically with several rivers and drainage areas.

Mostly due to the use of ground water for agriculture in the region, the aquifer has been pumped in ever-increasing amounts since records were kept from the early 1900's. In 1995 Arkansas ranked fourth in the nation for ground water withdrawals with an estimated use of 5,460 million gallons per day (Mgal/d) (Solley, et. al., 1998). By 2003 that number had increased to approximately 6,650 Mgal/d. The estimated sustainable yield for the alluvial aquifer is 2,700 Mgal/d, leaving an unmet demand of 3,950 Mgal/d (59.4%). Ground water furnishes 63% of the state's total water use, and 95% of the ground water used comes from the alluvial aquifer. Agriculture accounts for 96% of the total water that is pumped from the alluvial aquifer. Figures 4 and 5 are illustrations of the 2005 potentiometric surface, and potentiometric contour map. Increased pumping from this aquifer has resulted in decreased outflow to rivers, increased inflow from rivers, increased inflow from the overlying confining unit,

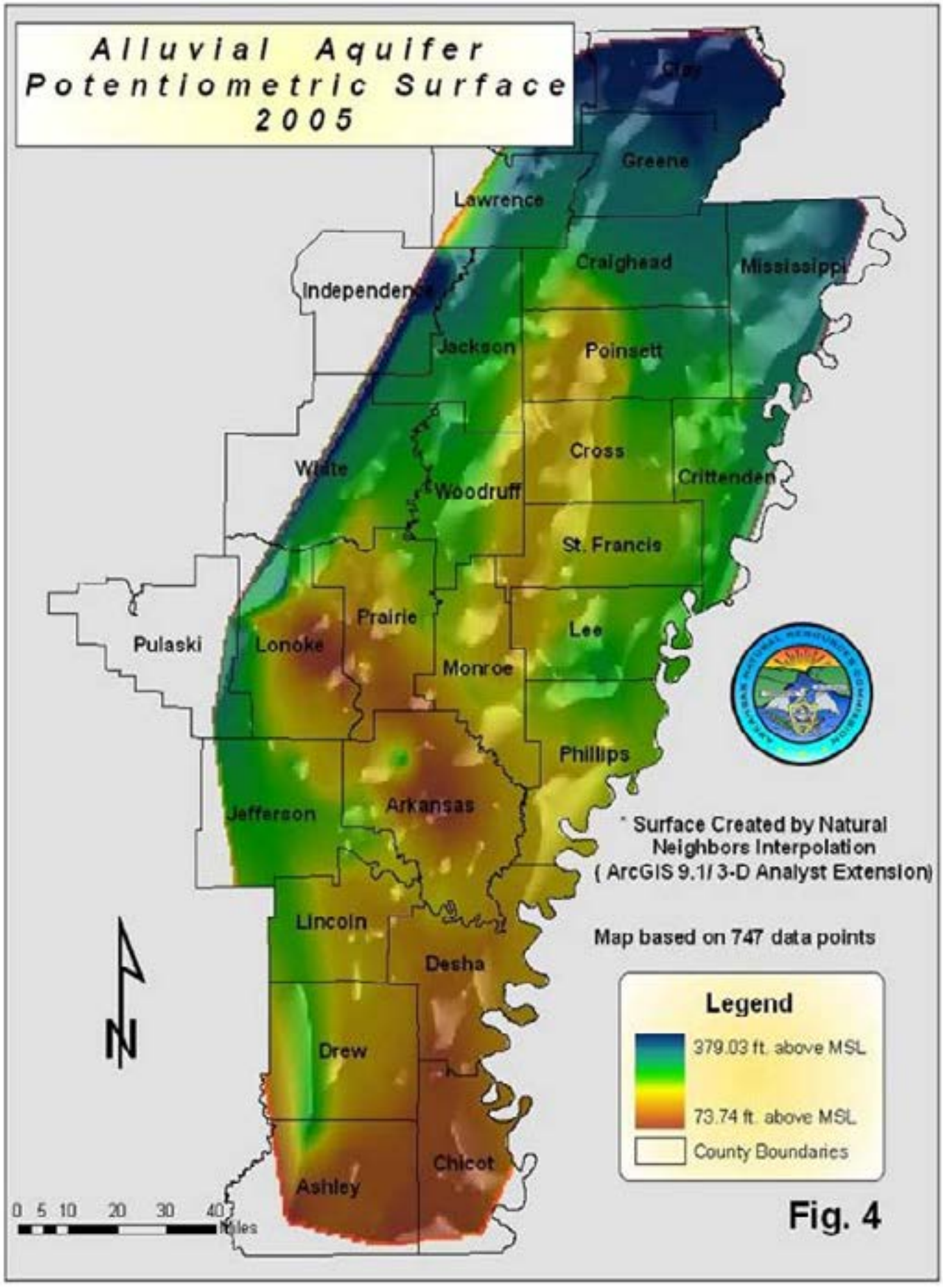

Alluvial Aquifer
Potentiometric Surface
2005
Clay
Greene
Lawrence
Craighead
Mississippi
Independence
Jackson
Poinsett
Cross
White
Woodruff
Crittenden
St. Francis
Prairie
Pulaski
Lonoke
Monroe
Lee
Phillips
Jefferson
Arkansas
Lincoln
Desha
Drew
Chicot
Ashley
N
0 5 10 20 30 40
Miles
* Surface Created by Natural Neighbors Interpolation (ArcGIS 9.1/ 3-D Analyst Extension)
Map based on 747 data points
Legend
379.03 ft. above MSL
73.74 ft. above MSL
County Boundaries

Fig. 4

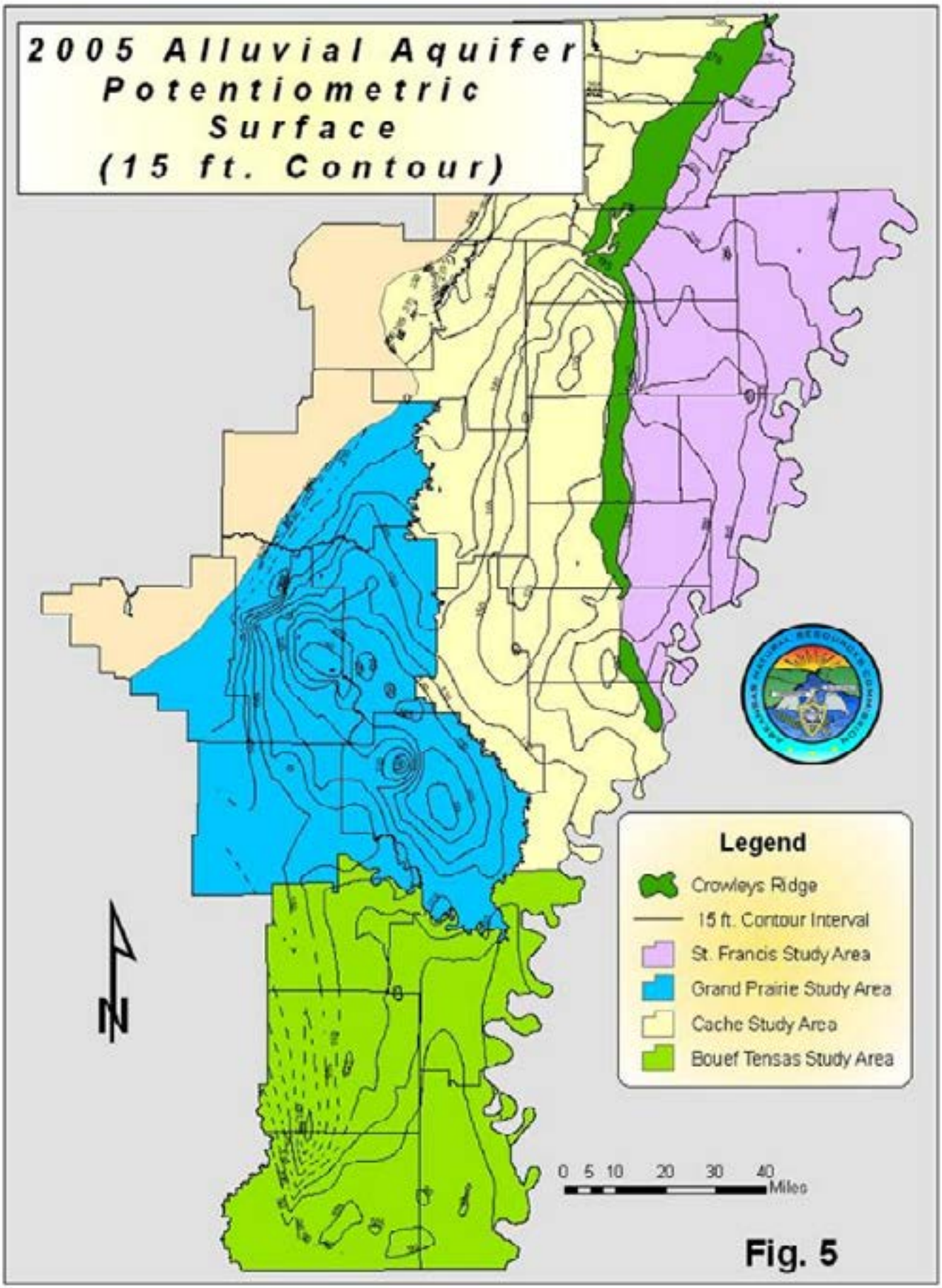

2005 Alluvial Aquifer Potentiometric Surface (15 ft. Contour)
Legend
Crowleys Ridge
15 ft. Contour Interval
St. Francis Study Area
Grand Prairie Study Area
Cache Study Area
Bouef Tensas Study Area
N
0 5 10 20 30 40
Miles

Fig. 5

regional changes in ground-water flow, regional water level declines, reduction of aquifer storage, and decreases in well yields (Ackerman, 1996).

There were 646 alluvial aquifer wells monitored for water-level change in both 2004 and 2005, 230 (55.6%) of these had a decline in the static water level. The overall water-level change was +0.55 ft. Though the long-term trend observed in hydrographs is a decline in water levels, this one year increase is consistent with those years with water-level changes viewed in especially wet years. The 2004 precipitation for Arkansas was approximately 56 inches, which is 7 inches above normal. Of 540 alluvial aquifer wells monitored in both 2000 and 2005, 267 (49.4%) of these had declining static water levels. Over a 10-year period of time from 1995 to 2005, 177 of 237 wells (74.7%) monitored showed declines in the alluvial aquifer. The average change over the entire aquifer during the 2004-2005 monitoring period was +0.55 feet, the 5-year average change was –-0.20, and the 10-year average –-4.75 feet respectively. The greatest 5-year declines were observed in the Cache Study Area (-1.51 feet) and the Grand Prairie Study Area (-0.52 feet). Appendix A is a table of specific water level monitoring data for the alluvial aquifer. Appendix B is a series of selected hydrographs for alluvial aquifer wells.

Sparta/Memphis Aquifer

The Sparta/Memphis aquifer of Tertiary Age is located in the south, southeast, and east regions of Arkansas, as well as portions of Texas, Louisiana, and Mississippi. The aquifer outcrops in Dallas, Hot Spring, Saline, Grant, Nevada, Columbia, and Ouachita Counties throughout the state. The Sparta/Memphis Sand aquifer thickness averages approximately 600 feet, ranging from a thickness of approximately 200 to 300 feet thick in the outcrop area to about 900 feet thick in the southeastern part of the state. The majority of the area discussed in this report is a confined aquifer, underlain by the Cane River Formation and overlain by the Cook Mountain Formation, both of which are effective confining units.

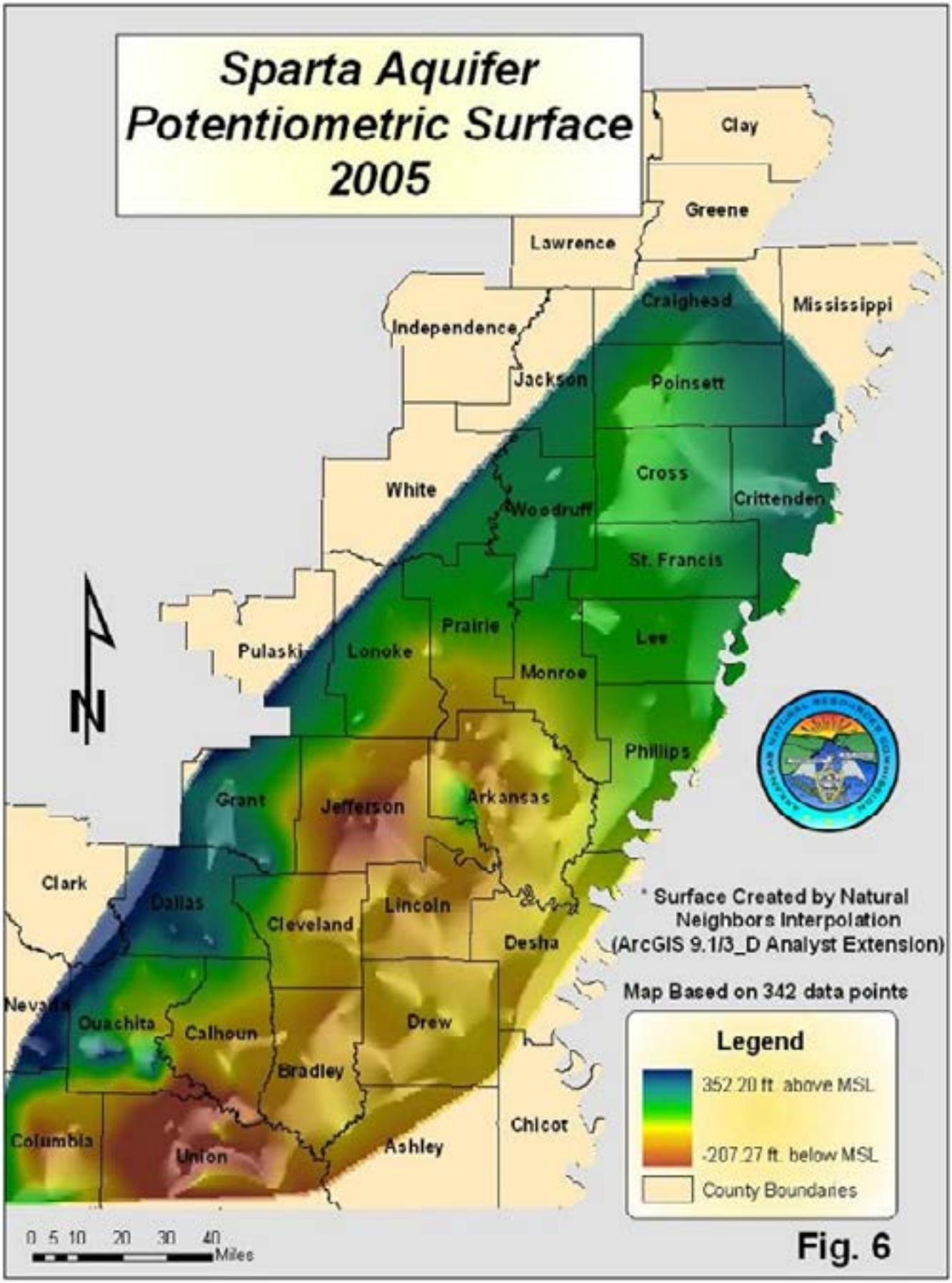
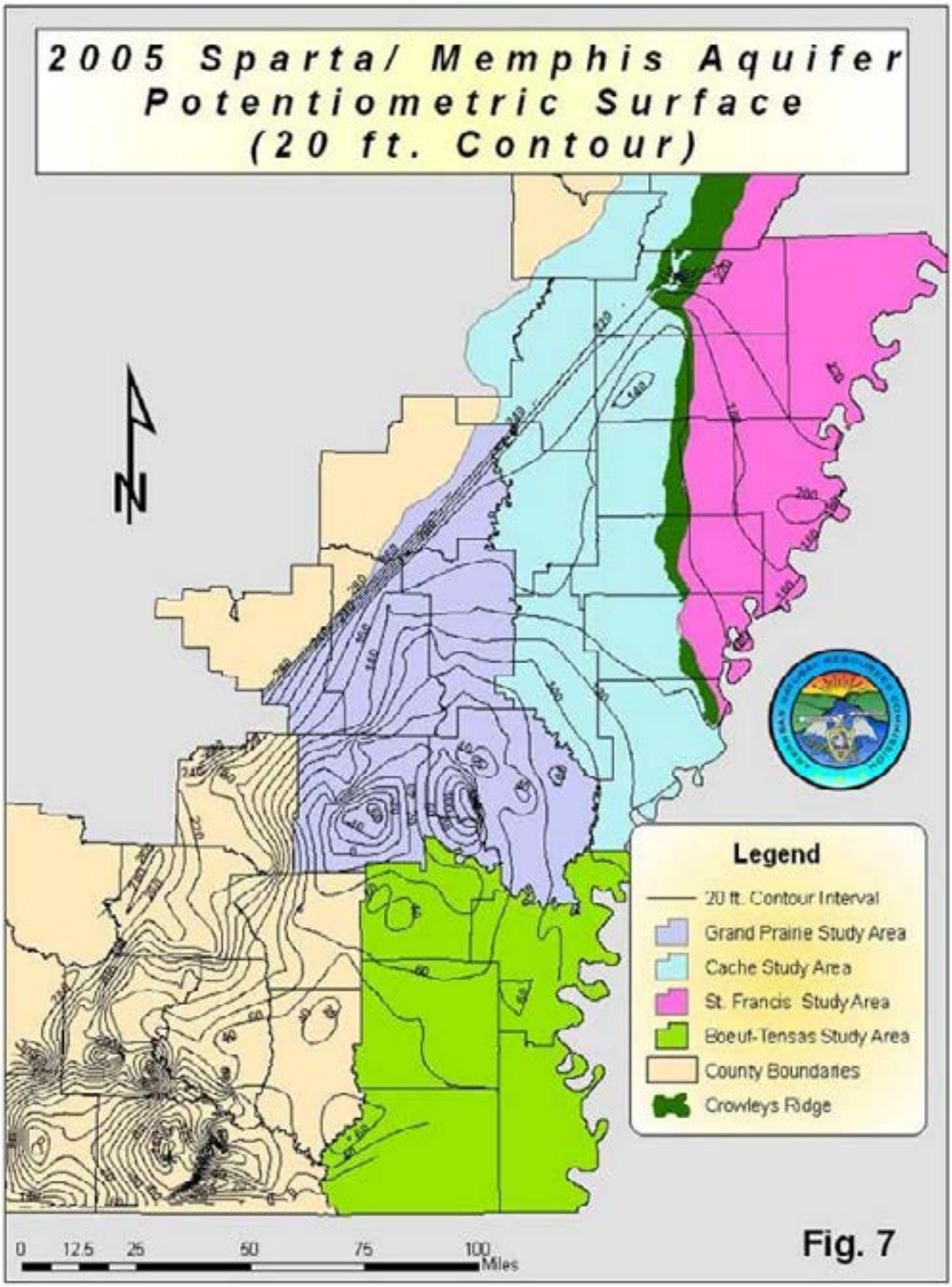

Sparta Aquifer
Potentiometric Surface
2005
Clay
Greene
Lawrence
Craighead
Mississippi
Independence
Jackson
Poinsett
White
Woodruff
Cross
Crittenden
St. Francis
Prairie
Lee
Pulaski
Lonoke
Monroe
Phillips
Grant
Jefferson
Arkansas
Clark
Dallas
Cleveland
Lincoln
Desha
Nevada
Ouachita
Calhoun
Drew
Bradley
Columbia
Union
Ashley
Chicot
N
* Surface Created by Natural Neighbors Interpolation (ArcGIS 9.1/3_D Analyst Extension)
Map Based on 342 data points
Legend
352.20 ft. above MSL
-207.27 ft. below MSL
County Boundaries
0 5 10 20 30 40
Miles

Fig. 6


2005 Sparta/ Memphis Aquifer
Potentiometric Surface
(20 ft. Contour)
N
Legend
20 ft. Contour Interval
Grand Prairie Study Area
Cache Study Area
St. Francis Study Area
Boeuf-Tensas Study Area
County Boundaries
Crowleys Ridge
0 12.5 25 50 75 100
Miles
Fig. 7

The Sparta aquifer in south Arkansas consists of two units, separated by the confining unit located between them: the upper Greensand aquifer and the lower El Dorado aquifer. The Sparta is composed mainly of sand with considerable amounts of silt, clay, shale, and lignite, which are found in lenses throughout the unit. Lithologically, it varies considerably both vertically and laterally. Glauconite, a green hydrous potassium iron silicate mineral, is sometimes found in sand lenses in the upper levels of the aquifer, hence the name "Greensand".

The Memphis Sand aquifer in eastern Arkansas is part of a thick sand section in the middle and lower portions of the Claiborne Group. It includes the Sparta Sand, the predominantly sandy facies of the Cane River, and the Carrizo Sand. The Memphis aquifer is the major source of quality drinking water in the area.

Ground-water levels were collected from 250 water wells in the Sparta/Memphis aquifer throughout the south and east portions of Arkansas in 2004 and 2004. Eighty-eight of those wells (35.2%) showed declines in the static water level. The average change over the entire aquifer during the 2004-2005 monitoring period was 1.95 feet. As noted previously, this water-level rise is expected during especially wet years like 2004. During the monitoring period from 2000 to 2005, 94 wells were monitored for water-level change. Forty-eight of these wells (51.0%) showed a decline in static water levels during this time. During a 10 year monitoring period, from 1995 to 2005, 89 of the 127 wells monitored (70.0%) showed a decline in static water levels. Appendix C is a table of specific water level monitoring data for the Sparta/Memphis aquifer. For the Sparta aquifer the USGS Conjunctive Use Optimization Model estimates that only 32 percent of the 2001 withdrawal of 260 Mgal/d is sustainable.

Data from as far back as 1965 has been plotted as hydrographs for selected wells throughout the study area. Trend line analysis indicates that the general trend for most wells included in this study is that of a lowered potentiometric surface (Fig. 6) This decline in potentiometric surface in the aquifer can be attributed to a statewide increase in water use from 139 million gallons per day (mgd) in 1970 to 230 mgd in

2002, an increase of 64 percent. The most recent significant increase in water use from the Sparta has been for agricultural supply.

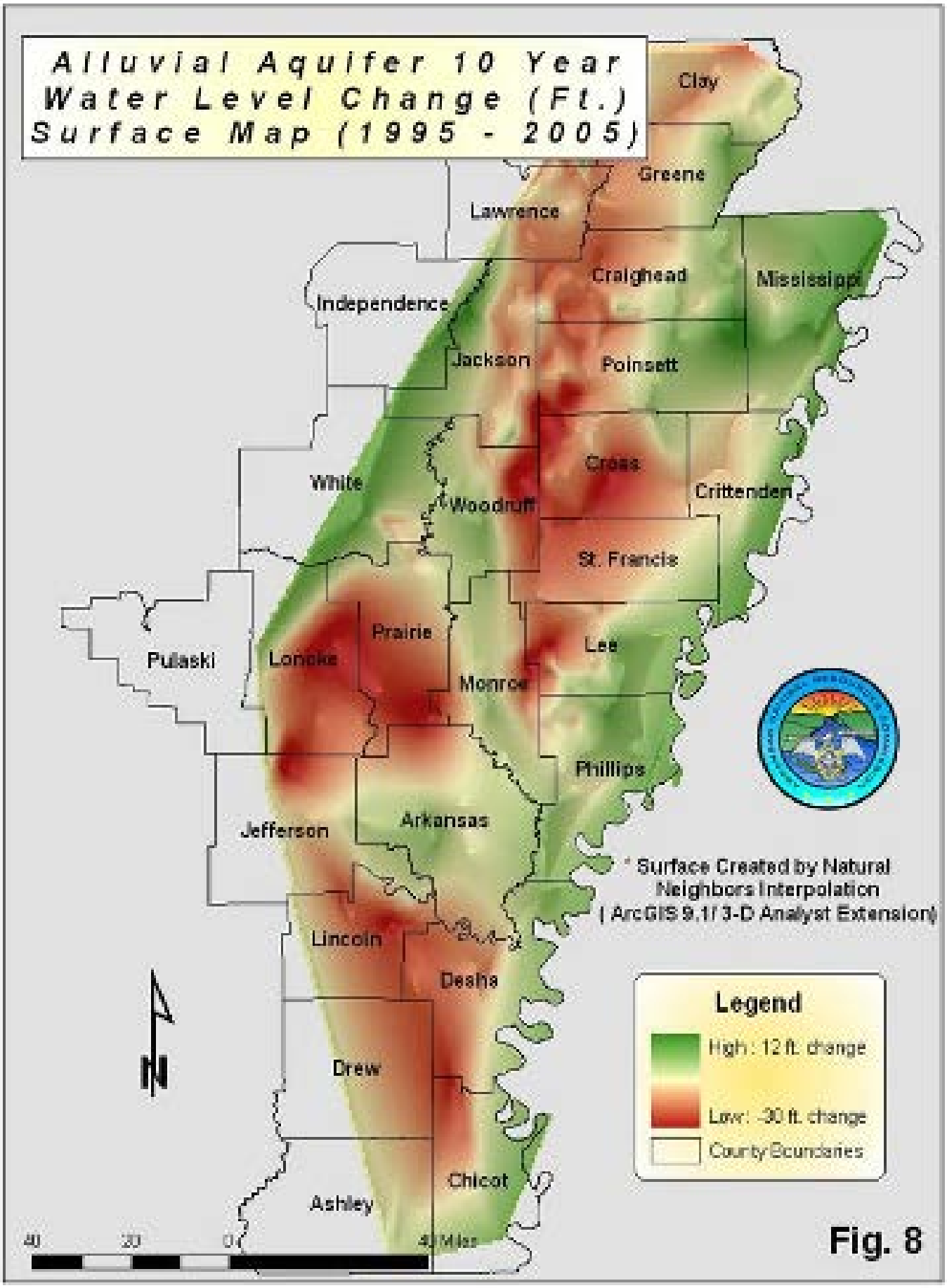
The exception to this rule is the data from the South Arkansas Study Area, where local education, conservation, and the use of excess surface water has led to significantly fewer declines, as well as some rebound in water levels in some areas. Appendix D is a series of hydrographs for Sparta/Memphis aquifer wells in Arkansas.

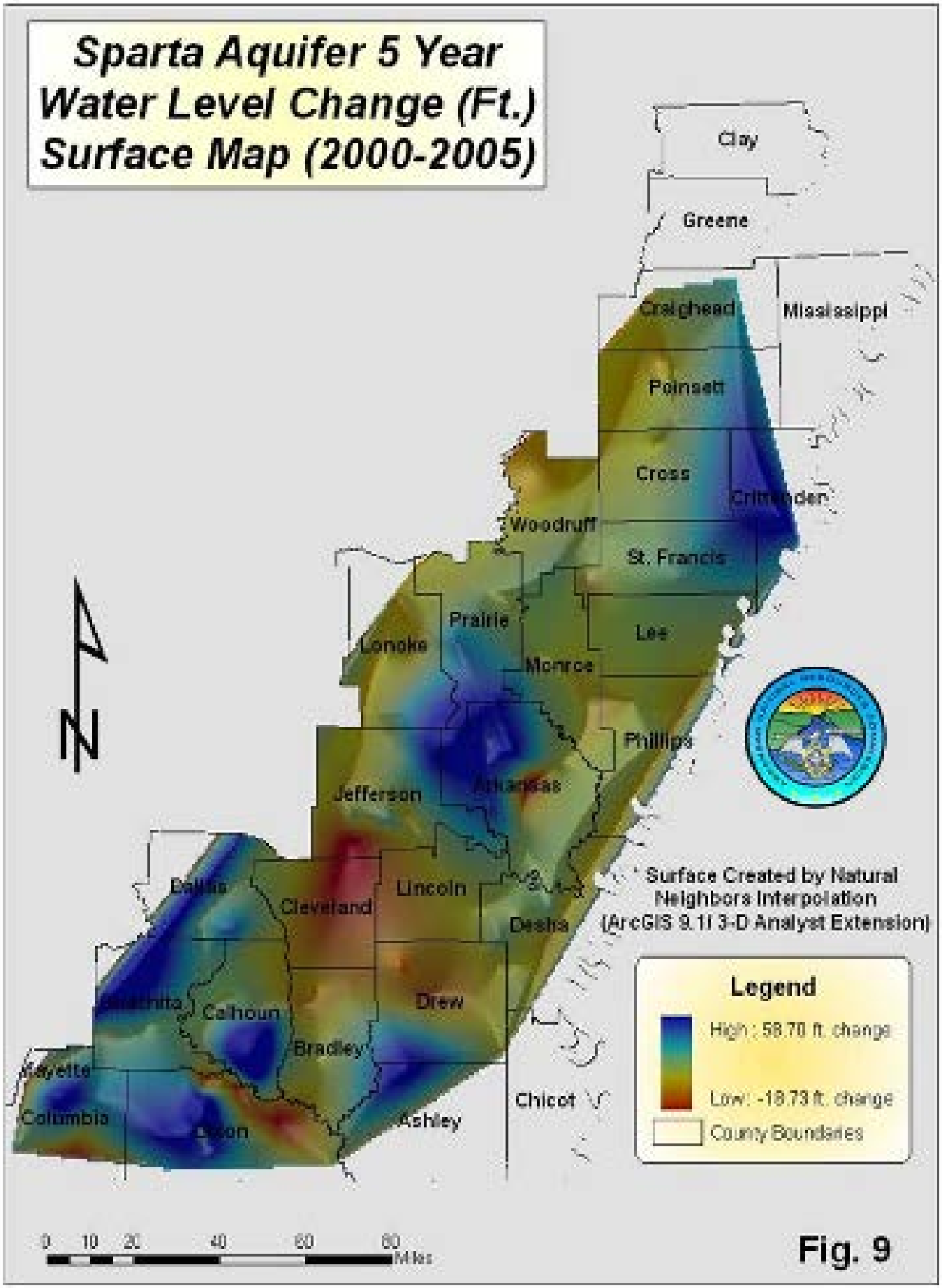
GROUND-WATER LEVELS AND WATER-LEVEL CHANGE

MONITORING

The United States Geological Survey (USGS), in cooperation with the Arkansas Natural Resources Commission (ANRC), the Arkansas Geological Commission (AGC), and the Natural Resource Conservation Service (NRCS), monitor wells throughout the entire state for general ground water quality as well as to record water levels. In addition, several agencies continually monitor wells throughout the state in an effort to detect significant changes and/or trends in ground-water levels and ground-water quality. The ANRC has recently added to this monitoring network by constructing 33 wells throughout the eastern part of the state used exclusively for monitoring purposes, with more to be added in the near future. (Fig.39) All water level data collected by the USGS and ANRC is collected in accordance with USGS data collection protocol.

Water-level measurements are made each spring for a designated portion of the monitoring network of approximately 1,200 wells statewide. A schedule of monitoring has been established based upon existing funding and the ANRC's management and protection responsibilities as mandated by the Arkansas General Assembly. The monitoring schedule has been set up to obtain data annually from the alluvial and Sparta/Memphis aquifers. Other aquifers with less usage are measured at least once every five years. Measurements of water levels in the alluvial and Sparta/Memphis aquifers are taken each spring to obtain as close to true static water level data as


Alluvial Aquifer 10 Year Water Level Change (Ft.) Surface Map (1995 - 2005)
Clay
Greene
Lawrence
Craighead
Mississippi
Independence
Jackson
Poinsett
Cross
White
Woodruff
Crittenden
St. Francis
Prairie
Lee
Pulaski
Lonoke
Monroe
Phillips
Arkansas
Jefferson
* Surface Created by Natural Neighbors Interpolation (ArcGIS 9.1/ 3-D Analyst Extension)
Lincoln
Desha
Drew
Chicot
Ashley
Legend
High : 12 ft. change
Low: -30 ft. change
County Boundaries
40
20
0
40 Miles
Fig. 8


Sparta Aquifer 5 Year
Water Level Change (Ft.)
Surface Map (2000-2005)
Clay
Greene
Craighead
Mississippi
Poinsett
Cross
Crittenden
Woodruff
St. Francis
Prairie
Lonoke
Lee
Monroe
Phillips
Jefferson
Arkansas
Dallas
Cleveland
Lincoln
Desha
Drew
Calhoun
Bradley
Columbia
Ashley
Chicot
N
Surface Created by Natural
Neighbors Interpolation
(ArcGIS 9.1/ 3-D Analyst Extension)
Legend
High : 58.70 ft. change
Low: -18.73 ft. change
County Boundaries
0 10 20 40 60 80
Miles
Fig. 9

possible. This allows the water level data to be the least affected by summer pumping. Measurements in the alluvial aquifer are obtained each spring and fall by the NRCS and are helpful in evaluating the zones of drawdown that result from seasonal pumping for irrigation of crops. A table of measurements taken in the spring and fall from the same wells is included as Appendix F. This table is useful in showing the amount of drawdown and rebound from specific wells during the pumping season.

SOUTH ARKANSAS CRITICAL GROUND-WATER AREA

The South Arkansas Critical Ground-Water Area is composed of the Sparta Aquifer in Bradley, Calhoun, Columbia, Ouachita, and Union Counties. In 1996 this area was the first to be designated as a critical ground water area for the Sparta aquifer pursuant to the Arkansas Groundwater Protection and Management Act of 1991.

Continued monitoring of Sparta aquifer ground-water levels show that some ground-water levels in this region have stabilized or risen, while others continue to decline. During the 2004-2005 monitoring period, the ground-water level showed an average change of -1.54 feet in Union County, +1.82 feet in Ouachita County, -0.69 feet in Calhoun County, -3.14 feet in Bradley County, and +4.90 feet in Columbia County respectively. The South Arkansas Study Area as a whole had an average change of +1.19 feet during the 2004-2005 monitoring period, with 34 of the 89 wells monitored showing declines (Fig.10). Although Union County had an average change that was a decline, it is important to recognize the stabilization of declines in this area. In 1998 the average change for Union County was –22.14 feet, in 1999 –4.40 feet, in 2000 +0.62 feet, in 2001 –1.25 feet, in 2002 +3.21 feet, and in 2003 Union County showed a +1.14 foot average change. The diminishing declines in average change seem to indicate that the education and conservation efforts in Union County have made an impact on ground-water levels.

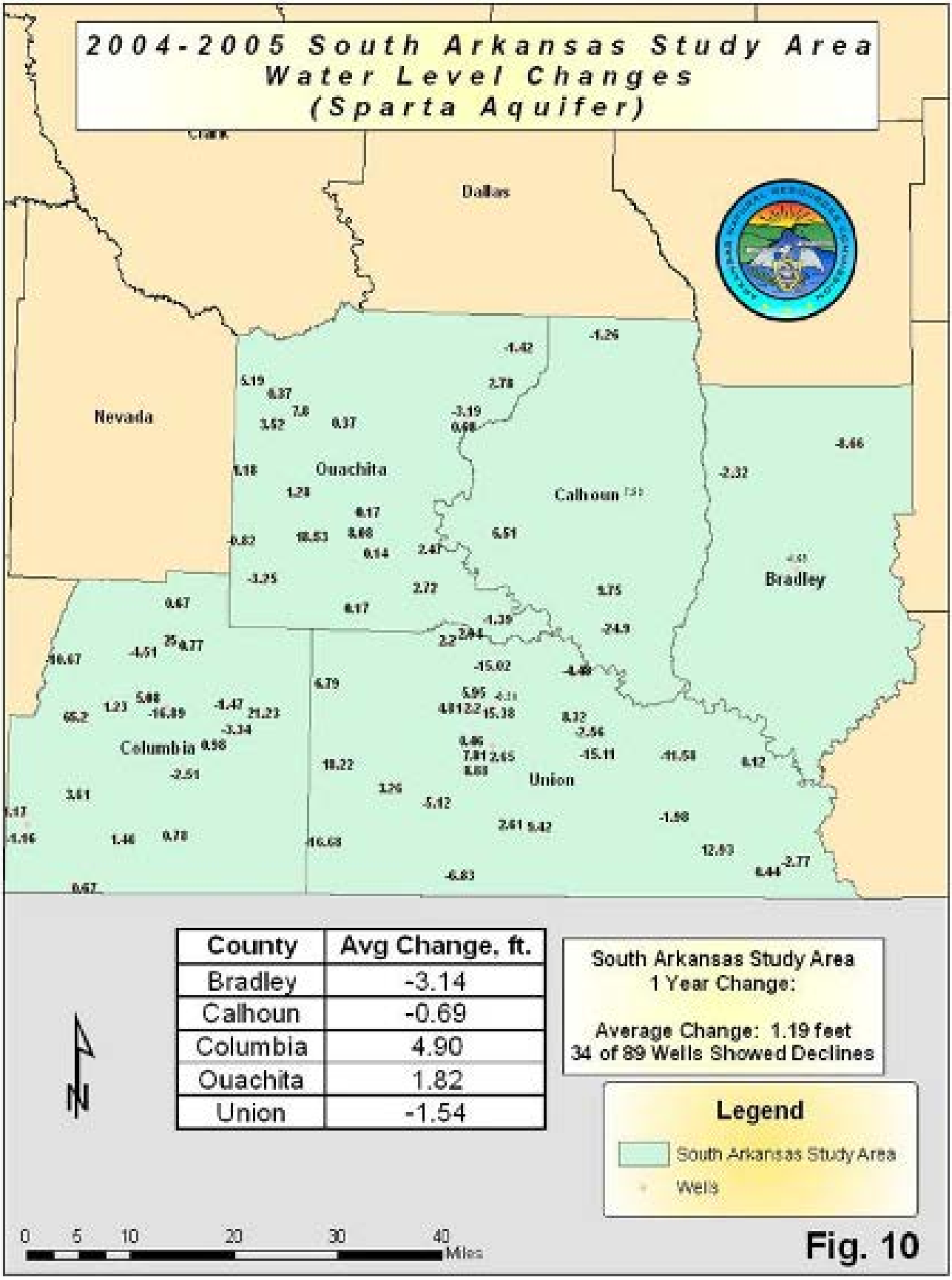
During the 5-year monitoring period, from 1999 to 2004, the South Arkansas Study Area had an average change of +8.20 feet. Thirty-three wells were monitored over this time, with 14 of them showing a decline in static water levels. Every county

in the study area showed a positive average change in their respective water levels. Ouachita County had an average change of +9.32 feet, Union +10.28 feet, Calhoun +12.39 feet, Bradley +2.81 feet, and Columbia +2.39 feet respectively. (Fig. 11)

For the 10-year monitoring period, the Sparta aquifer has shown an average change of -1.16 feet in the South Arkansas Study Area, with 24 of the 42 wells monitored (57.1%) showing declines. The only county showing an average positive change during this time was Columbia County with an average of +5.83 feet. Bradley County had an average change of -0.34 feet, Ouachita County -9.14 feet, and Union County -2.08 feet. (Fig.12)

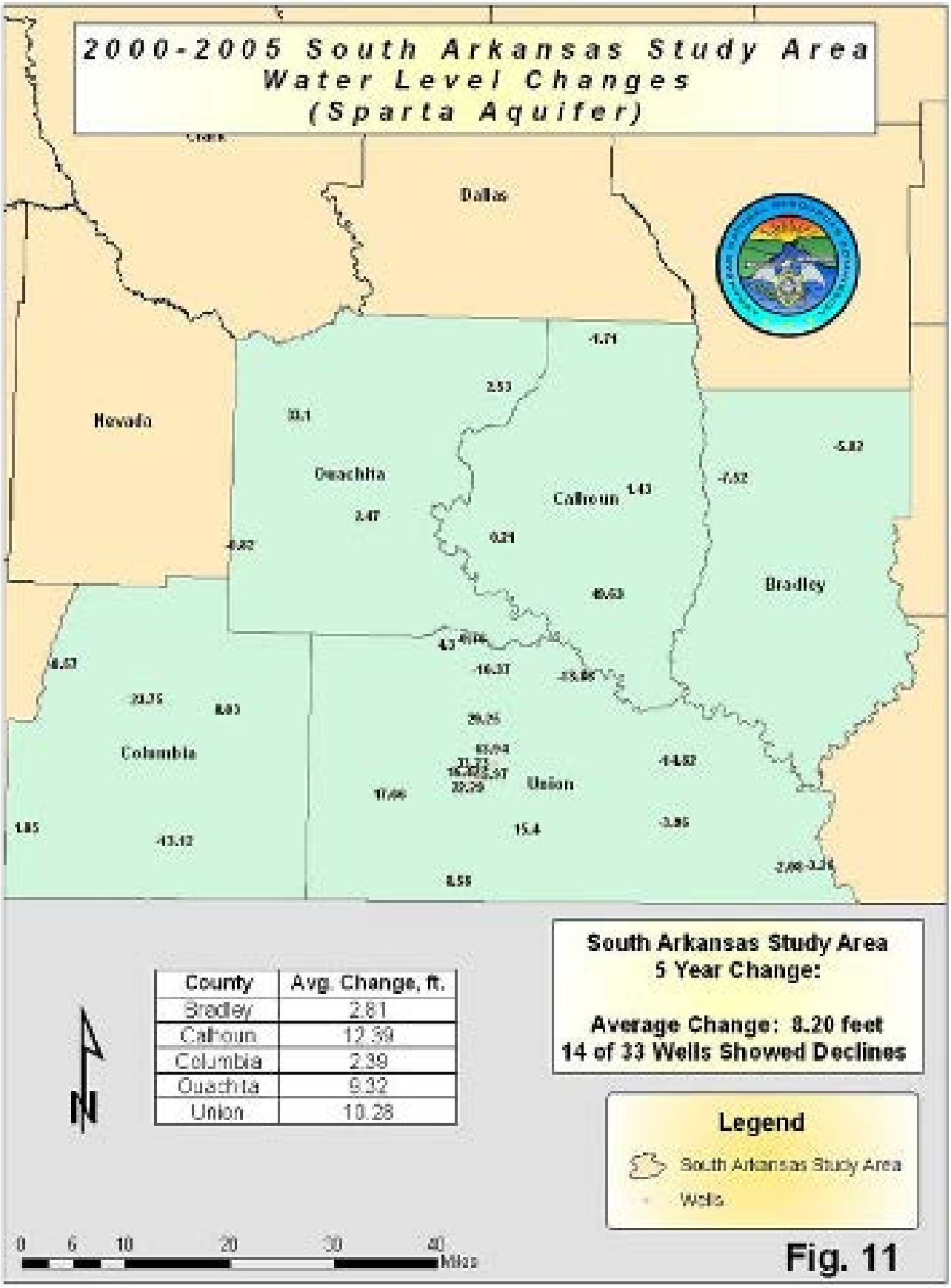
The USGS has recently completed extensive modeling for both the Sparta/Memphis aquifer, as well as the alluvial aquifer. This modeling work contained sustainable yield estimates for the selected areas. The sustainable yield is defined as the amount of ground water that can be pumped from the aquifer without violating the Critical Area constraints or reducing a protected base flow in streams in the outcrop and subcrop areas of the aquifer. These numbers were based on the amount of ground water that was being pumped in 1997. For the Sparta aquifer in the South Arkansas Study Area, the USGS Conjunctive Use Optimization Model indicates that Union County can sustain only 36% of the 1997 rates, while Calhoun and Ouachita counties are able to sustain 57% respectively.

For the first time in decades, water levels in the Sparta aquifer are rising in some areas, and declining at a minimal rate in others. This progress is the result of a true success story in the area of ground-water conservation in Arkansas. With conservation and education in place, this years accomplishments have set South Arkansas in a position of approaching complete compliance with the Arkansas Water Plan, by developing the use of excess surface water to meet ground-water use needs that are above sustainable yield.



County	Avg Change, ft.
Bradley	-3.14
Calhoun	-0.69
Columbia	4.90
Ouachita	1.82
Union	-1.54

Fig. 10


2000-2005 South Arkansas Study Area
Water Level Changes
(Sparta Aquifer)
Dallas
Nevada
Ouachita
Calhoun
Bradley
Columbia
Union
South Arkansas Study Area
5 Year Change:
Average Change: 8.20 feet
14 of 33 Wells Showed Declines
County | Avg. Change, ft.
Bradley | 2.81
Calhoun | 12.39
Columbia | 2.39
Ouachita | 9.32
Union | 10.28
N
Legend
South Arkansas Study Area
Wells
0 6 10 20 30 40
Miles
Fig. 11

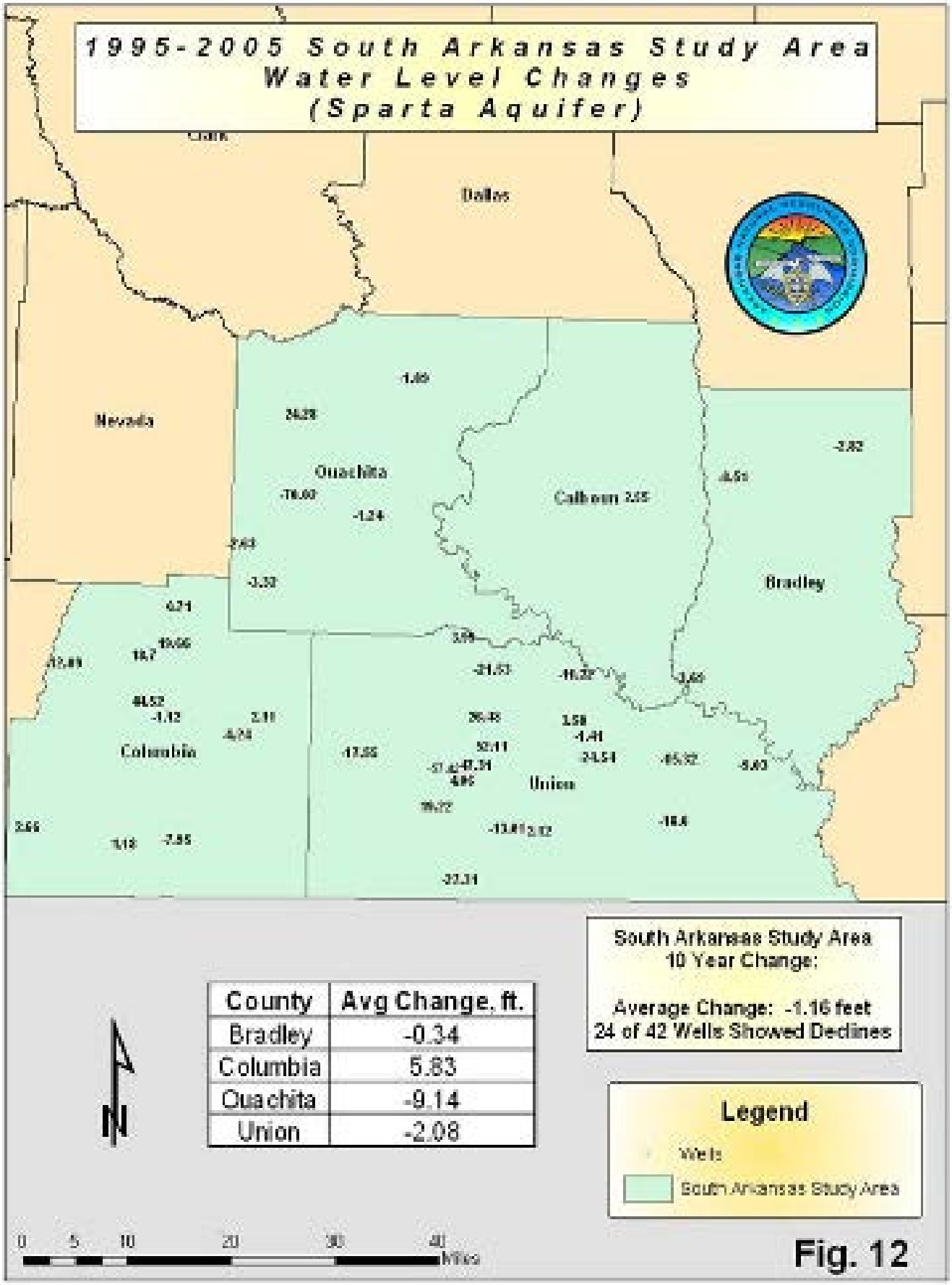
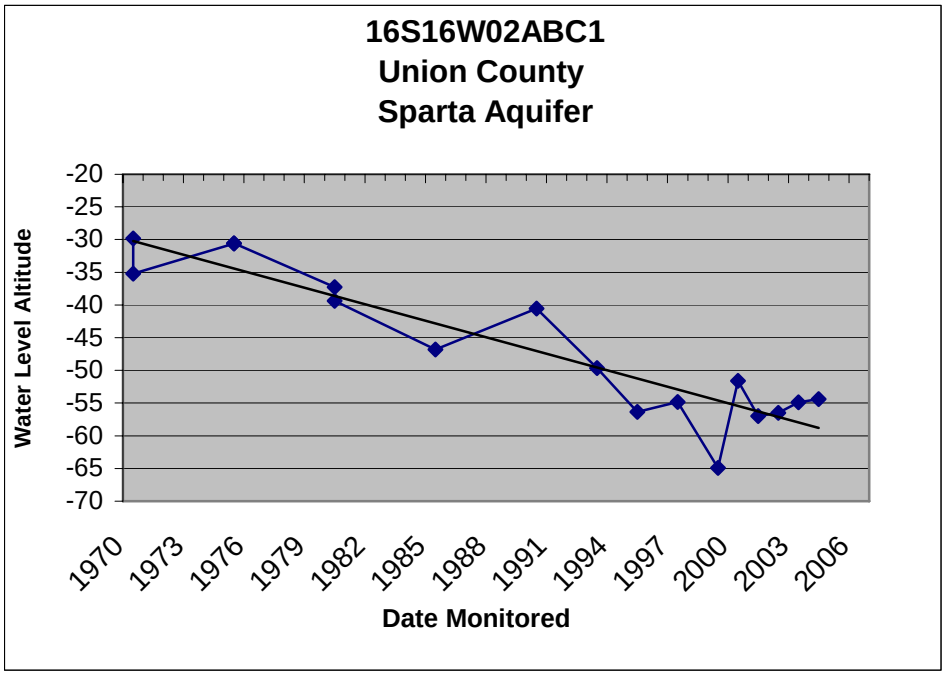

1995-2005 South Arkansas Study Area
Water Level Changes
(Sparta Aquifer)
Dallas
Nevada
Ouachita
Calhoun
Bradley
Columbia
Union
South Arkansas Study Area
10 Year Change:
Average Change: -1.16 feet
24 of 42 Wells Showed Declines
County | Avg Change, ft.
Bradley | -0.34
Columbia | 5.83
Ouachita | -9.14
Union | -2.08
Legend
Wells
South Arkansas Study Area
N
0 5 10 20 30 40
Miles

Fig. 12

On December 20, 2005, the Union County Water Conservation Board announced completion of the Ouachita River Alternative Water Supply Project. Among the noted accomplishments were:

- Sparta water levels rising for the first time in 60 years
- $23 million debt paid off early
- 1 cent temporary county-wide sales tax to be removed January 1, 2006
- Chemtura, El Dorado Chemical, Lion Oil on river water

With water levels rising and water use being reduced to rates that are approaching sustainable yield goals, South Arkansas is rapidly approaching water conservation goals that will provide a protected water resource for current and future water users.



GRAND PRAIRIE CRITICAL GROUND-WATER AREA

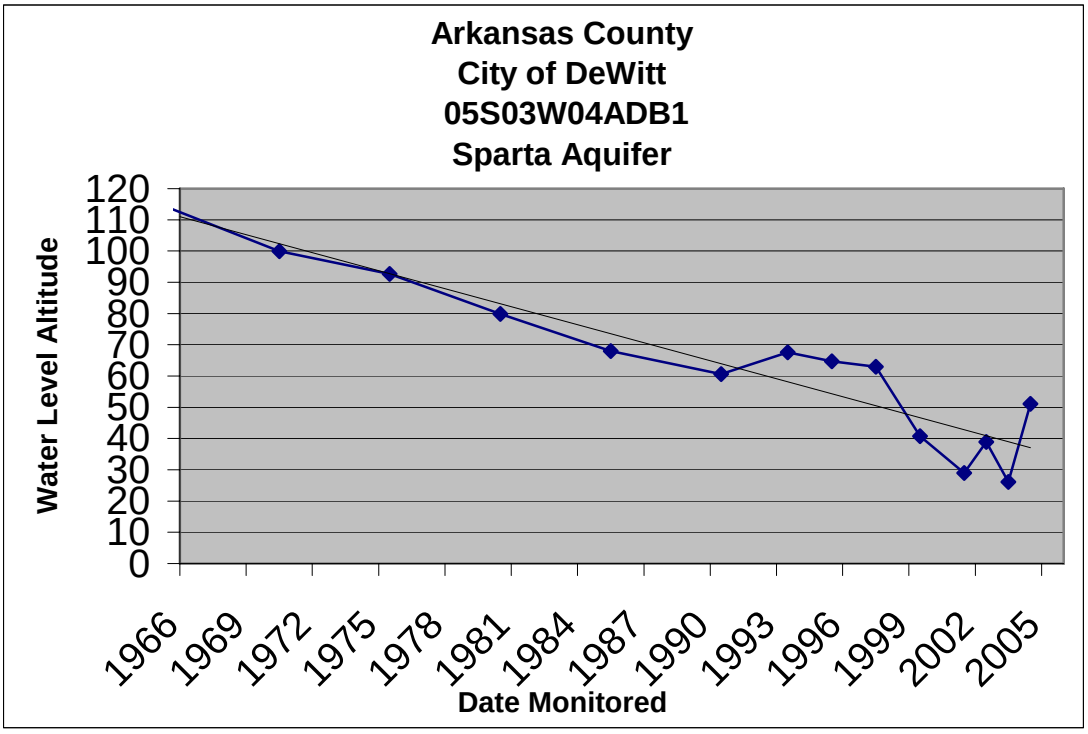
The designation “Grand Prairie” varies according to authors, but is commonly used to designate the area bounded on the south and west by the Arkansas River and on the north and east by the White and Little Red Rivers. (Ackerman, 1996) (Fig.1) This area was designated as a critical ground-water area for the alluvial aquifer and for the Sparta/Memphis aquifer in July 1998. Since designation, water levels have continued to decline throughout much of the Grand Prairie in both the alluvial and Sparta/Memphis aquifers.

During the 2004-2005 monitoring period there 85 wells monitored with 20 (23.5%) showing average declines in the Sparta/Memphis aquifer throughout the counties in this study area. Prairie County had an average change of +9.96 feet, Jefferson County +3.74 feet, Lonoke County +0.19 feet, and Arkansas County an average change of +4.04 feet. The average change for the entire study area for this time was +3.99 feet. (Fig.13) This water-level rise is consistent with observed water levels in especially wet years such as 2004.

During the 5-year monitoring period from 2000 to 2005 Jefferson County had an average change of -2.53 feet, and Lonoke County -2.90 feet. Arkansas County had an average change of +1.89 feet and Prairie County +4.45 feet during this time. Although some counties will show short- term increases in water levels, even in areas of significant historical decline, the long-term effect of over-use can be seen in the hydrograph below. The entire Grand Prairie Study Area averaged a +3.80 foot change during this 5-year period in the Sparta/Memphis aquifer, with 15 of 31 wells monitored showing declines. (Fig.14) Sparta aquifer ground water withdrawals in Arkansas County have increased from an estimated 20.3 mgd in 1970 (Halburg, 1972) to a reported water use of 60.1 mgd in 2002, an increase of almost 200 percent.

During the 10-year monitoring period from 1995 to 2005 every county in the study area has shown an average decline in ground water levels in the Sparta/Memphis aquifer with Prairie County leading the declines with an average change of -13.07 feet. Arkansas County had an average change of -10.10 feet, Lonoke

County an average change of -11.97 feet, and Jefferson County – 8.47 feet during this time. The entire Grand Prairie Study Area had an average decline of -10.21 feet in the Sparta/Memphis aquifer from 1995 to 2004, with 32 of the 37 wells monitored (86.5%) showing declines. (Fig. 15)



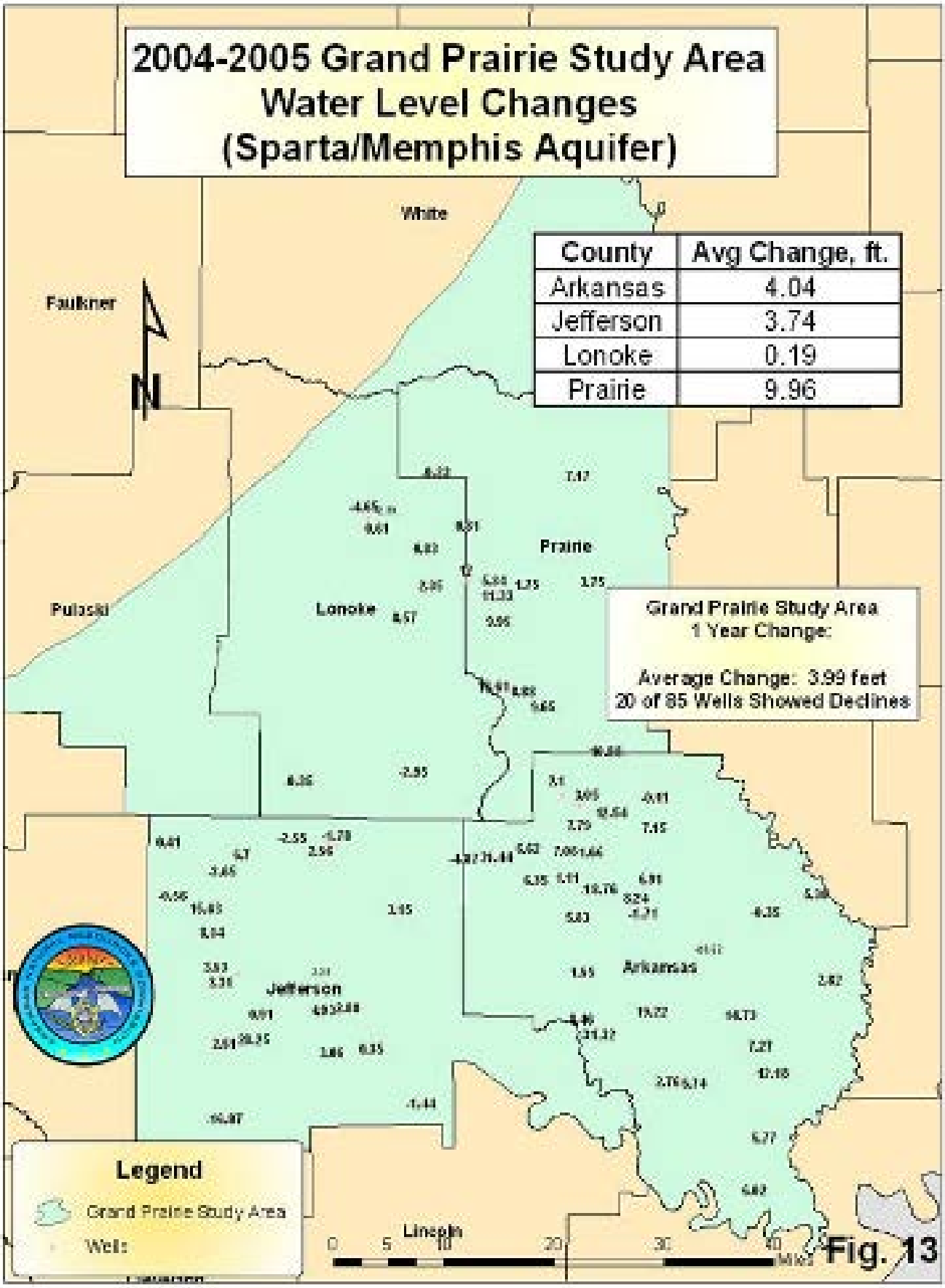

2004-2005 Grand Prairie Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
White
Faulkner
Pulaski
Prairie
Lonoke
Jefferson
Arkansas
Lincoln
N
County | Avg Change, ft.
Arkansas | 4.04
Jefferson | 3.74
Lonoke | 0.19
Prairie | 9.96
Grand Prairie Study Area
1 Year Change:
Average Change: 3.99 feet
20 of 85 Wells Showed Declines
Legend
Grand Prairie Study Area
Wells
0 5 10 20 30 40 Miles

Fig. 13

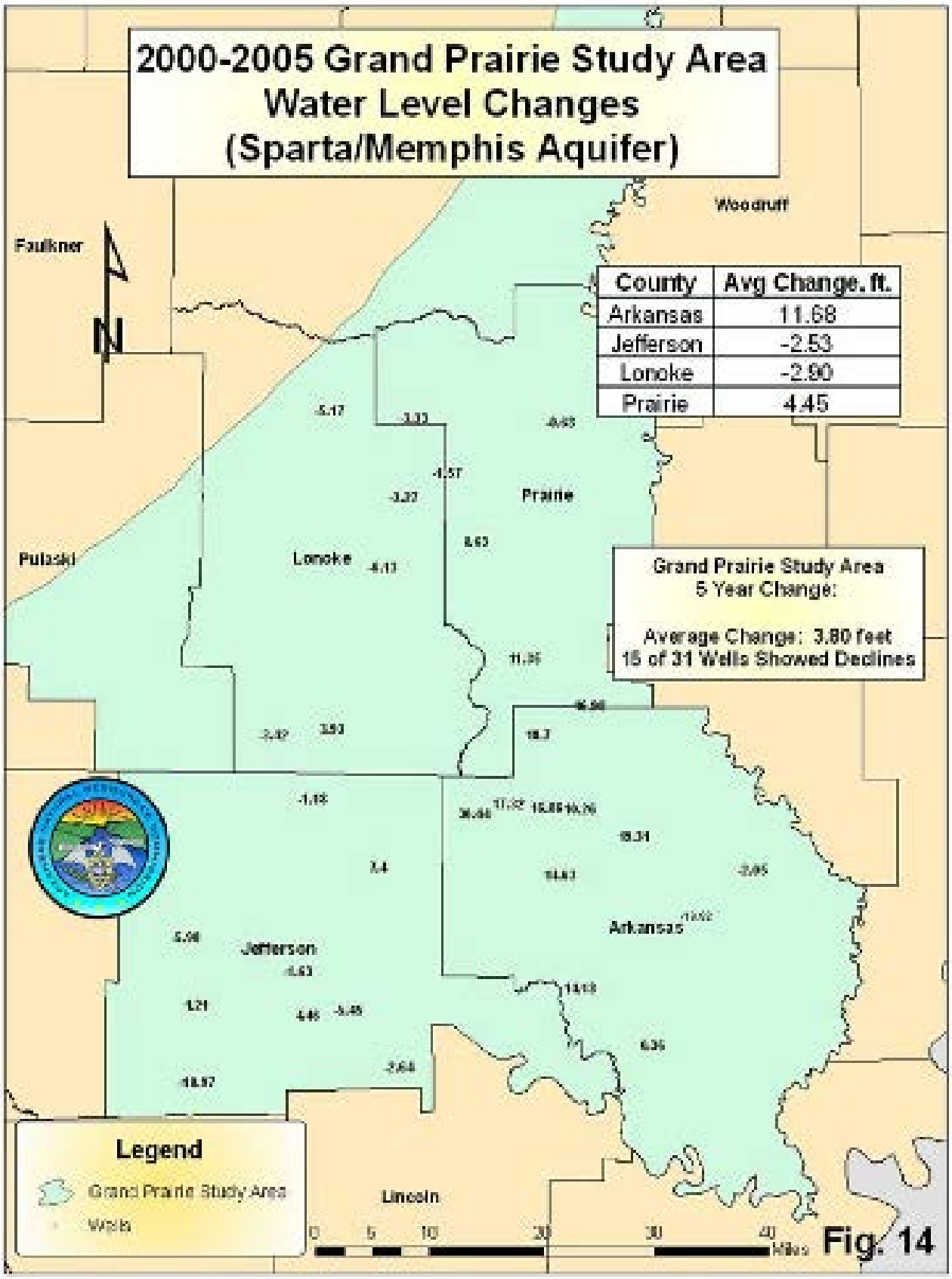

2000-2005 Grand Prairie Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Woodruff
Faulkner
N
Pulaski
Lonoke
Prairie
Jefferson
Arkansas
Lincoln
County | Avg Change. ft.
Arkansas | 11.68
Jefferson | -2.53
Lonoke | -2.90
Prairie | 4.45
Grand Prairie Study Area
5 Year Change:
Average Change: 3.80 feet
15 of 31 Wells Showed Declines
Legend
Grand Prairie Study Area
Wells
0 5 10 20 30 40 Miles

Fig. 14

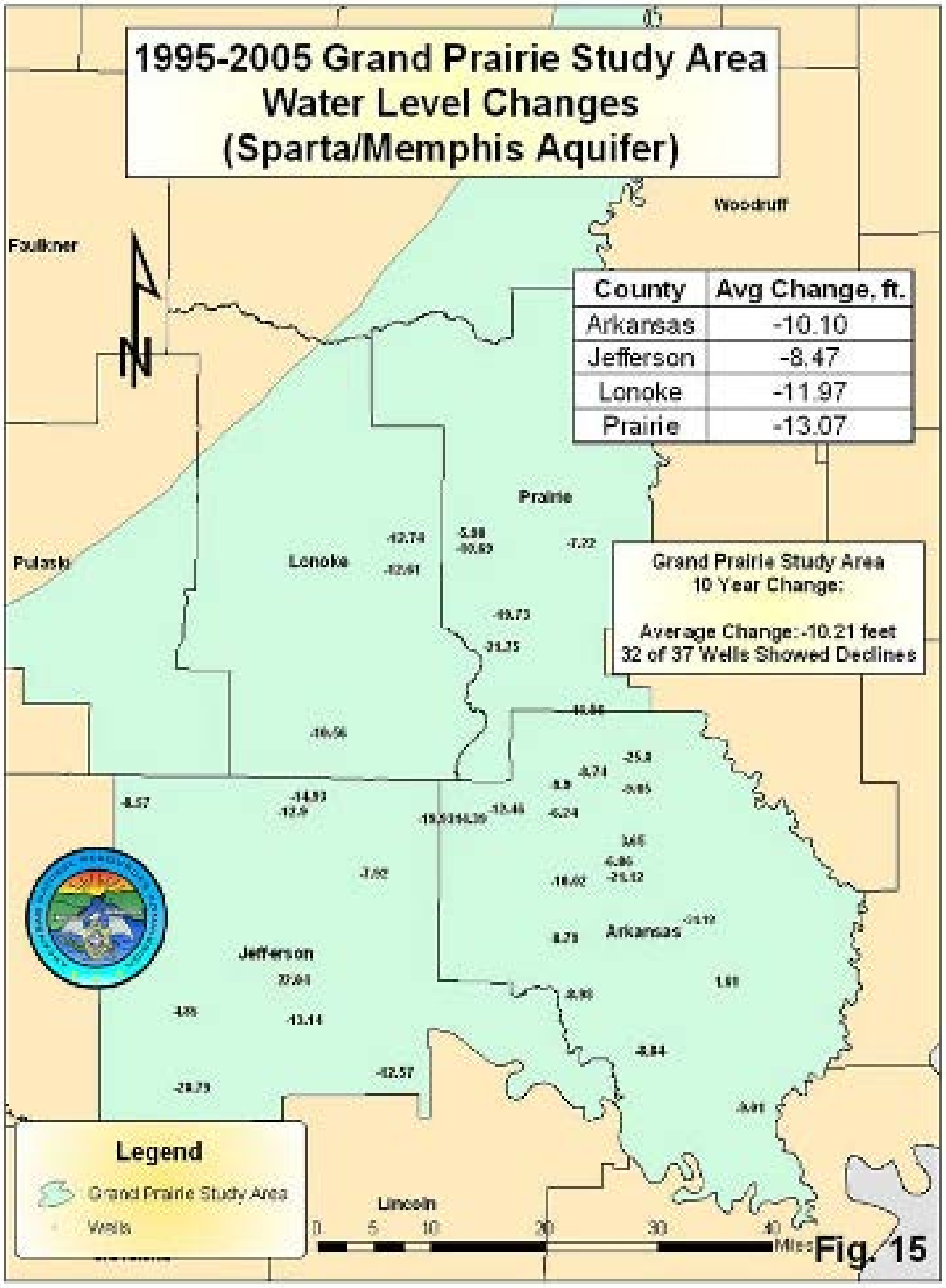
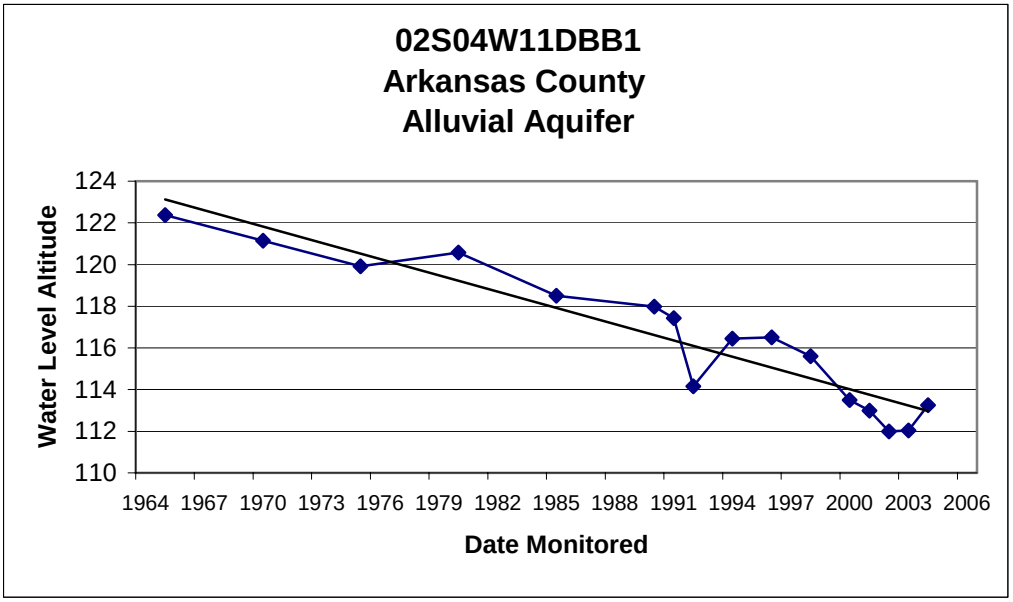

1995-2005 Grand Prairie Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Woodruff
Faulkner
Pulaski
Lonoke
Prairie
Jefferson
Arkansas
Lincoln
County | Avg Change, ft.
Arkansas | -10.10
Jefferson | -8.47
Lonoke | -11.97
Prairie | -13.07
Grand Prairie Study Area
10 Year Change:
Average Change: -10.21 feet
32 of 37 Wells Showed Declines
Legend
Grand Prairie Study Area
Wells
0 5 10 20 30 40 Miles

Fig. 15

In the alluvial aquifer during the 2004-2005 monitoring period for the Grand Prairie Critical Ground Water Area, Pulaski County had an average change of +4.61 feet, White County +1.57 feet, Prairie County -0.43 feet, Lonoke County +0.38 feet, Jefferson county +3.76 feet, and Arkansas County +0.58 feet, respectively. The average change for the entire study area for 2004-2005 in the alluvial aquifer was +0.82 feet, with 49 of the 160 wells (30.6%) monitored showing declines. (Fig.16)

During the 5-year monitoring period from 2000 to 2005, some counties showed declines in average ground water levels, while others showed positive average changes in the alluvial aquifer. Pulaski County had an average change of +5.82 feet, White County +3.70 feet, and Arkansas County +1.05 feet. The counties showing average declines during this time were Jefferson County with an average change of -0.24 feet, Prairie County -0.90 feet, and Lonoke County -4.96 feet respectively. The Grand Prairie Study Area had an average decline –4.80 feet during this 5-year period for the alluvial aquifer, with 62 of the 123 wells (50.4%) monitored showing declines. (Fig.17)

From 1995 to 2005 the alluvial aquifer in the Grand Prairie Study Area had an average change of –5.18 feet, with 15 of 21 (71.4%) wells monitored showing declines. Changes during this 10-year period ranged from –8.80 feet in Prairie County, to +6.35 feet in White County. Arkansas County had an average change of +1.08 feet, while Jefferson and Lonoke Counties showed average declines of -8.44 feet and -8.16 feet respectively. (Fig.18)



For the alluvial aquifer in the Grand Prairie Study Area the USGS Conjunctive Use Optimization Model indicated that the ground-water use in this area is substantially more than is sustainable. Based on the 1997 data, Jefferson County could sustain 76% of the actual pumping rate, Monroe County 74%, Prairie County 50%, Arkansas County 47%, and Lonoke County 42%. (Fig.38) The Grand Prairie Irrigation Project, once in place, is expected to significantly help reduce these counties' unmet demands for irrigation.

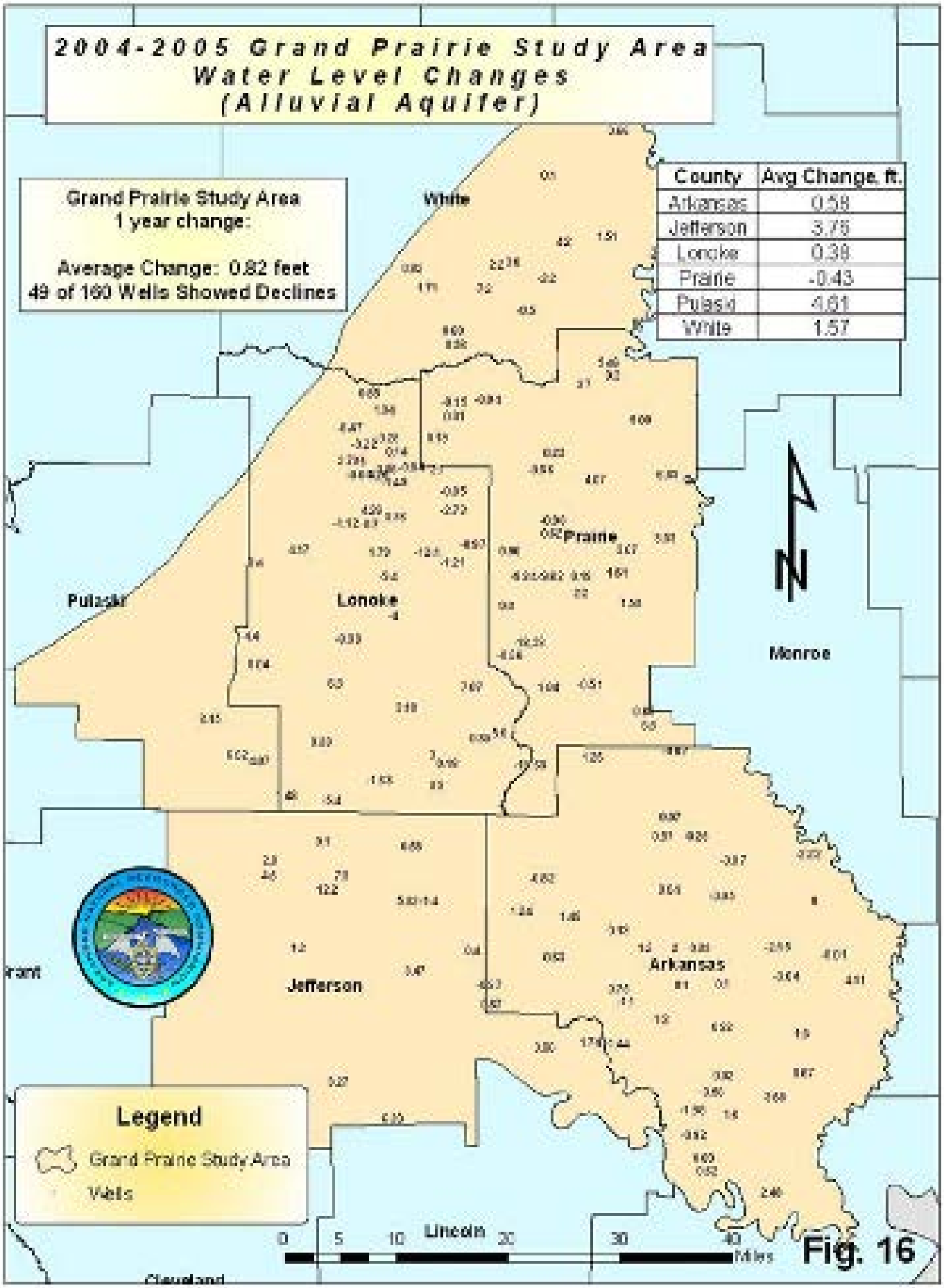
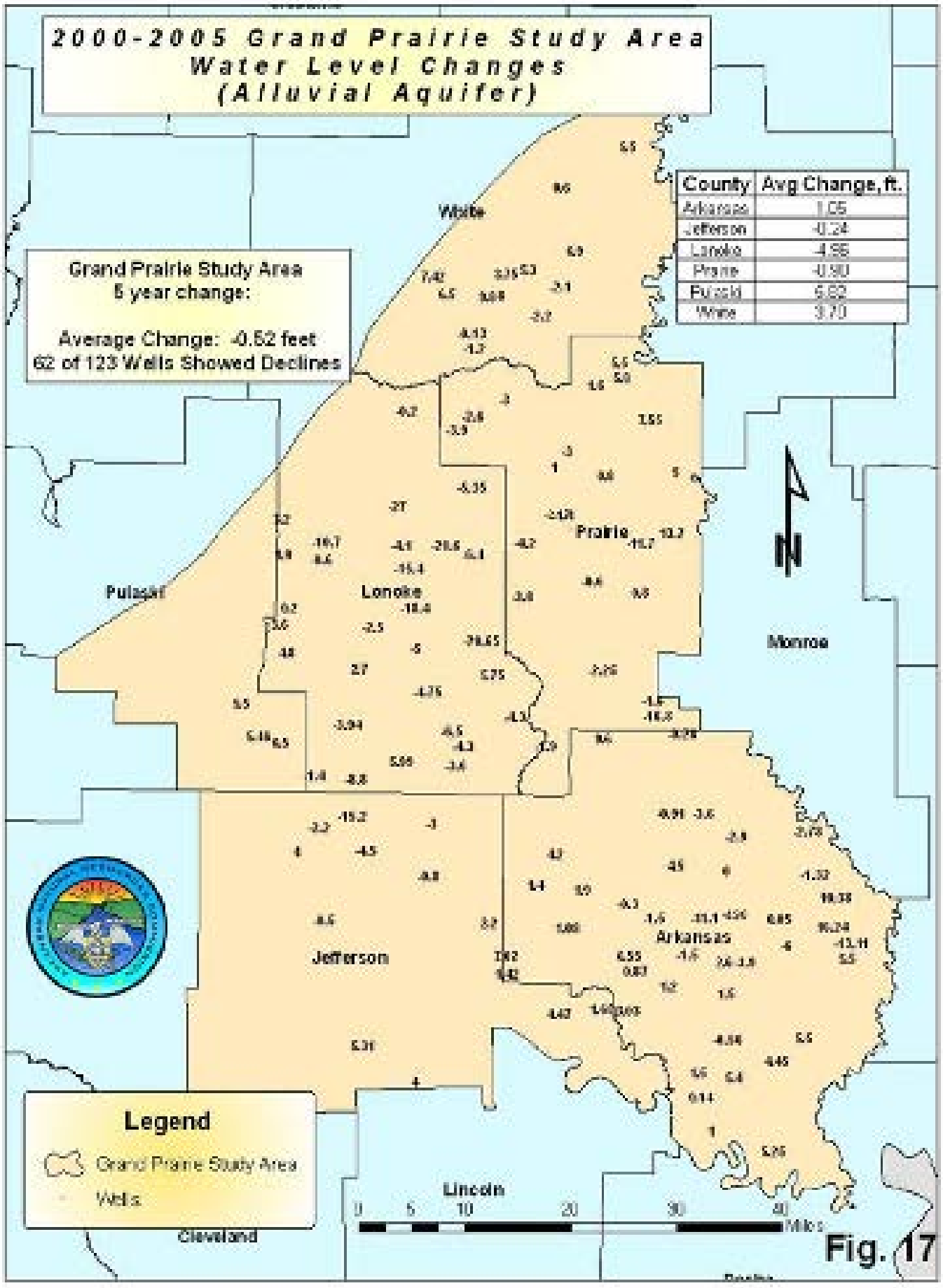
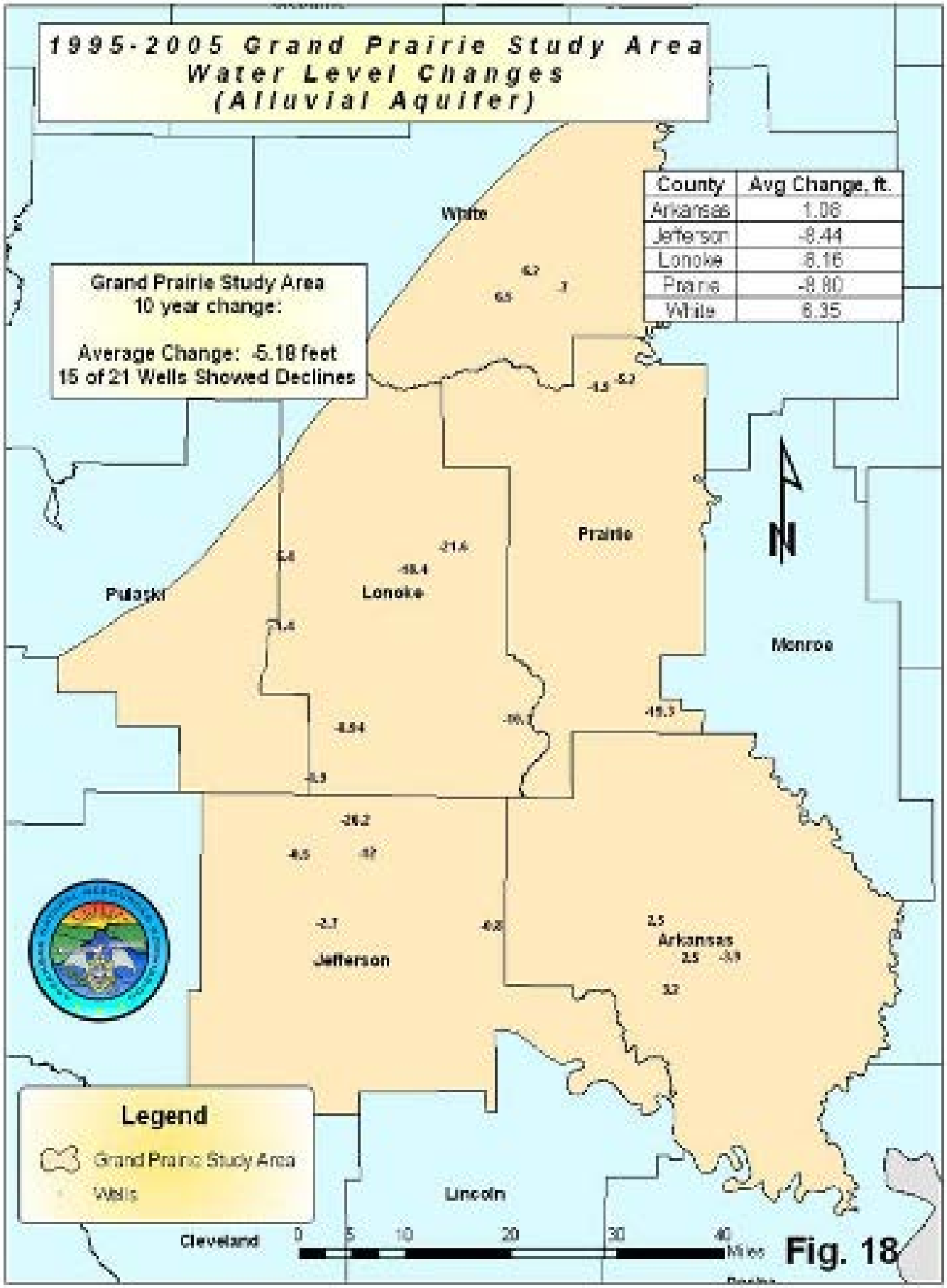

2004-2005 Grand Prairie Study Area
Water Level Changes
(Alluvial Aquifer)
Grand Prairie Study Area
1 year change:
Average Change: 0.82 feet
49 of 160 Wells Showed Declines
County | Avg Change, ft.
Arkansas | 0.58
Jefferson | 3.75
Lonoke | 0.39
Prairie | -0.43
Pulaski | 4.61
White | 1.57
White
Prairie
Pulaski
Lonoke
Monroe
Arkansas
Jefferson
Lincoln
Cleveland
N
Legend
Grand Prairie Study Area
Wells
0 5 10 20 30 40 Miles

Fig. 16


2000-2005 Grand Prairie Study Area
Water Level Changes
(Alluvial Aquifer)
Grand Prairie Study Area
5 year change:
Average Change: -0.52 feet
62 of 123 Wells Showed Declines
County | Avg Change, ft.
Arkansas | 1.05
Jefferson | -0.24
Lonoke | -4.86
Prairie | -0.80
Pulaski | 5.62
White | 3.70
White
Pulaski
Lonoke
Prairie
Monroe
Arkansas
Jefferson
Lincoln
Cleveland
Legend
Grand Prairie Study Area
Wells
0 5 10 20 30 40 Miles
Fig. 17


1995-2005 Grand Prairie Study Area
Water Level Changes
(Alluvial Aquifer)
Grand Prairie Study Area
10 year change:
Average Change: -5.18 feet
15 of 21 Wells Showed Declines
County | Avg Change, ft.
Arkansas | 1.08
Jefferson | -8.44
Lonoke | -6.16
Prairie | -8.80
White | 6.35
White
Prairie
Monroe
Pulaski
Lonoke
Jefferson
Arkansas
Lincoln
Cleveland
Legend
Grand Prairie Study Area
Wells
0 5 10 20 30 40 Miles
Fig. 18

CACHE STUDY AREA

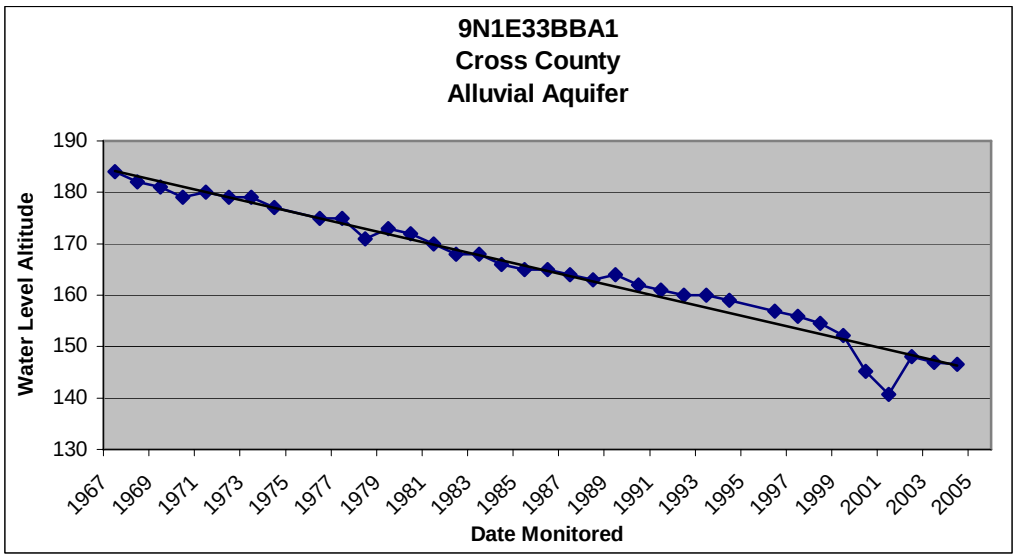
The Cache Study Area is defined as the 7300 square mile region between Crowley's Ridge to the east, the Fall Line to the west, the state line to the north, and the White River to the south. (Ackerman, 1996) This study area includes portions of Craighead, Poinsett, Cross, St. Francis, Lee, Phillips, Monroe, Woodruff, Jackson, Lawrence, Greene, and Clay Counties.

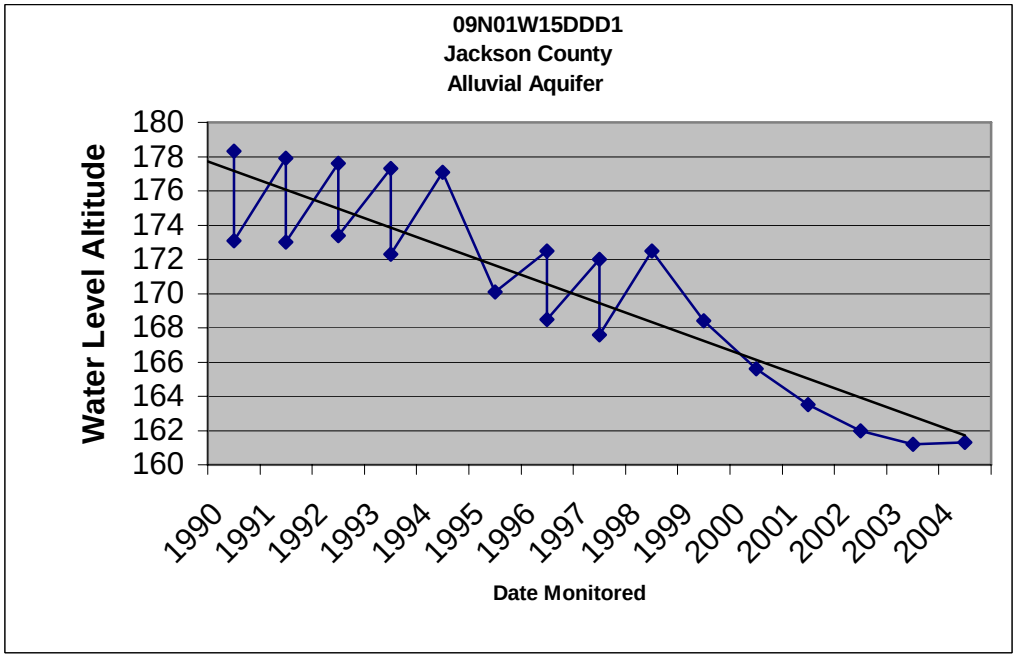
Monitoring of the alluvial aquifer in this study area from 2004-2005 showed little change, with the entire study area showing an average change of +0.04 feet, and 127 of the 275 wells monitored (46.2%) having a decline in static water level. During this same time Craighead County showed an average change of –0.21 feet, Cross County +0.64 feet, Greene County -0.70 feet, Independence County +1.58 feet, Jackson County +0.14 feet, Lawrence County -1.10 feet, Lee County +1.48 feet, Monroe County +0.58 feet, Poinsett County -0.93, Randolph County -5.91, St. Francis -0.78 feet, Woodruff County +0.44, Phillips County +2.97 feet, and Clay County +0.07 feet, respectively. (Fig.19)

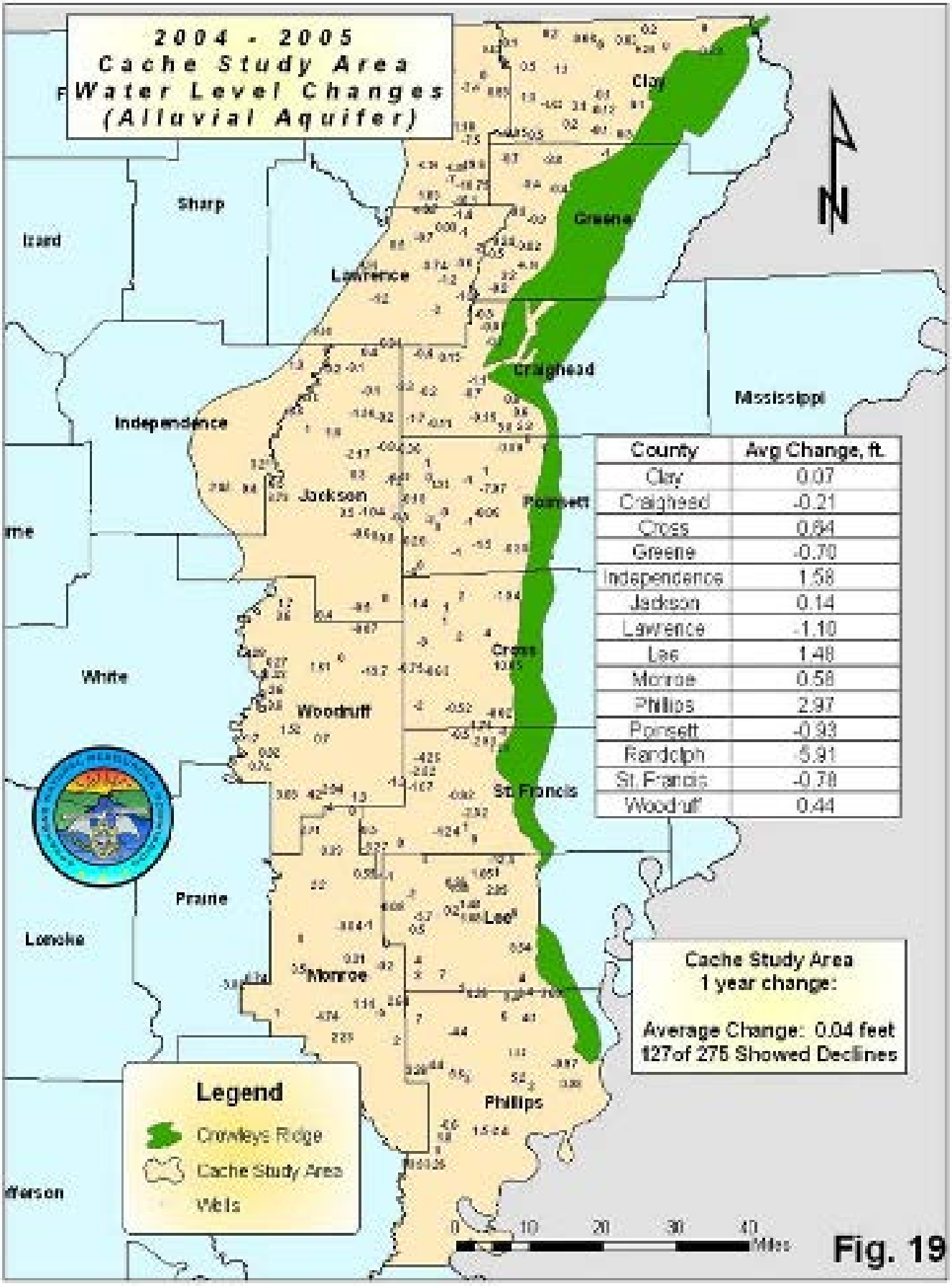
The alluvial aquifer in the Cache Study Area was also evaluated for change in water levels for a 5-year time period from 2000 to 2005. For this period the counties also showed mixed increases and declines in static water level changes with 9 of the 14 counties showing overall declines. Greene County had an average change of -4.03 feet, Clay County -0.06 feet, Craighead County -2.43 feet, Cross County -4.55 feet, Independence County +2.04 feet, Jackson County -0.87 feet, Lee County +0.64 feet, Monroe County +0.02 feet, Phillips County +3.46 feet, Poinsett County -5.85 feet, Randolph -3.27 feet, St. Francis County -4.95 feet, and Woodruff County +0.46 feet, respectively. The entire Cache Study Area showed an average change of -1.51 feet in the alluvial aquifer during this 5-year monitoring period. Out of the 248 wells monitored, 155 (62.5%) of these showed average declines. (Fig.20)

Average change in 144 wells was also compared in the alluvial aquifer for a 10-year timeframe, for the Cache Study Area. Of the 144 wells monitored, 116 of these (80.6%) showed an average decline. Every county in the study area showed an average decline in static water levels with the exception of Phillips County which

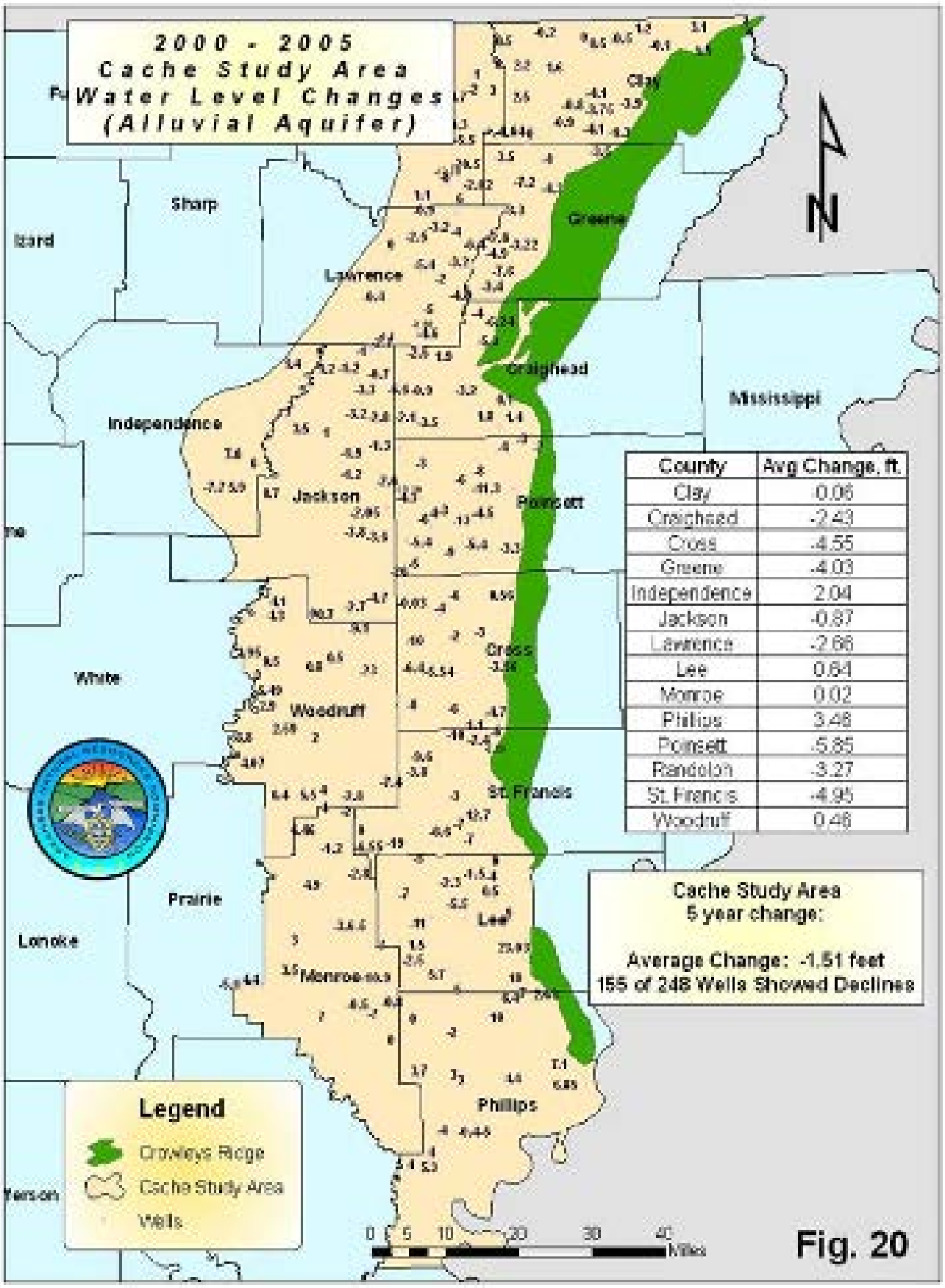
showed an average change of +1.21 feet. The other counties' average changes during this time were; Cross -11.17 feet, Craighead -9.31 feet, Jackson -4.33 feet, Lawrence -6.52 feet, Lee -5.40 feet, Monroe -2.75 feet, Poinsett -11.71 feet, Randolph -9.31 feet, St. Francis -8.80 feet, Woodruff -5.60, and Clay County -6.45 feet respectively. The average change for the study area over this time was a decline of -6.25 feet. (Fig. 21)





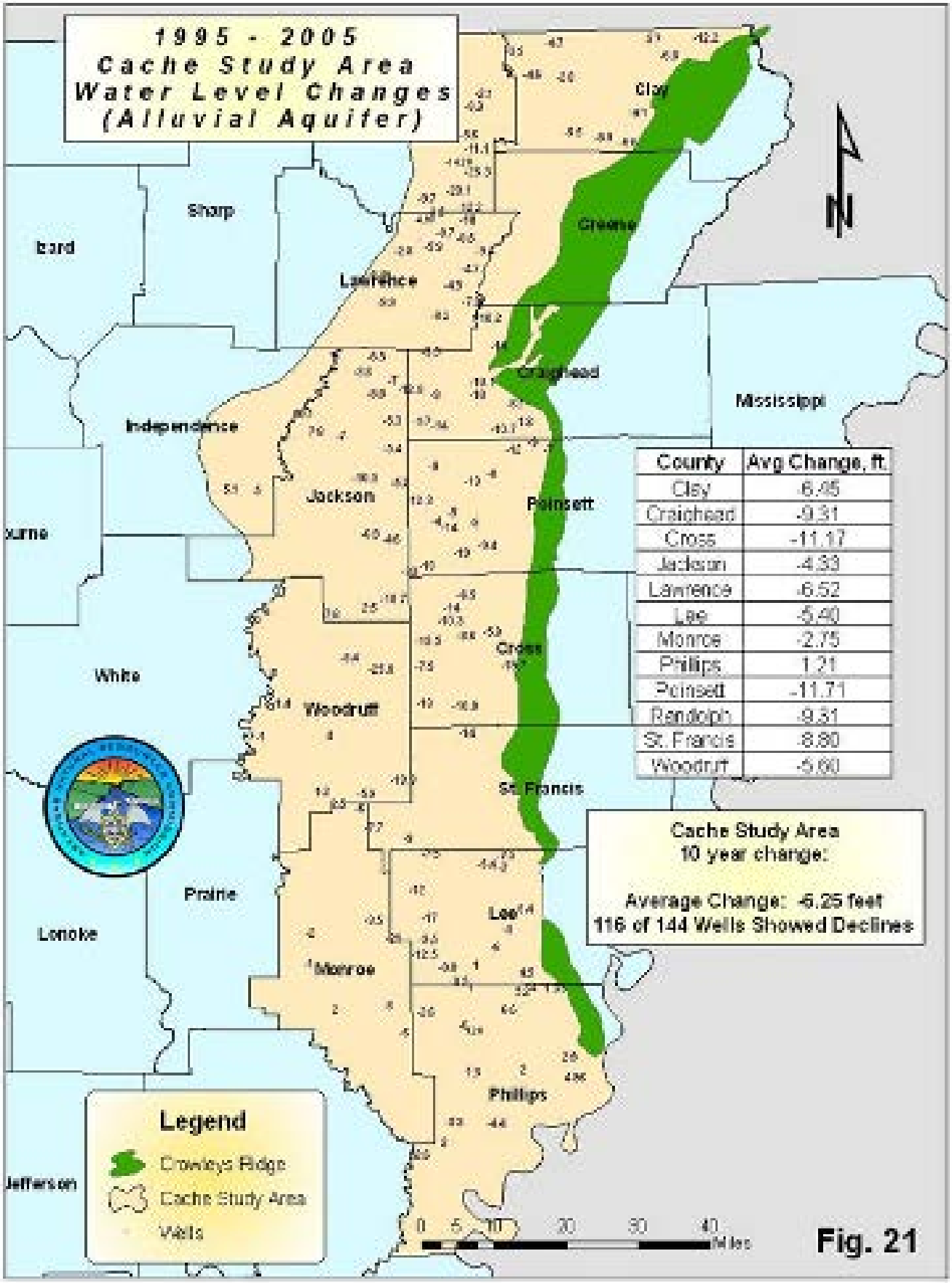


County	Avg Change, ft.
Clay	0.07
Craighead	-0.21
Cross	0.84
Greene	-0.70
Independence	1.58
Jackson	0.14
Lawrence	-1.10
Lee	1.48
Monroe	0.58
Phillips	2.97
Poinsett	-0.93
Randolph	-5.91
St. Francis	-0.78
Woodruff	0.44



County	Avg Change, ft.
Clay	0.06
Craighead	-2.43
Cross	-4.55
Greene	-4.03
Independence	2.04
Jackson	-0.87
Lawrence	-2.66
Lee	0.64
Monroe	0.02
Phillips	3.48
Poinsett	-5.85
Randolph	-3.27
St. Francis	-4.95
Woodruff	0.46

Fig. 20


1995 - 2005
Cache Study Area
Water Level Changes
(Alluvial Aquifer)
Clay
Greene
Sharp
Izard
Lawrence
Craighead
Mississippi
Independence
Jackson
Poinsett
Cross
White
Woodruff
St. Francis
Prairie
Lonoke
Monroe
Lee
Phillips
Jefferson
N
County | Avg Change, ft.
Clay | -6.45
Craighead | -9.31
Cross | -11.17
Jackson | -4.33
Lawrence | -6.52
Lee | -5.40
Monroe | -2.75
Phillips | 1.21
Poinsett | -11.71
Randolph | -9.31
St. Francis | -8.80
Woodruff | -5.60
Cache Study Area
10 year change:
Average Change: -6.25 feet
116 of 144 Wells Showed Declines
Legend
Crowleys Ridge
Cache Study Area
Wells
0 5 10 20 30 40
Miles
Fig. 21

Monitoring of the Sparta/Memphis aquifer in the Cache Study Area from 2004 to 2005 shows that the study area had an overall average decline in static water level of -0.22 feet. Although there are not as many irrigation wells in the Sparta/Memphis aquifer as there are in the alluvial aquifer in this study area, there has been an increase in recent years as the water level in the alluvial aquifer continues to drop. Sixteen of the 33 wells (48.5%) monitored showed declines during this time period. The average change for the counties in this study area over the one-year period (2004-2005) were; Craighead County -2.28 feet, Cross County +1.85 feet, Monroe County -1.41 feet, Phillips County -2.98 feet, Poinsett County +0.43 feet, and Woodruff County +3.38 feet respectively. (Fig.22)

During the 2000 to 2005 monitoring period the Sparta/Memphis aquifer in the Cache Study Area had an average water level decline of –2.41 feet, with 15 of the 16 wells monitored (93.8%) showing decline. Woodruff County had an average change of -1.48 feet, Phillips County -3.10 feet, and Poinsett County -2.49 feet respectively. (Fig. 23)

For the 10-year monitoring period, there are very few monitoring points due to the scarcity of monitoring points that were collected in 1995. Each year this data improves with the continual addition of Sparta/Memphis wells in this area to monitor. The data that was collected shows a -6.15 average change in the static water level in this area during this time, with 10 of the 13 wells monitored (76.9%) showing declines. Phillips County had an average change of -5.22 feet, Cross County -8.51 feet, and Monroe County -9.35 feet respectively. (Fig. 24)

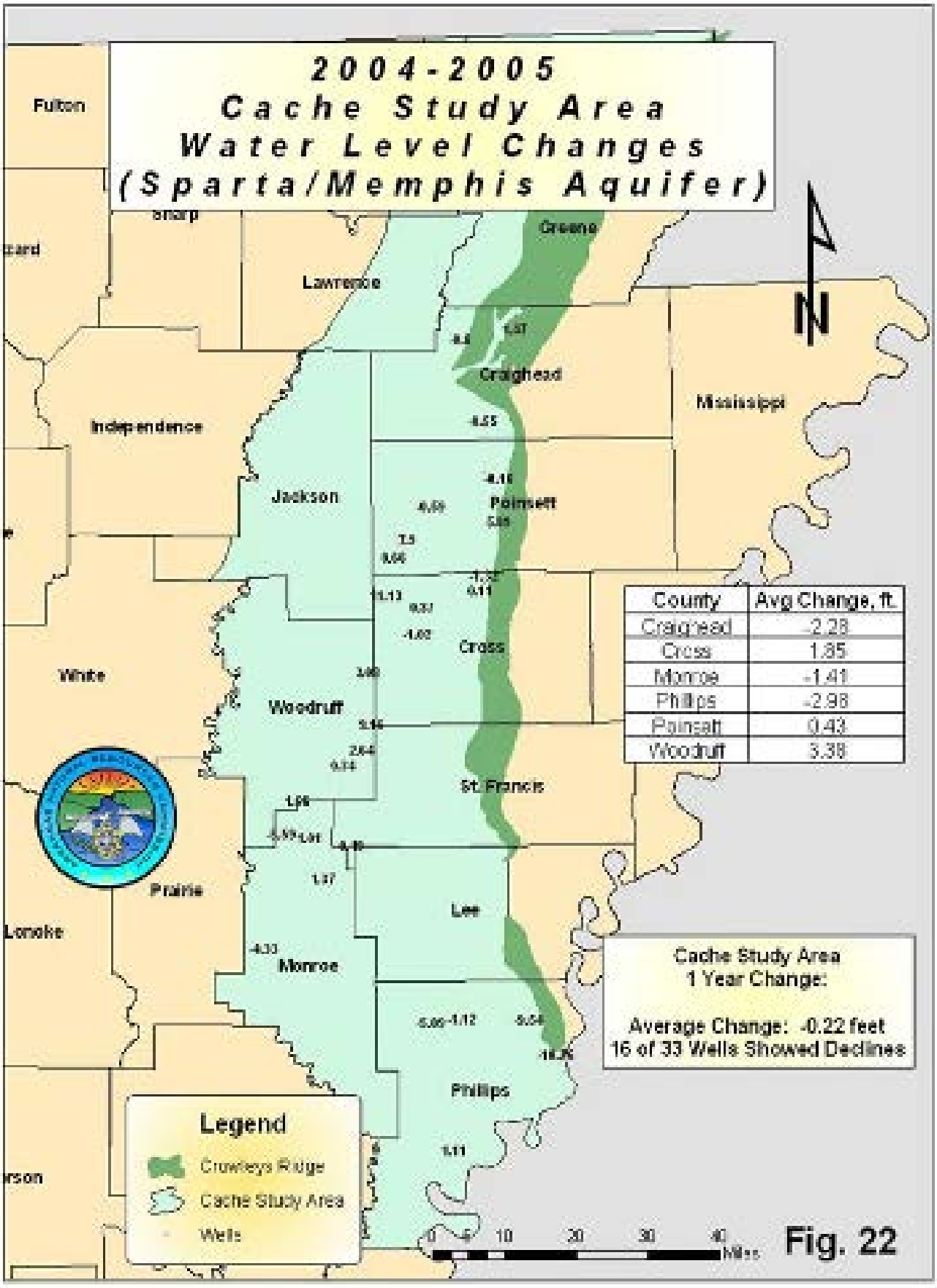
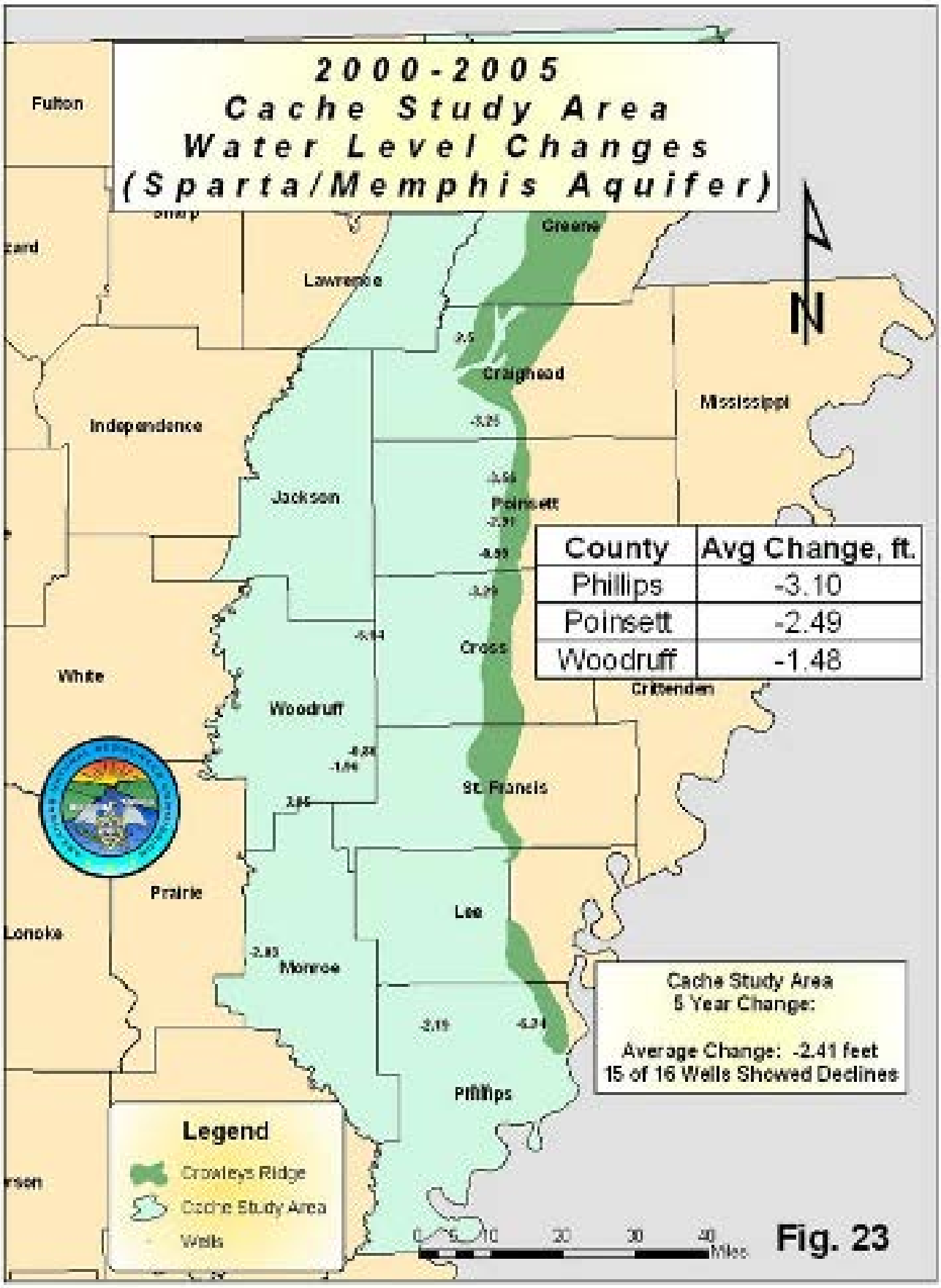
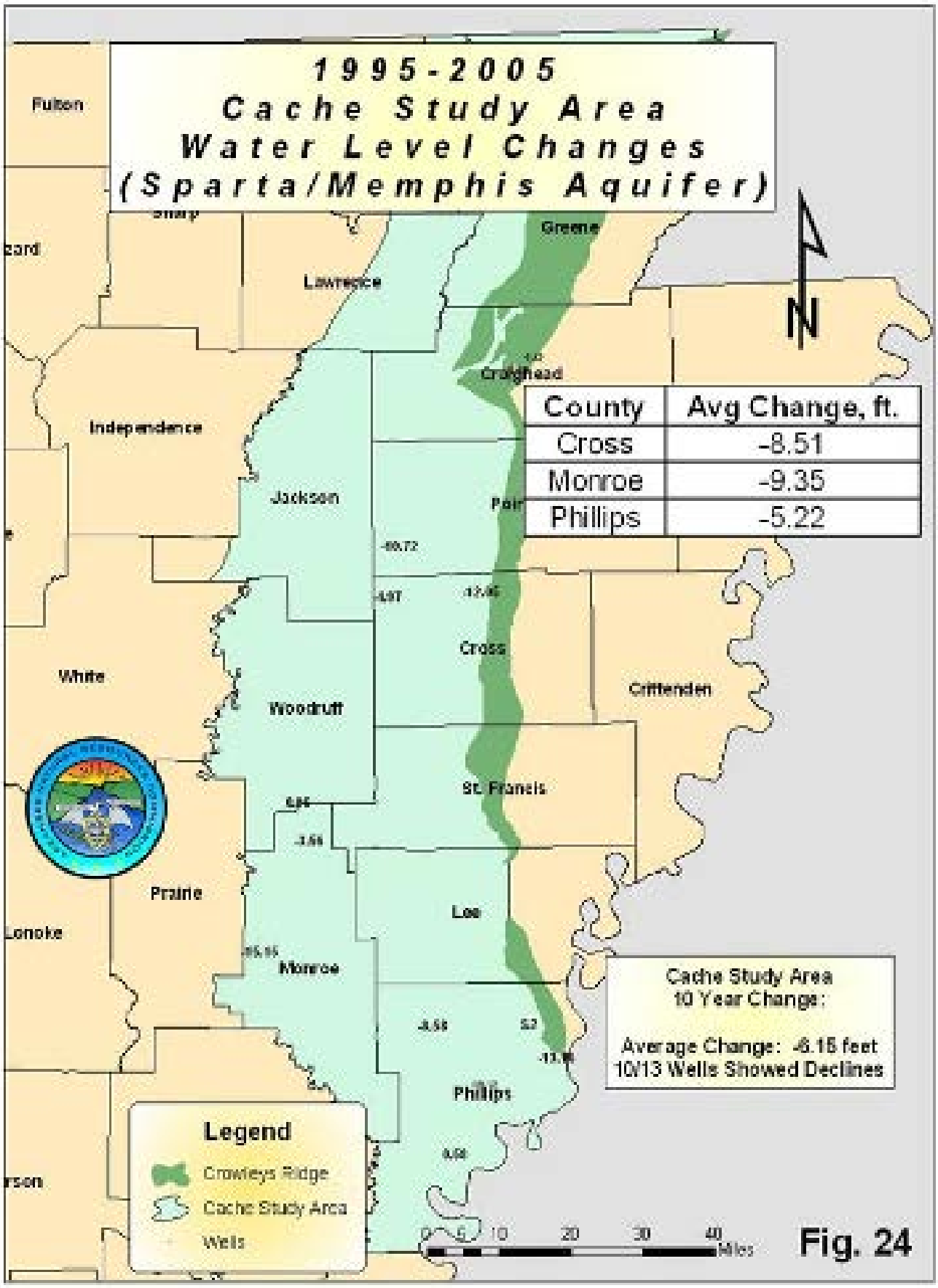

2004-2005
Cache Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Fulton
Sharp
Lawrence
Greene
Craighead
Mississippi
Independence
Jackson
Poinsett
White
Woodruff
Cross
St. Francis
Prairie
Lee
Monroe
Phillips
Lonoke
N
County | Avg Change, ft.
Craighead | -2.28
Cross | 1.85
Monroe | -1.41
Phillips | -2.98
Poinsett | 0.43
Woodruff | 3.38
Cache Study Area
1 Year Change:
Average Change: -0.22 feet
16 of 33 Wells Showed Declines
Legend
Crowleys Ridge
Cache Study Area
Wells
0 5 10 20 30 40
Miles

Fig. 22


2000-2005
Cache Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Fulton
Lawrence
Greene
Craighead
Mississippi
Independence
Jackson
Poinsett
Cross
White
Woodruff
Crittenden
St. Francis
Prairie
Lee
Monroe
Phillips
Lonoke
N
County | Avg Change, ft.
Phillips | -3.10
Poinsett | -2.49
Woodruff | -1.48
Cache Study Area
5 Year Change:
Average Change: -2.41 feet
15 of 16 Wells Showed Declines
Legend
Crowleys Ridge
Cache Study Area
Wells
0 5 10 20 30 40 Miles
Fig. 23


1995-2005
Cache Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Fulton
Sharp
Izard
Lawrence
Greene
Craighead
Independence
Jackson
Poinsett
White
Woodruff
Cross
Crittenden
St. Francis
Prairie
Lonoke
Monroe
Lee
Phillips
N
County | Avg Change, ft.
Cross | -8.51
Monroe | -9.35
Phillips | -5.22
Cache Study Area
10 Year Change:
Average Change: -6.15 feet
10/13 Wells Showed Declines
Legend
Crowleys Ridge
Cache Study Area
Wells
0 5 10 20 30 40 Miles
Fig. 24

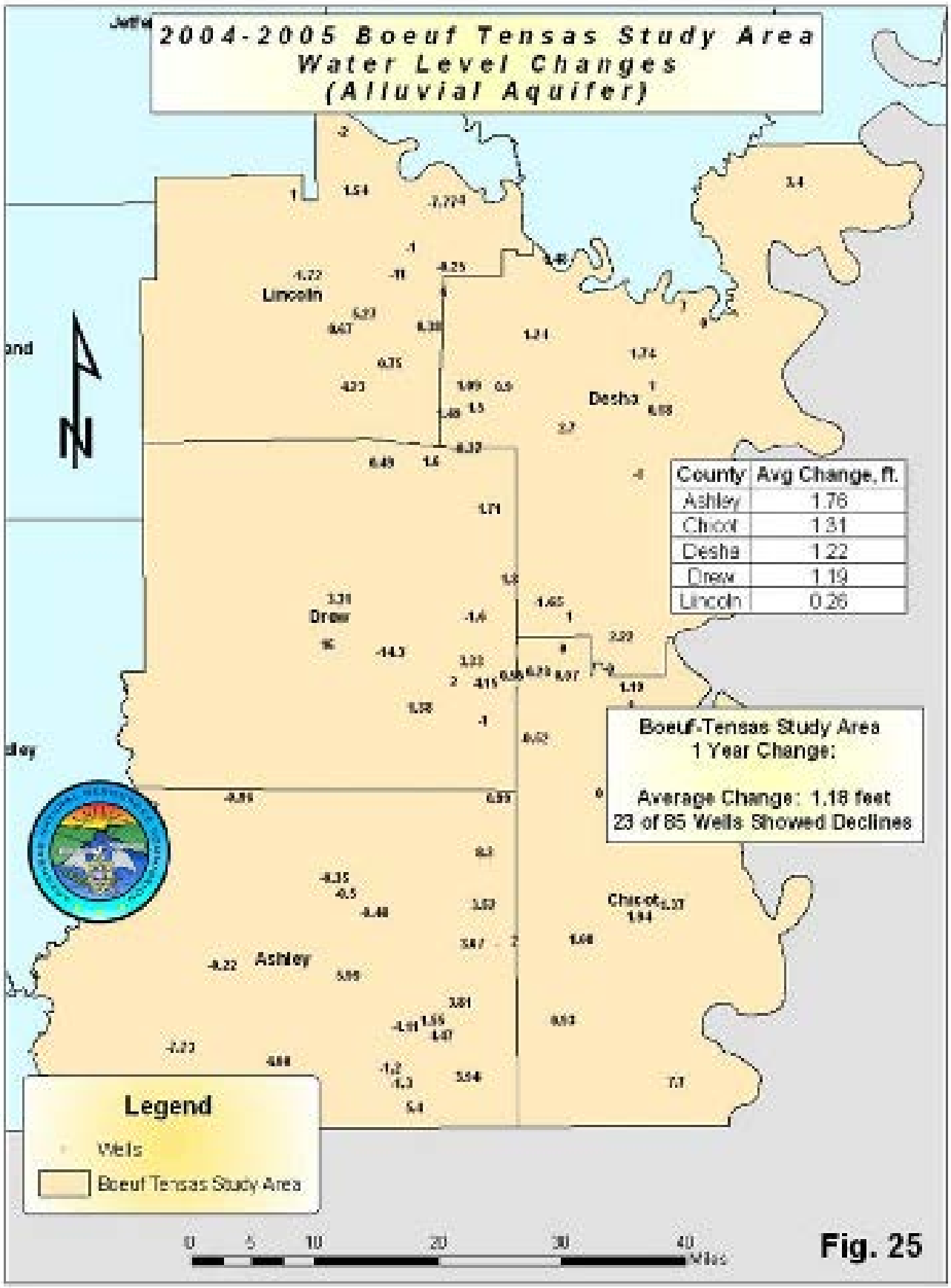
BOEUF-TENSAS STUDY AREA

The Boeuf-Tensas study area in southeast Arkansas is comprised of Ashley, Chicot, Desha, Drew, and Lincoln Counties. This hydrologic basin extends into Louisiana but for the purposes of this study will be bounded by the Arkansas state line to the south.

The alluvial aquifer data in the Boeuf-Tensas Study Area for the monitoring period of 2004-2005 showed nearly static conditions with the entire study area having an average change of +1.18 feet, and only 23 of the 85 wells monitored (27.1%) having declines in static water level. Lincoln County had an average change of +0.26 feet, Chicot County +1.31 feet, Desha County +1.22 feet, Drew County +1.19 feet, and Ashley County +1.76 feet respectively. (Fig.25)

During the 5-year monitoring period from 2000 to 2005 the study area had an average change of +0.65 feet in the alluvial aquifer, with 26 of the 60 wells monitored (43.3%) showing declines. Ashley County had an average change of + 4.39 feet, Chicot County +0.36 feet, and Drew County + 3.35 feet. Desha County and Lincoln Counties showed average declines during this time of -1.06 feet and -1.60 feet respectively. (Fig.26)

The data for the 10-year change in the Boeuf-Tenses shows every county in the study area had average declines. Ashley County an average change of -0.84 feet, Chicot County -6.87 feet, Desha County -6.82 feet, and Lincoln County -11.13 feet respectively. The entire study area showed an average change of -7.58 feet during this 10-year period in the alluvial aquifer with 19 of 22 wells monitored (86.4%) showing declines. (Fig.27)


2004-2005 Boeuf Tensas Study Area
Water Level Changes
(Alluvial Aquifer)
Lincoln
Desha
Drew
Ashley
Chicot
N
County | Avg Change, ft.
Ashley | 1.76
Chicot | 1.31
Desha | 1.22
Drew | 1.19
Lincoln | 0.26
Boeuf-Tensas Study Area
1 Year Change:
Average Change: 1.18 feet
23 of 85 Wells Showed Declines
Legend
Wells
Boeuf Tensas Study Area
0 5 10 20 30 40
Miles
Fig. 25

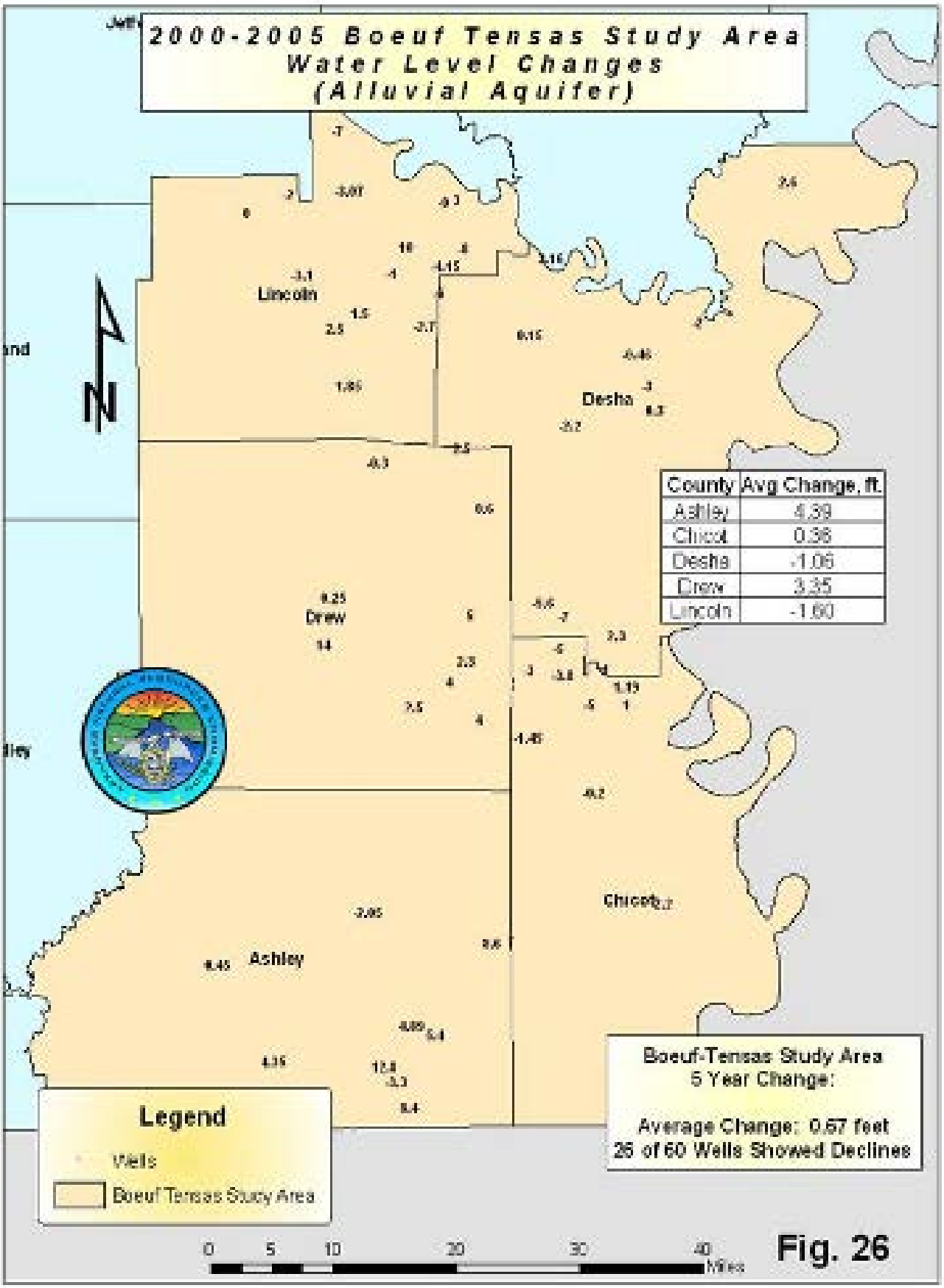

2000-2005 Boeuf Tensas Study Area
Water Level Changes
(Alluvial Aquifer)
Lincoln
Desha
Drew
Ashley
Chicot
N
County | Avg Change, ft.
Ashley | 4.39
Chicot | 0.36
Desha | -1.06
Drew | 3.35
Lincoln | -1.60
Boeuf-Tensas Study Area
5 Year Change:
Average Change: 0.67 feet
26 of 60 Wells Showed Declines
Legend
Wells
Boeuf Tensas Study Area
0 5 10 20 30 40
Miles

Fig. 26

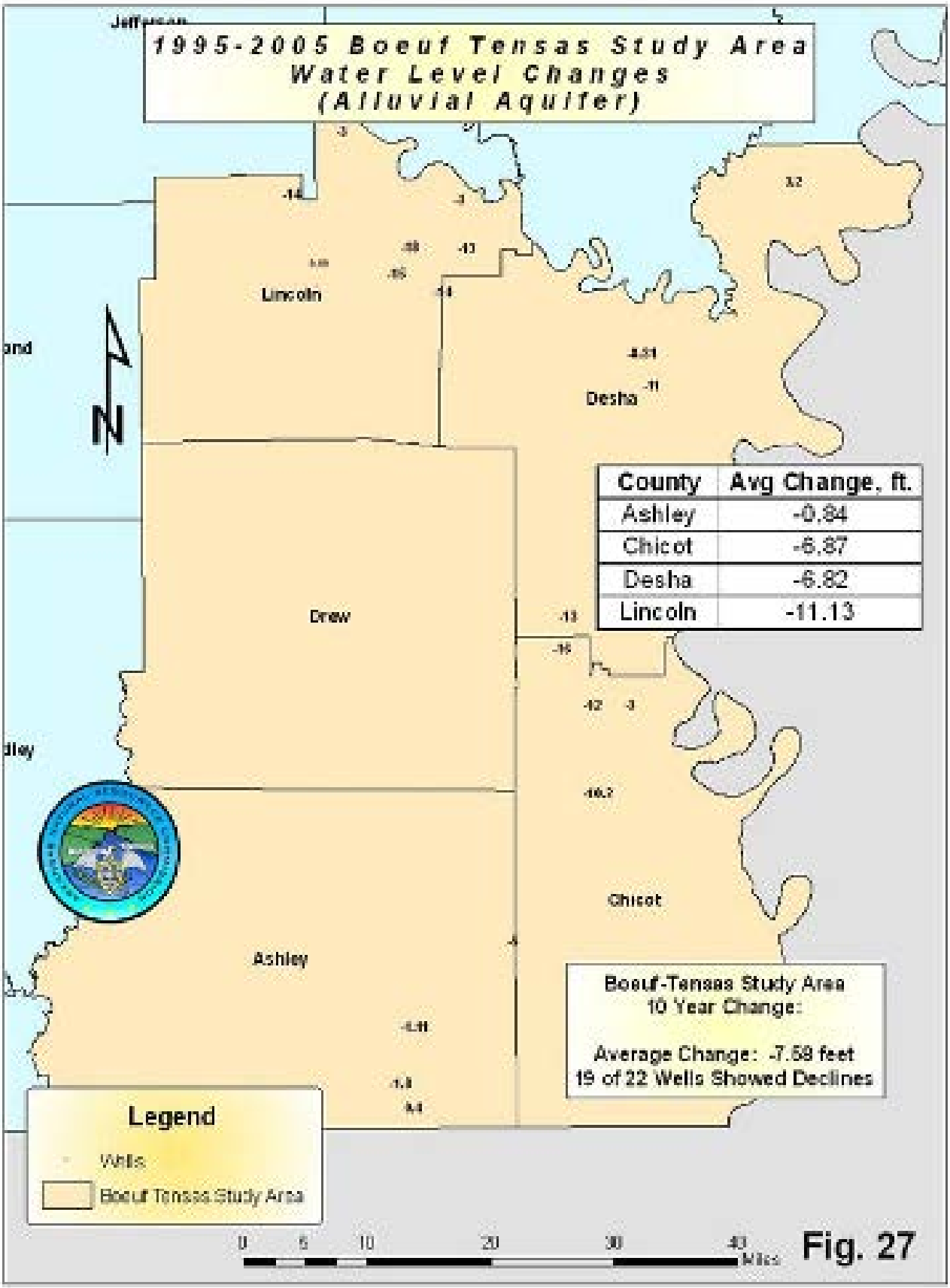
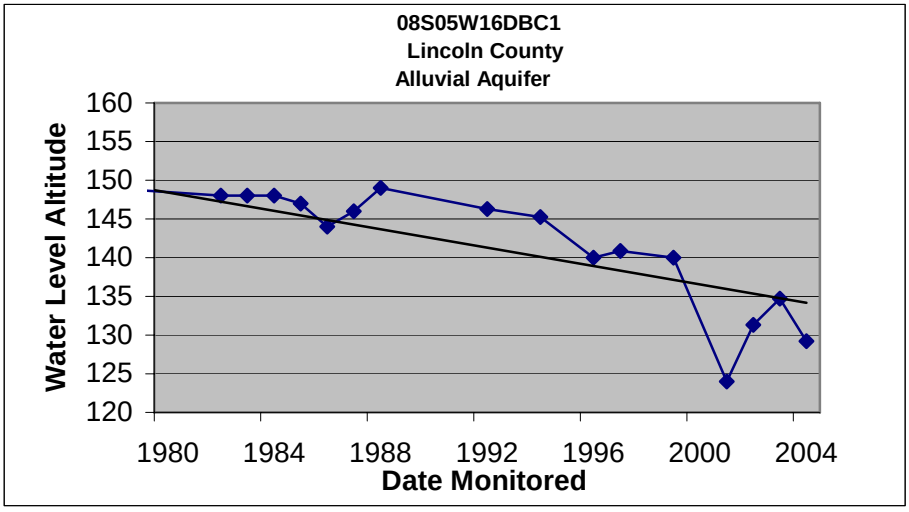

1995-2005 Boeuf Tensas Study Area
Water Level Changes
(Alluvial Aquifer)
Lincoln
Desha
Drew
Chicot
Ashley
N
County | Avg Change, ft.
Ashley | -0.84
Chicot | -6.87
Desha | -6.82
Lincoln | -11.13
Boeuf-Tensas Study Area
10 Year Change:
Average Change: -7.58 feet
19 of 22 Wells Showed Declines
Legend
Wells
Boeuf Tensas Study Area
0 5 10 20 30 40 Miles

Fig. 27



Continued monitoring of the ground-water levels in the Sparta aquifer of the Boeuf-Tensas Study Area shows mixed results mostly because of the lack of wells that are drilled into the aquifer in this part of the state. The ANRC as well as the USGS continue to add Sparta aquifer wells to the database from this study area and the historical data continues to improve every year.

During the 2004-2005 monitoring period the Boeuf-Tenses Study Area showed an average decline of +0.59 feet in the Sparta/Memphis aquifer, with 9 of the 17 wells monitored (52.9%) showing declines. Lincoln County had an average change of +0.42 feet, Desha County a change of +0.60 feet, and Drew County +1.32 feet respectively. (Fig.28)

During the 5-year monitoring period, from 2000 to 2005, 6 of the 9 wells monitored in the Sparta/Memphis aquifer (66.7%) showed water-level declines in this study area. Desha County had an average change of -2.09 feet and Drew County -3.61 feet respectively. The entire study area had an average change of -0.11 feet during this time. (Fig.29)

From 1995 to 2005 the Boeuf Tensas Study Area showed an average decline of -5.73 feet in the Sparta aquifer, with 9 of the 13 wells monitored (69.2%) showing declines in the static water level. Desha County had an average change of -1.38 feet, Drew County -3.03 feet, and Lincoln County an average change of -23.04 feet. (Fig.30)

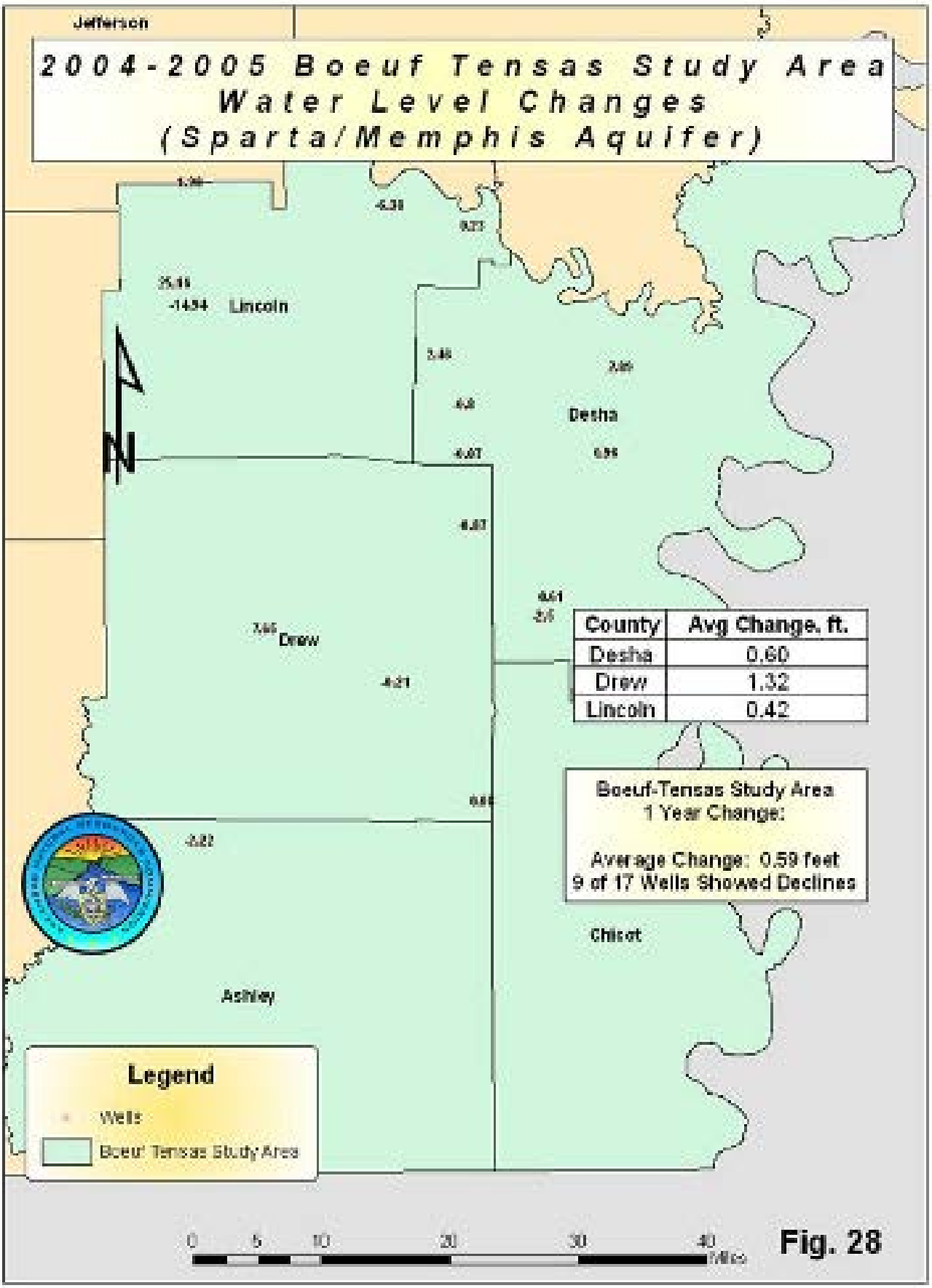

2004-2005 Boeuf Tensas Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Jefferson
Lincoln
Desha
Drew
Ashley
Chicot
N
County | Avg Change, ft.
Desha | 0.60
Drew | 1.32
Lincoln | 0.42
Boeuf-Tensas Study Area
1 Year Change:
Average Change: 0.59 feet
9 of 17 Wells Showed Declines
Legend
Wells
Boeuf Tensas Study Area
0 5 10 20 30 40
Miles

Fig. 28

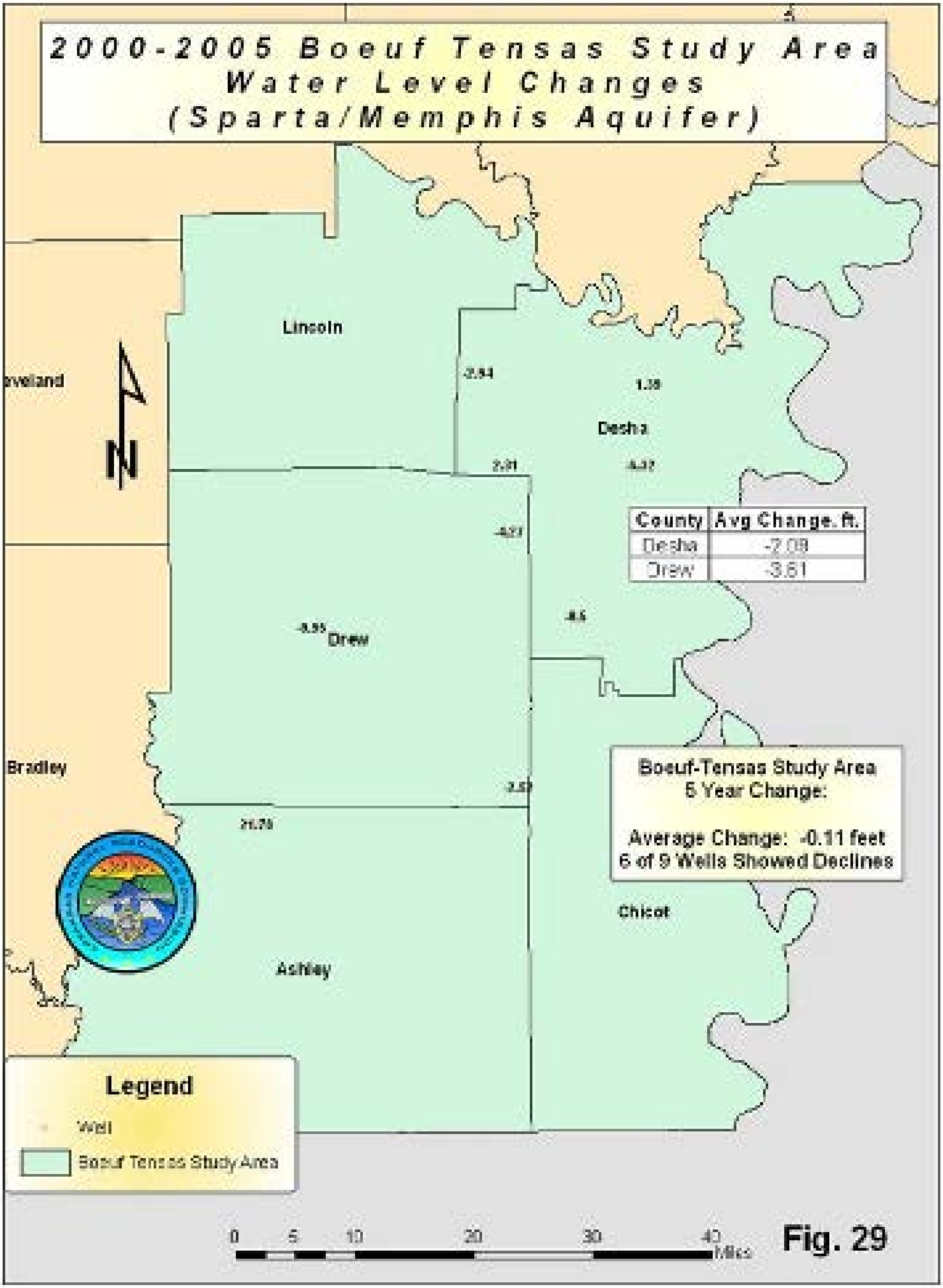
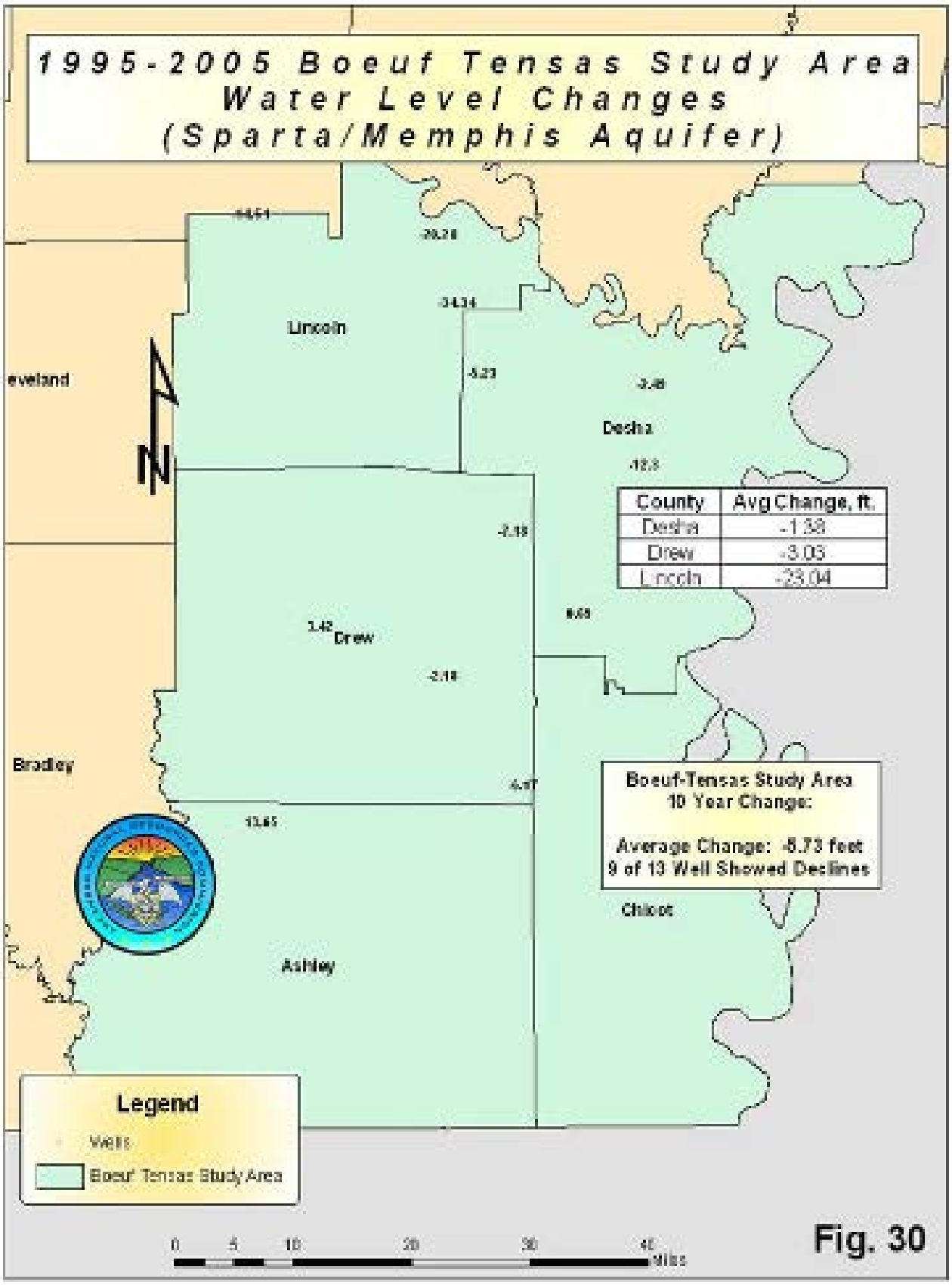

2000-2005 Boeuf Tensas Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Lincoln
Desha
Drew
Chicot
Ashley
Bradley
County | Avg Change. ft.
Desha | -7.08
Drew | -3.61
Boeuf-Tensas Study Area
5 Year Change:
Average Change: -0.11 feet
6 of 9 Wells Showed Declines
Legend
Well
Boeuf Tensas Study Area
0 5 10 20 30 40
Miles

Fig. 29


1995-2005 Boeuf Tensas Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Lincoln
Desha
Drew
Bradley
Ashley
Chicot
eveland
-34.34
-3.23
-3.48
-12.3
-2.38
3.42
-2.18
8.68
-6.97
-13.65
County | Avg Change, ft.
Desha | -1.38
Drew | -3.03
Lincoln | -23.04
Boeuf-Tensas Study Area
10 Year Change:
Average Change: -8.73 feet
9 of 13 Well Showed Declines
Legend
Wells
Boeuf Tensas Study Area
0 5 10 20 30 40
Miles
Fig. 30

ST. FRANCIS STUDY AREA

The St. Francis Study Area is defined as the area west of the Mississippi River, east of Crowley's Ridge, and south and east of the subcrop of the McNairy-Nacatoch aquifer (6900 square miles) (Ackerman, 1996). For the purpose of this report, only the area inside the boundaries of Arkansas is considered.

As was observed in the preceding study areas, during the 2004-2005 monitoring period there were both declines and increases in average static water levels in the alluvial aquifer throughout this study area. Clay county had an average change of +0.09 feet, Craighead County +0.46 feet, Crittenden County +0.74 feet, Cross County, -0.12 feet, Greene County -0.37 feet, Lee County +3.17 feet, Mississippi County +1.49 feet, Poinsett County +2.76 feet, and St. Francis County +0.54 feet respectively. The overall study area had an average static water-level change of 0.89 feet during this time, with 31 of the 125 (24.8%) wells monitored showing declines. (Fig.31)

During the 5-year monitoring timeframe, from 2000 to 2005, Greene County had an average change of +2.49 feet, Mississippi County +4.44 feet, Craighead County +3.43 feet, Cross County -1.37 feet, Crittenden County +0.69, St. Francis County -2.50, Poinsett County +4.61 feet, Lee County +3.88 feet, and Clay county +1.15 feet respectively. The alluvial aquifer in this study area had an average change of +2.61 feet, with 24 of the 107 wells monitored (22.4%) showing declines. (Fig.32)

A 10-year average change was also done in the St. Francis Study Area for the alluvial aquifer static water levels. Once again during this period there were declines as well as increases in static water levels throughout the study area. Clay County has an average change of -2.10 feet, Craighead County -0.44 feet, Crittenden County -2.63 feet, Cross County -4.03 feet, Greene County +5.25 feet, Lee County +2.80 feet, Mississippi County +3.41 feet, and Poinsett County +5.33 feet respectively. There was an average change of +0.56 feet over the entire study area for this 10-year period, with 16 of the 31 wells monitored (51.6%) showing declines. (Fig. 33)

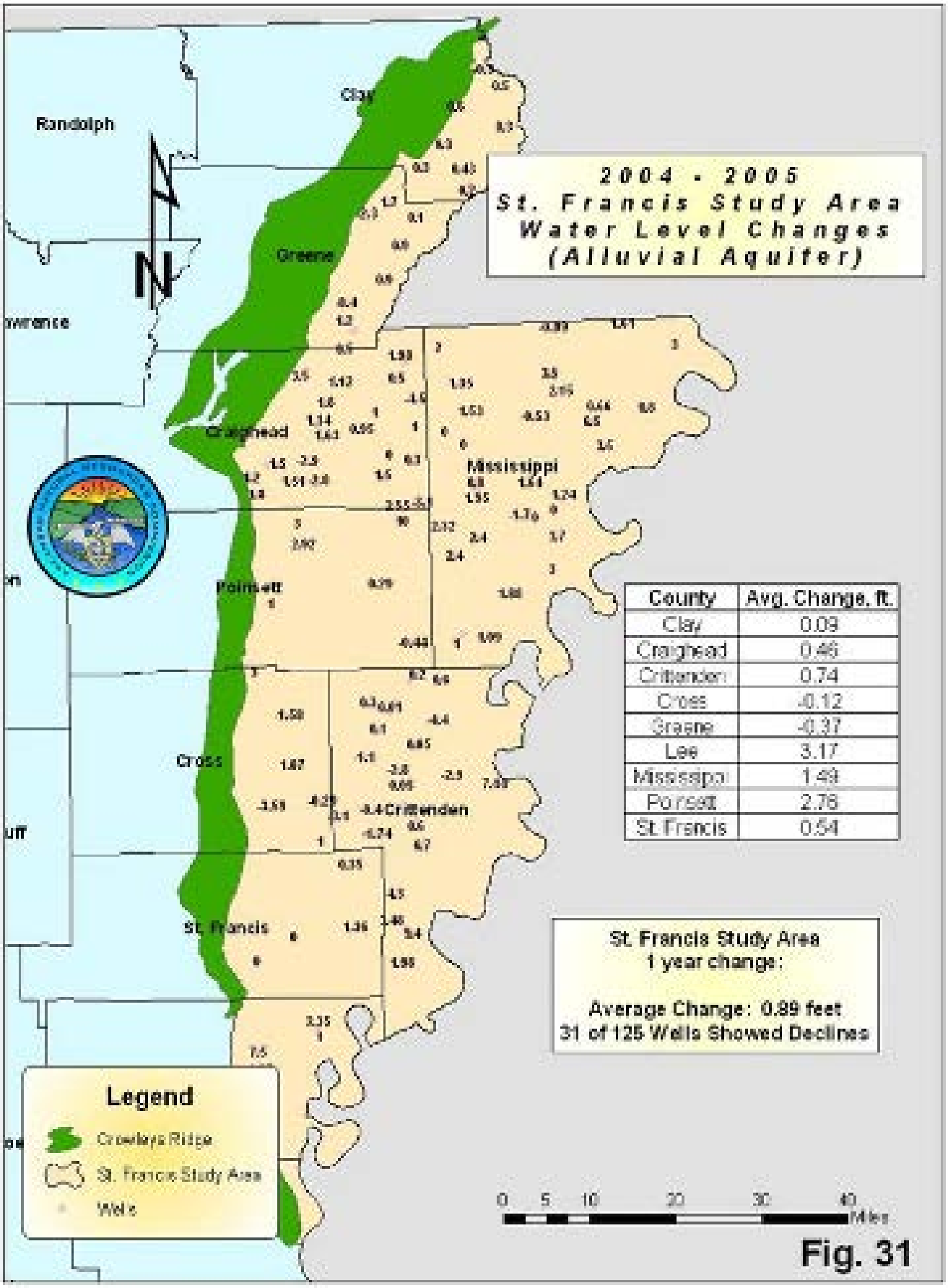

2004 - 2005
St. Francis Study Area
Water Level Changes
(Alluvial Aquifer)
Randolph
Clay
Greene
Craighead
Mississippi
Poinsett
Cross
Crittenden
St. Francis
Lee
N
County | Avg. Change, ft.
Clay | 0.09
Craighead | 0.46
Crittenden | 0.74
Cross | -0.12
Greene | -0.37
Lee | 3.17
Mississippi | 1.49
Poinsett | 2.76
St. Francis | 0.54
St. Francis Study Area
1 year change:
Average Change: 0.89 feet
31 of 125 Wells Showed Declines
Legend
Crowleys Ridge
St. Francis Study Area
Wells
0 5 10 20 30 40
Miles

Fig. 31

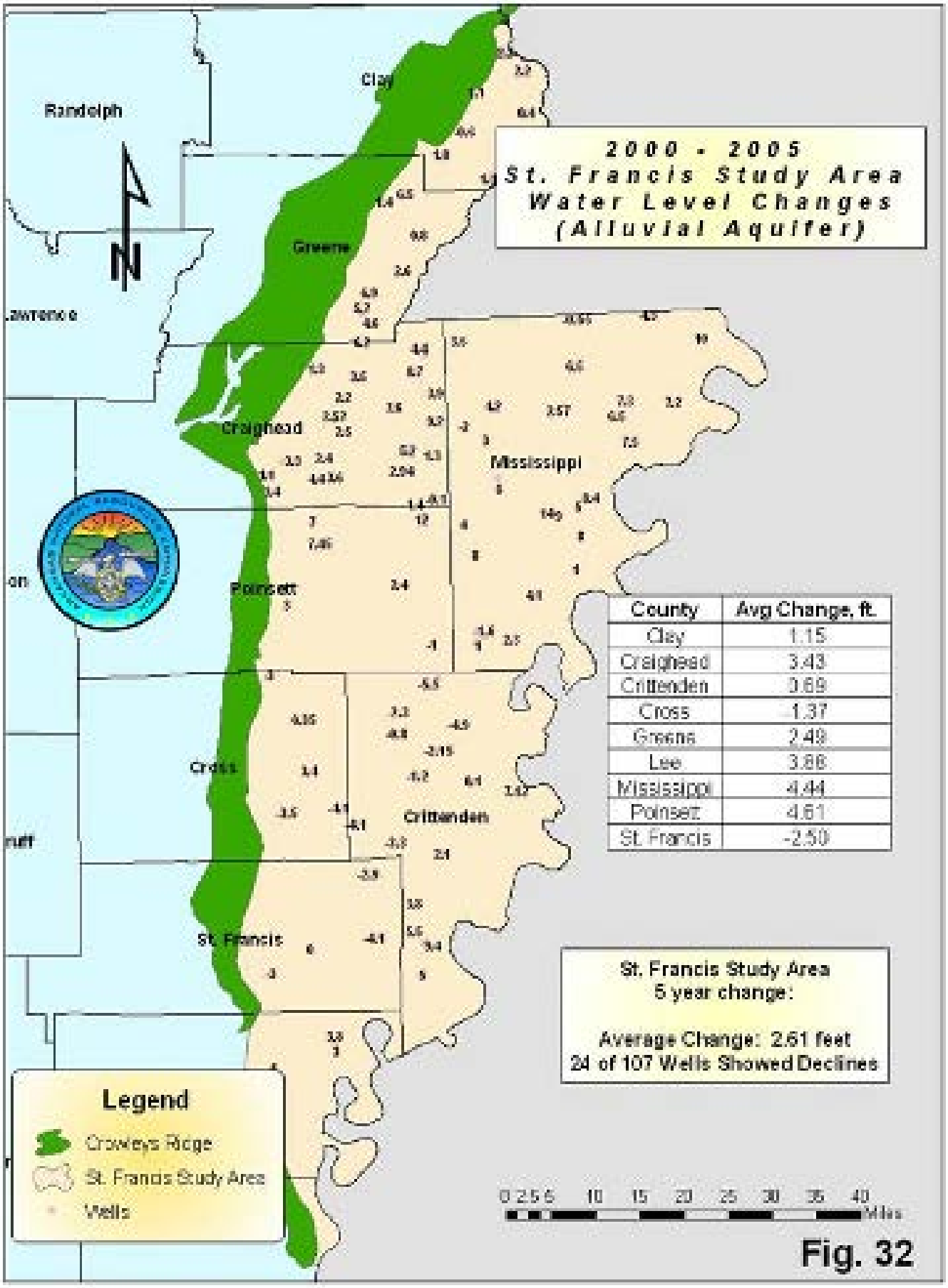
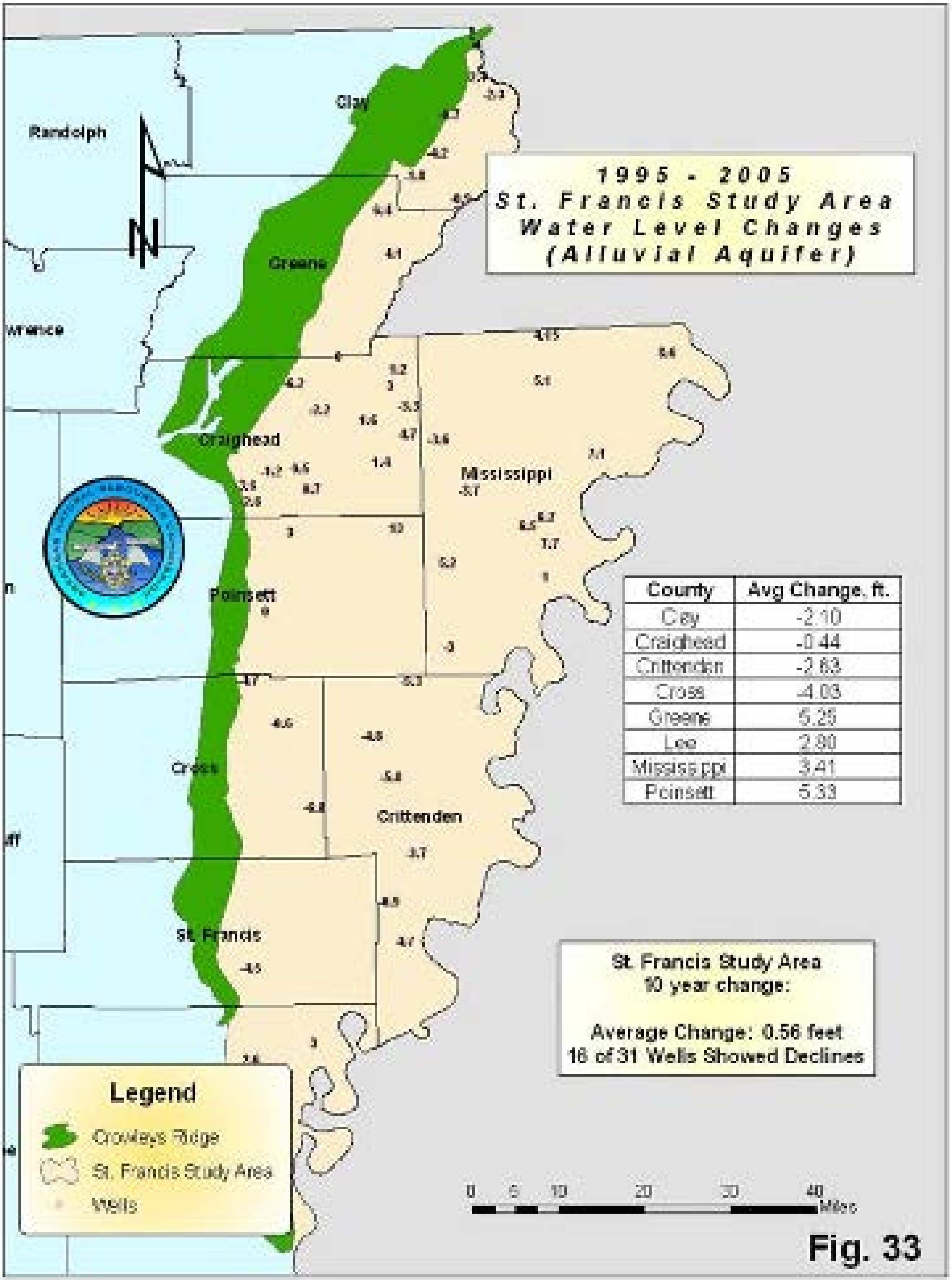
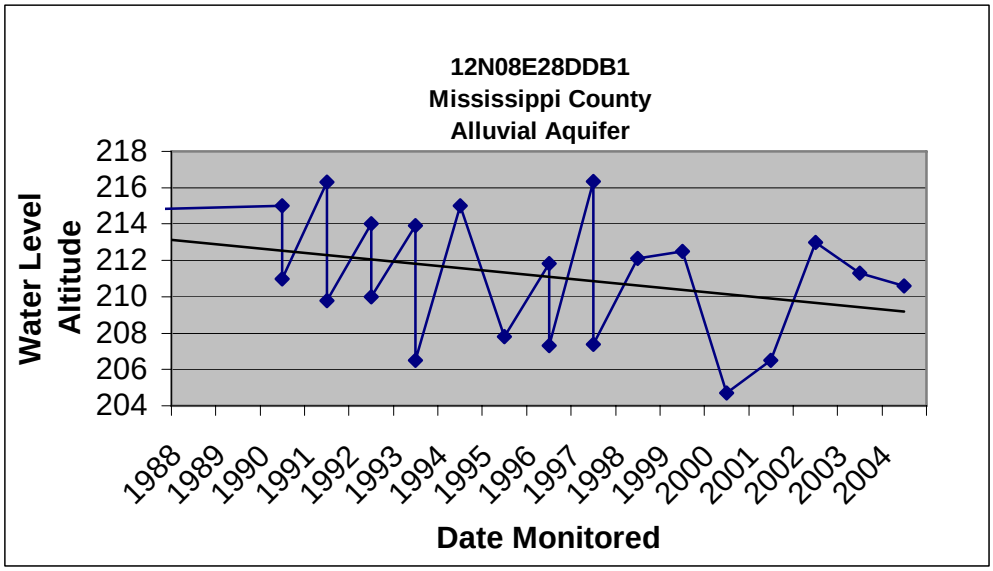
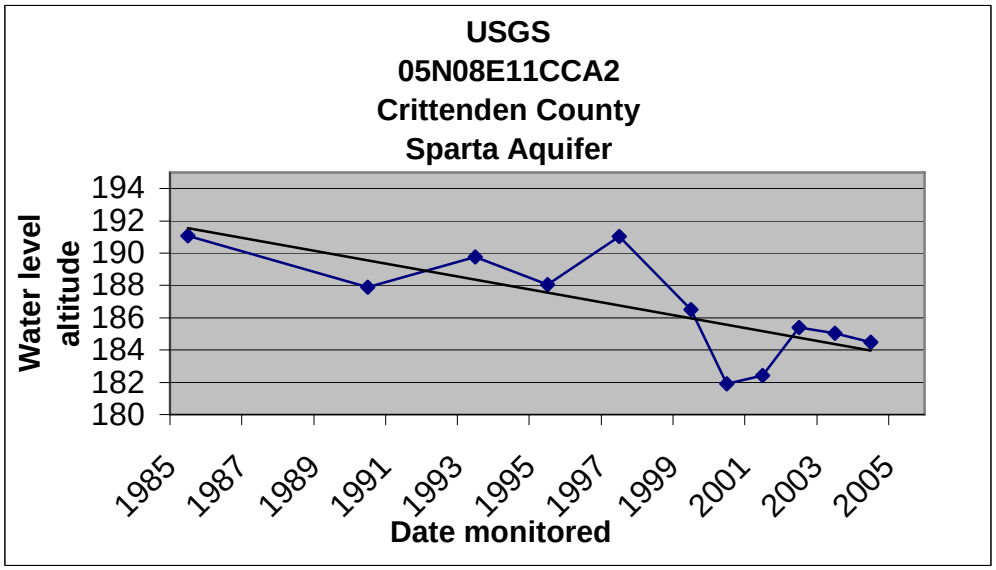

2000 - 2005
St. Francis Study Area
Water Level Changes
(Alluvial Aquifer)
Randolph
Clay
Greene
Lawrence
Craighead
Mississippi
Poinsett
Cross
Crittenden
St. Francis
County | Avg Change, ft.
Clay | 1.15
Craighead | 3.43
Crittenden | 3.69
Cross | 1.37
Greene | 2.49
Lee | 3.86
Mississippi | 4.44
Poinsett | 4.61
St. Francis | -2.50
St. Francis Study Area
5 year change:
Average Change: 2.61 feet
24 of 107 Wells Showed Declines
Legend
Crowleys Ridge
St. Francis Study Area
Wells
0 2.5 5 10 15 20 25 30 35 40
Miles

Fig. 32


1995 - 2005
St. Francis Study Area
Water Level Changes
(Alluvial Aquifer)
Randolph
Clay
Greene
Craighead
Mississippi
Poinsett
Cross
Crittenden
St. Francis
County | Avg Change, ft.
Clay | -2.10
Craighead | -0.44
Crittenden | -2.63
Cross | -4.03
Greene | 5.25
Lee | 2.80
Mississippi | 3.41
Poinsett | 5.33
St. Francis Study Area
10 year change:
Average Change: 0.56 feet
16 of 31 Wells Showed Declines
Legend
Crowleys Ridge
St. Francis Study Area
Wells
0 5 10 20 30 40
Miles
Fig. 33

Just as in the Boeuf-Tensas Study Area, the St. Francis Study Area has a limited number of wells drilled into the Sparta/Memphis aquifer. This should be taken into account when looking at the county changes in the figures. There are more wells being drilled into these areas as the water level in the alluvial aquifer continues to decline. USGS as well as the ANRC will continue to add monitoring points in these areas for the Sparta/Memphis aquifer. The hydrographs below are good representations of the static water level changes over time. Figures 34 and 35 show the actual measurements taken for the 1 year and 5 year periods respectively.





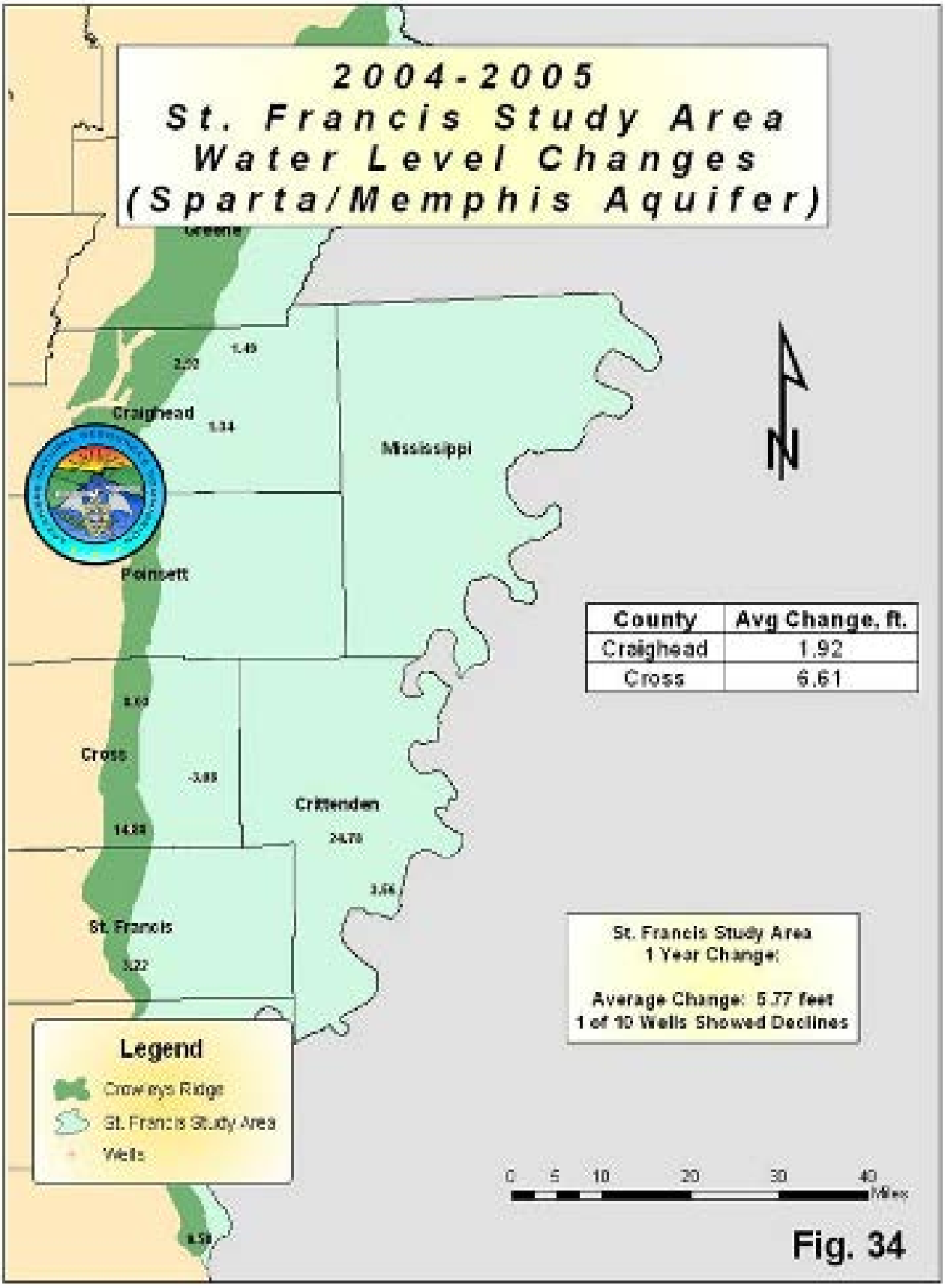
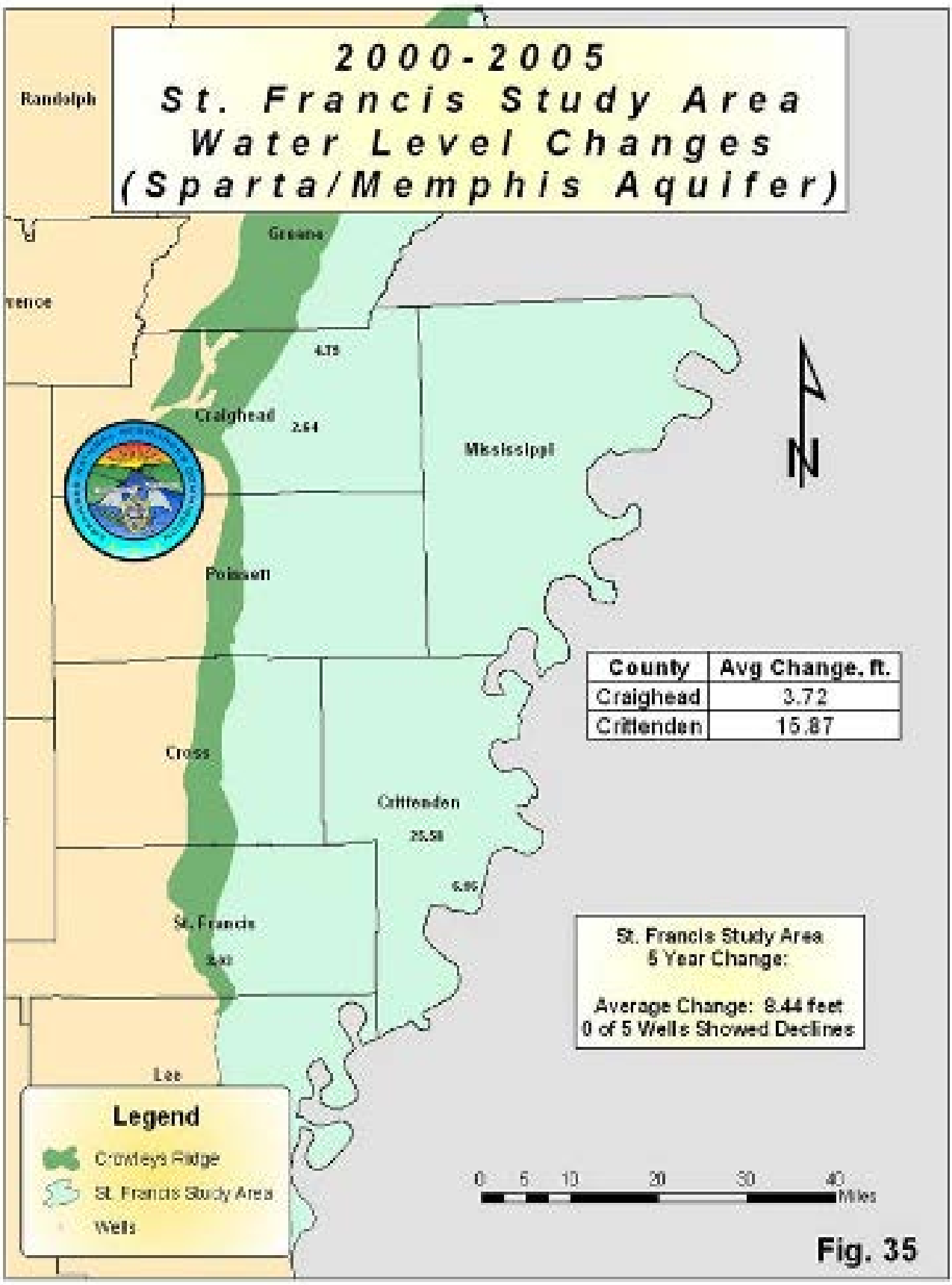

2004-2005
St. Francis Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Craighead
Poinsett
Cross
Crittenden
St. Francis
Mississippi
County | Avg Change, ft.
Craighead | 1.92
Cross | 6.61
St. Francis Study Area
1 Year Change:
Average Change: 5.77 feet
1 of 10 Wells Showed Declines
Legend
Crowleys Ridge
St. Francis Study Area
Wells
0 5 10 20 30 40
Miles

Fig. 34

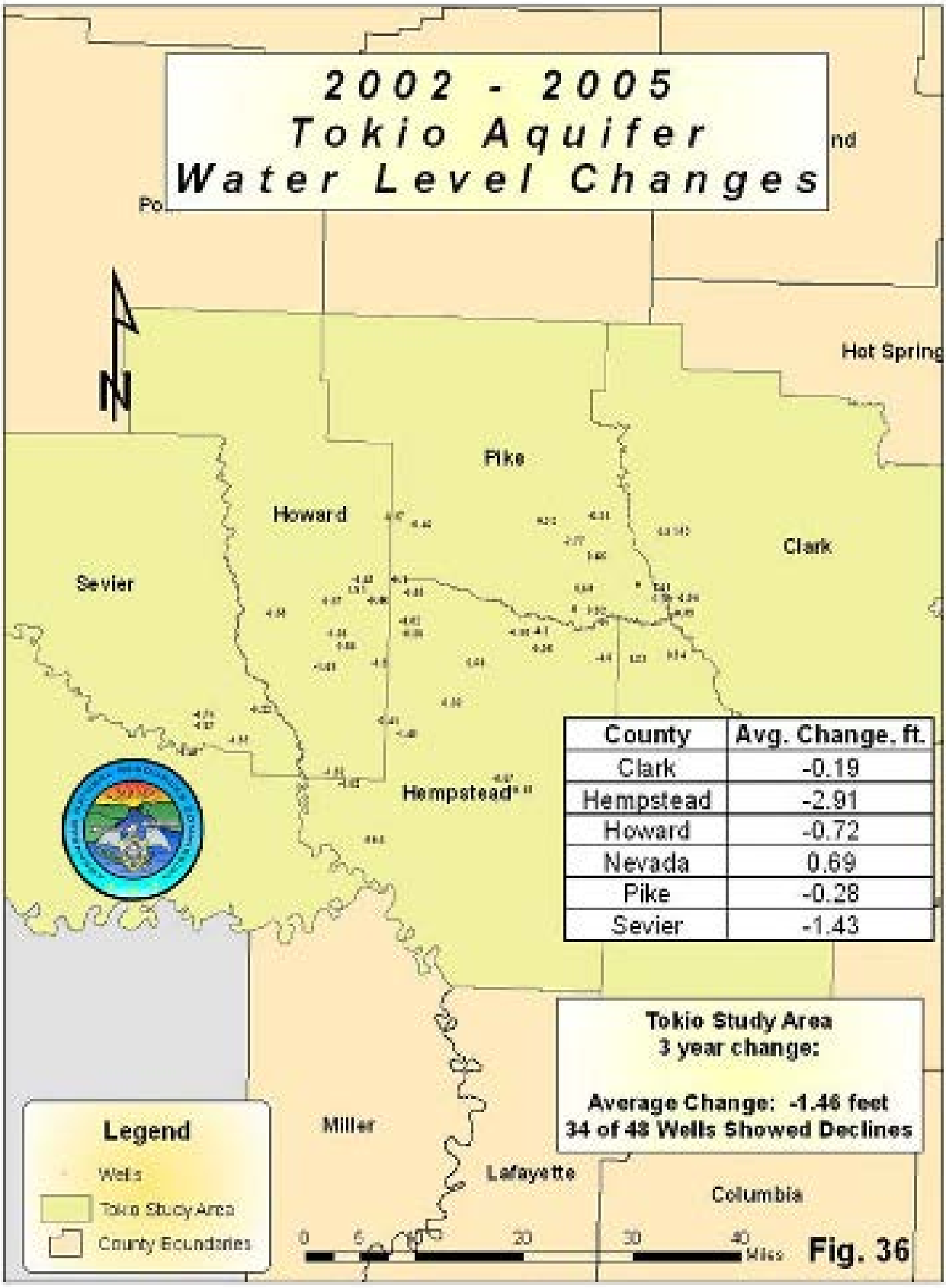

2000-2005
St. Francis Study Area
Water Level Changes
(Sparta/Memphis Aquifer)
Randolph
Greene
Craighead
2.64
Mississippi
Poinsett
Cross
Crittenden
25.58
6.86
St. Francis
2.83
Lee
4.79
N
County | Avg Change, ft.
Craighead | 3.72
Crittenden | 15.87
St. Francis Study Area
5 Year Change:
Average Change: 8.44 feet
0 of 5 Wells Showed Declines
Legend
Crowleys Ridge
St. Francis Study Area
Wells
0 5 10 20 30 40
Miles
Fig. 35

Other Aquifers Monitored

The USGS in cooperation with the ANRC monitors aquifers other than the alluvial and Sparta/Memphis aquifers throughout Arkansas. Every third year the USGS monitors the Cockfield and Wilcox aquifers, the Tokio and Nacatoch aquifers, and Paleozoic Age aquifers. The 2005 monitoring year was designated for the Tokio and the Nacatoch aquifers. The water level changes were analyzed for the 6 year period from 1999 to 2005 for both aquifers.

In the Tokio aquifer there were 48 wells monitored by the USGS for water level change from 1999 to 2005. Of these 30 (62.5%) showed a decline, with an average change of -3.44 feet over the area of the aquifer studied. (Fig.36)

The area studied for the Nacatoch aquifer had an average change of -4.19 feet from 1999 to 2005, with 37 of the 51 wells monitored (72.5%) having a decline in static water level. The extent of the area studied as well as individual well data is presented in figure 37.


2002 - 2005
Tokio Aquifer
Water Level Changes
N
Hot Spring
Pike
Howard
Clark
Sevier
Hempstead
Miller
Lafayette
Columbia
County | Avg. Change, ft.
Clark | -0.19
Hempstead | -2.91
Howard | -0.72
Nevada | 0.69
Pike | -0.28
Sevier | -1.43
Tokio Study Area
3 year change:
Average Change: -1.46 feet
34 of 48 Wells Showed Declines
Legend
Wells
Tokio Study Area
County Boundaries
0
10
20
30
40
Miles
Fig. 36


2002 - 2005
Nacatoch Aquifer
Water Level Changes
N
Clay
Greene
Craighead
Jackson
Poinsett
White
Cross
Woodruff
St. Francis
Prairie
Lee
Pulaski
Lonoke
Saline
Monroe
Hot Spring
Grant
Clarke
Dallas
Cleveland
Lincoln
Desha
Little River
Hempstead
Nevada
Ouachita
Calhoun
Bradley
Miller
Columbia
Union
Lafayette
County | Avg Change, ft.
Clark | 0.90
Clay | 1.02
Hempstead | 0.65
Nevada | 0.33
Nacatosh Study Area
3 year change:
Average Change: 0.66 feet
24 of 51 Wells Showed Declines
Legend
Nacatoch Study Area
Wells
40 20 0 40 Miles

Fig. 37

Summary of Water-Level Changes Spring to Fall, 2005

A set of 64 of the Arkansas Natural Resources Commission (ANRC) monitoring wells and 2 real time wells equipped and maintained by the Arkansas District of the U.S. Geological Survey (USGS) were utilized to survey the affects of this year's relatively dry precipitation pattern, and the effects of the irrigation season on the alluvial aquifer in eastern Arkansas. This summary represents the first evaluation of the 2005 summer changes. This data is contained in appendix G.

Typically, water levels in the alluvial aquifer decline approximately 3.3 feet over the course of the agricultural irrigation season each summer. This survey has identified a water-level decline for the summer of 2005 that averages 3.16 feet in the alluvial aquifer, and 2.76 feet in the Grand Prairie Study Area which is in the normal range of declines. Average spring to fall changes for the counties in the Grand Prairie Study Area are; Arkansas County -3.86 feet, Jefferson County -1.62 feet, Lonoke County -5.67 feet, Prairie County +1.11 feet, Pulaski County -1.61 feet and White County -6.68 feet, respectfully.

The water level in the USGS/UAPB Lonoke Farm (real-time site) well shows a decline of 2.8 feet for a 31 day period from early July through August 10th, and a slight rise in the water level of 0.75 feet since pumping has decreased in early September. This is an area of intense pumping from the alluvial aquifer, where the cone of depression is expanding as a result of pumping at a rate that is above the sustainable yield of the aquifer. The data from this well shows a decline in the static water level of approximately 8 feet since 2001.

A similar real-time site at the Stuttgart Experimental Rice Station revealed a decline of .8 feet over a period of about seven months ending in early October. This is a typical decline that is observed in those areas in close proximity to the cone-of-depression which centers around Stuttgart.

Precipitation Data

The National Weather Service Climatological Divisions for Arkansas can be seen in figure 38. For this report we have isolated the rainfall data for the months of January through August since these are the months during which the majority of the groundwater is utilized for irrigation. Division III consists of White, Independence, Jackson, Lawrence, Randolph, Clay, Greene, Craighead, Poinsett, and Mississippi Counties in northeast Arkansas. For these months, the average total rainfall in this area was 27.27 inches. This is -4.19 inches below average for this area according to National Weather Service (NWS) data.

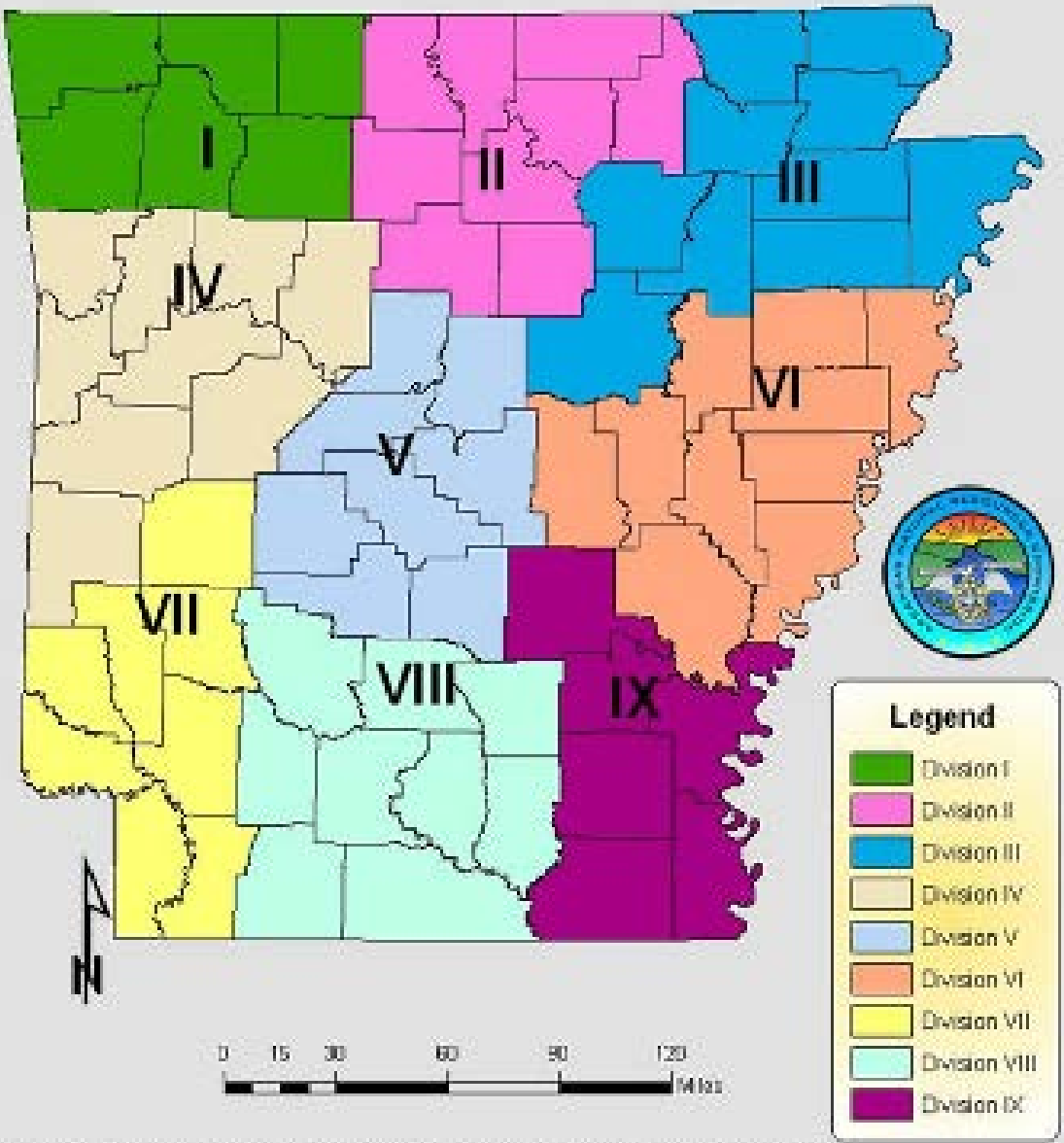
Division VI consists of Lonoke, Prairie, Woodruff, Cross, Crittenden, St. Francis. Lee, Philips, Monroe, and Arkansas Counties in east-central Arkansas. The average total rainfall for this area was 28.44 inches, which is -5.20 inches below the average for this area during these months

Division IX consists of Jefferson, Lincoln, Drew, Ashley, Desha, and Chicot Counties in southeast Arkansas. This area showed the largest depart from normal for these months with an average total rainfall of 25.92 inches. This is -10.83 inches below the mean for this area during this timeframe.

Division VIII is in south-central Arkansas and consists of Clark, Ouachita, Columbia, Nevada, Union, Calhoun, Dallas, Cleveland, and Bradley Counties. This area had an average total rainfall of 25.00 inches, which is a -10.60 inch departure from normal for this time.

The 2005 average totals were significantly less than the 2004 data for the same divisions over the same time. In 2004 average depart form normal was +1.41 inches for division III, -0.94 inches for division VI, -0.76 inches for division IX, and +3.32 inches for division VIII. This is consistent with the 2004-2005 changes we see in the alluvial aquifer over each of the respective study areas.

National Weather Service Climatological Divisions in Arkansas



* Climate Divisions were taken from the National Weather Service web site

Fig. 38

Table 1 Annual Precipitation Totals For Arkansas (1895 – 2005)

Year	Precipitation	Year	Precipitation	Year	Precipitation
1895	45.10 inches	1932	51.50 inches	1969	46.05 inches
1896	37.86 inches	1933	48.99 inches	1970	49.01 inches
1897	46.57 inches	1934	42.96 inches	1971	41.81 inches
1898	56.89 inches	1935	56.83 inches	1972	48.51 inches
1899	41.78 inches	1936	34.94 inches	1973	69.41 inches
1900	49.14 inches	1937	55.09 inches	1974	58.86 inches
1901	35.44 inches	1938	49.38 inches	1975	53.04 inches
1902	51.93 inches	1939	51.00 inches	1976	40.70 inches
1903	44.84 inches	1940	45.68 inches	1977	45.93 inches
1904	43.63 inches	1941	46.38 inches	1978	48.77 inches
1905	62.45 inches	1942	49.25 inches	1979	59.79 inches
1906	56.20 inches	1943	34.81 inches	1980	40.16 inches
1907	49.93 inches	1944	55.43 inches	1981	42.60 inches
1908	49.36 inches	1945	67.16 inches	1982	57.13 inches
1909	44.21 inches	1946	58.32 inches	1983	46.02 inches
1910	45.40 inches	1947	40.85 inches	1984	60.79 inches
1911	49.73 inches	1948	50.39 inches	1985	48.60 inches
1912	45.93 inches	1949	57.42 inches	1986	45.79 inches
1913	54.20 inches	1950	60.05 inches	1987	53.20 inches
1914	43.03 inches	1951	52.74 inches	1988	46.06 inches
1915	53.15 inches	1952	42.94 inches	1989	51.69 inches
1916	42.33 inches	1953	44.09 inches	1990	67.03 inches
1917	40.86 inches	1954	37.77 inches	1991	60.91 inches
1918	44.76 inches	1955	41.83 inches	1992	47.73 inches
1919	54.57 inches	1956	41.74 inches	1993	51.73 inches
1920	54.51 inches	1957	71.01 inches	1994	54.13 inches
1921	47.55 inches	1958	55.11 inches	1995	42.16 inches
1922	48.79 inches	1959	47.81 inches	1996	51.33 inches
1923	60.09 inches	1960	45.22 inches	1997	51.69 inches
1924	37.24 inches	1961	55.75 inches	1998	48.28 inches
1925	42.30 inches	1962	46.07 inches	1999	44.03 inches
1926	49.44 inches	1963	32.35 inches	2000	45.47 inches
1927	56.06 inches	1964	45.91 inches	2001	56.27 inches
1928	50.61 inches	1965	43.60 inches	2002	52.61 inches
1929	48.31 inches	1966	45.89 inches	2003	44.67 inches
1930	48.86 inches	1967	47.09 inches	2004	57.08 inches
1931	47.68 inches	1968	58.25 inches	2005	34.72 inches

*Data from NOAA Web Site

Table 2

2005 and 2004

Precip tation Data

2005

Div II (NE Arkansas)			Div VI (East Central Arkansas)		Div. II (NE Arkansas)			Div VI (East Central Arkansas)	
	Avg Total	Depart from Normal	Avg Total	Depart From Normal		Avg Tota	Depart From Normal	Avg Total	Depart From Normal
January	4.76	1.26	5.33	1.32	January	2.49	-0.9	4.3	0.42
Febuary	2.51	-0.99	2.84	-1.04	Febuary	2.51	-0.99	2.84	-1.04
March	4.81	-0.02	3.31	-1.41	March	4.27	-0.4	4.76	-0.28
April	4.34	0.01	4.82	-0.52	April	6.89	2.06	5.87	0.53
May	0.51	-4.47	1.19	-4.00	May	4.56	-0.28	4.05	-0.99
June	1.72	-1.95	1.39	-2.73	June	2.98	-0.69	5.16	1.04
July	4.57	1.45	4.59	1.18	July	4.67	1.54	2.34	-0.98
August	3.45	0.52	4.47	2.00	August	3.89	1.07	2.74	0.38
Total	**27.27**	**-4.19**	**28.44**	**-5.20**	**Total**	**32.26**	**1.41**	**32.06**	**-0.94**
Div VII (South Arkansas)			Div IX (SE Arkansas)		Div. VIII (South Arkansas)			Div IX (SE Arkansas)	
	Avg Total	Depart from Normal	Avg Total	Depart From Normal		Avg Tota	Depart From Normal	Avg Total	Depart From Normal
January	5.23	0.66	4.8	-0.34	January	3.45	-0.96	1.14	-0.34
Febuary	2.59	-1.54	2.79	-1.91	Febuary	2.59	-1.54	2.79	-1.91
March	2.36	-2.90	3.45	-2.13	March	6.15	1.06	5.21	-0.19
April	2.37	-1.98	3.17	-2.15	April	4.05	-0.80	4.06	-1.27
May	3.15	-1.97	3.85	-1.17	May	5.79	0.63	5.55	0.53
June	1.49	-3.24	1.95	-2.19	June	9.46	4.73	7.73	3.59
July	5.33	1.11	3.82	-0.06	July	3.94	0.13	4.08	0.31
August	2.28	-0.76	2.09	-0.87	August	2.81	-0.13	1.74	-1.13
Total	**25.00**	**-10.60**	**25.92**	**-10.83**	**Total**	**38.24**	**3.32**	**32.3**	**-0.76**
Total Avg Rainfall (East and South Arkansas):				**26.65**	**Total Avg Rainfall (East and South Arkansas):**				**33.71**
Total Depart from Normal (East and South Arkansas):				**-7.70**	**Total Depart from Normal (East and South Arkansas):**				**0.75**

*Data from National Weather Service

Water Quality

Specific Conductance in the Alluvial and Sparta/Memphis Aquifers

Generally, the occurrences of higher specific conductance in the alluvial aquifer most likely are caused by movement of water containing elevated concentrations of dissolved solids from sources at depth. (Bryant and others 1985). This "leaking" of water with higher concentrations of dissolved solids from an underlying aquifer is also thought to be a plausible explanation for the increase of specific conductance in the Sparta/Memphis aquifer.

The specific conductance data that is collected by the USGS every year is used to quantify the amount of dissolved solids present in the ground water. Table 3 shows the specific conductance and equivalent dissolved chloride for the wells monitored by the USGS in both the alluvial and Sparta/Memphis aquifers in 2005.

Generally the areas of higher specific conductance in the alluvial aquifer are located in western Chicot County and eastern Lincoln County. In data collected by the USGS , an area of increased concentration was noted west of Crowley's Ridge in Cross, Greene, Craighead, St. Francis, Lee, Monroe and Poinsett Counties. A map showing different concentrations can be found in the USGS Water-Resources Investigations Report 01-4124. (Schrader, T.P. 2001)

In the Sparta/Memphis aquifer the USGS collected water samples, and recorded specific conductance data from 61 wells in 25 different counties in 2005. This data is included in Table 3. Specific conductance values greater than 800 uS/cm were present in Arkansas, Ashley, Lee, Monroe, and Phillips Counties. (Schrader, T.P., 2005). A table of wells sampled, as well as a map showing the areas of equal specific conductance can be found in USGS Scientific Investigations Report 2004-5055.

Table 3

Temperature Specific Conductance for 2005

County	Agency	Aquifer	Site Number	Station Name	Date	Time	Temperature (Degrees Celsius)	Conductivity (Microsiemens/cm)
Arkansas	USGS	124SPRT	342416091243701	03S04W26CDA1	04/18/05	12:40	23.6	349.0
Arkansas	USGS	124SPRT	342226091075801	04S01W04CBD1	04/15/05	6:50	24.0	845.0
Arkansas	USGS	124SPRT	341734091200601	05S03W04ADB1	04/14/05	18:25	23.7	396.0
Arkansas	USGS	124SPRT	345711091224801	07S03W06ABC1	04/14/05	15:25	22.9	212.0
Ashley	USGS	124SPRT	332117091510301	15S07W32CDD1	03/23/05	13:40	24.8	875.0
Bradley	USGS	124SPRT	333647092040701	13S09W06ACB2	03/18/05	8:40	23.1	365.0
Bradley	USGS	124SPRT	333453092160701	13S11W17BCD1	03/18/05	9:15	23.2	444.0
Calhoun	USGS	124SPRT	333226092274101	13S13W32CDA1	03/17/05	10:55	23.1	432.0
Calhoun	USGS	124SPRT	333040092240301	14S13W12CCB1	03/17/05	11:15	23.2	446.0
Cleveland	USGS	124SPRT	335728092113301	09S11W01DCA1	03/29/05	10:55	22.5	278.0
Cleveland	USGS	124SPRT	334758091595701	10S09W35ACD1	03/29/05	13:20	22.8	239.0
Cleveland	USGS	124SPRT	334543092142201	11S11W16AAB1	03/29/05	14:55	22.6	370.0
Columbia	USGS	124SPRT	331545093031801	17S19W15AAB1	03/09/05	8:10	24.1	354.0
Columbia	USGS	124SPRT	330834093215801	18S22W27DDD1	03/09/05	16:50	21.7	239.0
Columbia	USGS	124SPRT	330609093274302	19S23W11CDA2	03/09/05	17:05	21.2	189.2
Craighead	USGS	12405MP	354929090392201	14N04E22CBD1	04/06/05	14:00	19.0	131.6
Craighead	USGS	12405MP	354839090403301	14N04E28DBD1	04/06/05	14:25	21.9	158.3
Crittenden	USGS	12405MP	350744090055601	06N09E23AAB1	04/05/05	16:10	22.9	240.0
Cross	USGS	12405MP	352403090451801	09N03E22ABD1	04/05/05	11:15	25.3	340.0
Cross	USGS	12405MP	352231090421501	09N04E30DCA1	04/05/05	12:15	22.7	480.0
Dallas	USGS	124SPRT	340429092333201	07S14W31AAA	03/07/05	11:05	21.1	129.5
Dallas	USGS	124SPRT	335605092470701	09S16W19CAA1	03/07/05	13:55	21.0	99.3
Dallas	USGS	124SPRT	334832092245502	10S13W34ACA2	03/07/05	12:10	24.0	269.0
Desha	USGS	124SPRT	335341091152201	09S02W26AAC1	03/24/05	9:25	22.5	260.0
Desha	USGS	124SPRT	335035091290301	10S04W11CBC1	03/24/05	10:25	25.6	253.0

Table 3

Temperature Specific Conductance for 2005

County	Agency	Aquifer	Site Number	Station Name	Date	Time	Temperature (Degrees Celsius)	Conductivity (Microsiemens/cm)
Desha	USGS	124SPRT	333740081225501	12S03W26CBB1	03/24/05	7:40	24.4	385.0
Drew	USGS	124SPRT	333803091454201	12S06W30BBD1	03/23/05	12:10	23.0	287.0
Drew	USGS	124SPRT	333154091340401	13S05W36ACB1	03/23/05	12:50	22.3	343.0
Grant	USGS	124SPRT	341845092235901	05S13W03CAA1	04/20/05	13:15	21.0	93.4
Grant	USGS	124SPRT	341841092332001	05S14W06DCC1	04/21/05	7:35	21.8	107.3
Grant	USGS	124SPRT	341923092382501	05S15W05ABD1	04/21/05	8:10	19.4	64.4
Grant	USGS	124SPRT	341024092354501	06S15W26ACA1	04/20/05	14:15	18.6	50.0
Jefferson	USGS	124SPRT	342644092105501	03S11W22ABC1	04/13/05	16:10	22.0	91.0
Jefferson	USGS	124SPRT	342140091474101	04S07W17BCC1	04/12/05	14:50	22.7	153.0
Jefferson	USGS	124SPRT	342218092095701	04S11W14BAD1	04/13/05	15:55	22.8	93.2
Jefferson	USGS	124SPRT	341634092053401	05S10W16DBD	04/12/05	17:55	20.7	161.0
Lafayette	USGS	124SPRT	330351093310301	19S23W29BDB1	03/08/05	13:55	24.2	397.0
Lee	USGS	124SPRT	345011090474901	03N03E28CDB1	04/04/05	15:40	20.5	1356.0
Lincoln	USGS	124SPRT	340444091504201	07S07W30CDC1	04/11/05	11:10	28.3	220.0
Lincoln	USGS	124SPRT	335907091333301	08S05W35ACC1	04/11/05	15:05	25.9	245.0
Lincoln	USGS	124SPRT	335955091530101	08S08W35DBB1	04/11/05	12:00	26.3	198.0
Lincoln	USGS	124SPRT	335858091522201	08S08W35DCB1	04/11/05	12:25	22.3	193.0
Lincoln	USGS	124SPRT	335631091512101	09S07W07DAD1	04/11/05	13:00	24.6	420.0
Monroe	USGS	124SPRT	344145091175601	01N03W14CCB1	03/31/05	12:50	20.2	893.0
Monroe	USGS	112TRRC	345616091150201	04N02W30BAD1	03/31/05	11:15	18.3	777.0
Nevada	USGS	124SPRT	333251093170801	14S21W04CCB1	03/08/05	8:50	20.1	205.3
Nevada	USGS	124SPRT	333050093172301	14S21W20AAB1	03/08/05	9:00	20.2	194.3
Ouachita	USGS	124SPRT	334154093010901	12S19W14AAA1	03/17/05	17:50	17.9	32.7
Ouachita	USGS	124SPRT	333435093041701	13S19W28BCD1	03/22/05	12:55	20.5	56.3
Ouachita	USGS	124SPRT	332305092543401	15S18W36ADD1	03/22/05	15:05	20.9	382.0
Ouachita	USGS	124SPRT	332318093031801	15S19W10DCC1	03/23/05	8:10	20.3	191.3

Table 3

Temperature Specific Conductance for 2005

County	Agency	Aquifer	Site Number	Station Name	Date	Time	Temperature (Degrees Celsius)	Conductivity (Microsiemens/cm)
Phillips	USGS	124SPRT	343322090505601	02S02E01ADC1	03/31/05	13:40	20.7	985.0
Phillips	USGS	124SPRT	342754090362101	03S05E05BAB1	03/31/05	15:45	18.9	782.0
Phillips	USGS	124SPRT	341822090512401	04S02E25CCC1	03/31/05	17:30	22.0	1240.0
Poinsett	USGS	12405MP	353225090431601	11N03E25BDD1	04/06/05	16:25	19.3	401.0
Prairie	USGS	124SPRT	344649091280101	02N04W19ACB1	03/31/05	9:30	19.1	349.0
Union	USGS	124SPRT	331900092395602	16S15W20DAA1	03/15/05	12:20	23.7	553.0
Union	USGS	124SPRT	331805092570902	16S18W34ABC2	03/15/05	8:35	21.7	338.0
Union	USGS	124SPRT	331040092353101	18S14W06CCD1	03/15/05	17:45	23.4	742.0
Union	USGS	124SPRT	331011092431701	18S16W11DAB1	03/15/05	13:55	23.1	536.0
Woodruff	USGS	12405MP	350023091145401	05N02W31DCB1	04/04/05	10:10	19.6	183.4

Nonpoint Source Program

The Arkansas Natural Resources Commission's (ANRC's) Nonpoint Source Program is supported by Section 319 (Clean Water Act) Grant Funds which provide 60 percent of the total program funding. ANRC staff continued work on one statewide nonpoint source ground-water project, and initiated work on a second project in the karst terrain of northern Arkansas in 2005.

The original 319 ground-water project began in 2000 and is ongoing until completed. The purpose of this project is to upgrade the statewide ambient ground-water quality monitoring program through installation of new wells or annexing existing wells into the monitoring network where new monitoring points are needed. Monitoring well installations/annexations have been focused in the existing and potential critical ground-water areas of eastern Arkansas. Upgrade of the monitoring network in eastern Arkansas is proving to be successful in terms of a more efficient monitoring network. Emphasis toward the critical threat to ground-water quality in the karst terrain of northern Arkansas has now also become a primary objective.

Ambient ground-water monitoring in Arkansas has traditionally been performed by three organizations: United States Geological Survey (USGS), Arkansas Department of Environmental Quality (ADEQ), and Arkansas Department of Health and Human Services (DHHS). The quality of this data is essential to the State's ability to manage and protect its valuable ground-water resources. ANRC is currently enhancing the quality and quantity of data collected in this program.

In 2001, a text summary of the hydrogeologic characteristics of each aquifer in the State was prepared, and twelve principal aquifers in the State were mapped to show the aerial extent of each aquifer along with the existing ground-water quality monitoring network's well locations. ANRC evaluated the placement of wells in the existing network, identified areas were new monitoring points were needed, and upgraded the network in eastern Arkansas by installing new wells or annexing existing wells into the network.

New monitoring well installations in eastern Arkansas initiated in June 2002 and are continuing to-date. Thus far, 27 alluvial and 6 Sparta wells have been installed in eastern Arkansas (Figure 39). Five additional alluvial wells are planned for installation in 2006. Monitoring well installations have occurred on private lands or State lands. Leases are enacted for wells installed on private lands which allow for installation and continued access. Although only a nominal lease fee is paid, the true advantage to the landowner is the receipt of all water level and ground-water quality data collected from the well. This could benefit the landowner considerably in the future as these aquifers continue to be exploited.

New wells added to the monitoring network are sampled, following installation or annexation, for selected chemical constituents using EPA approved protocols. Subsequent sampling frequency is designated to enhance the existing ground-water quality monitoring program by documenting changes in ground-water quality over extended periods. One goal of the sampling program is to monitor wells in areas that may demonstrate water quality degradation as the alluvial and Sparta aquifers continue to be overdrawn. Long term monitoring will also establish observable trends in ground-water quality which will benefit government agencies and the general public.

All ground-water quality sampling for this project is performed under protocol outlined in EPA approved Quality Assurance Project Plan (QAPP). Initially approved on March 12, 2001, the QAPP has been revised as required during the project, and is currently updated each year.

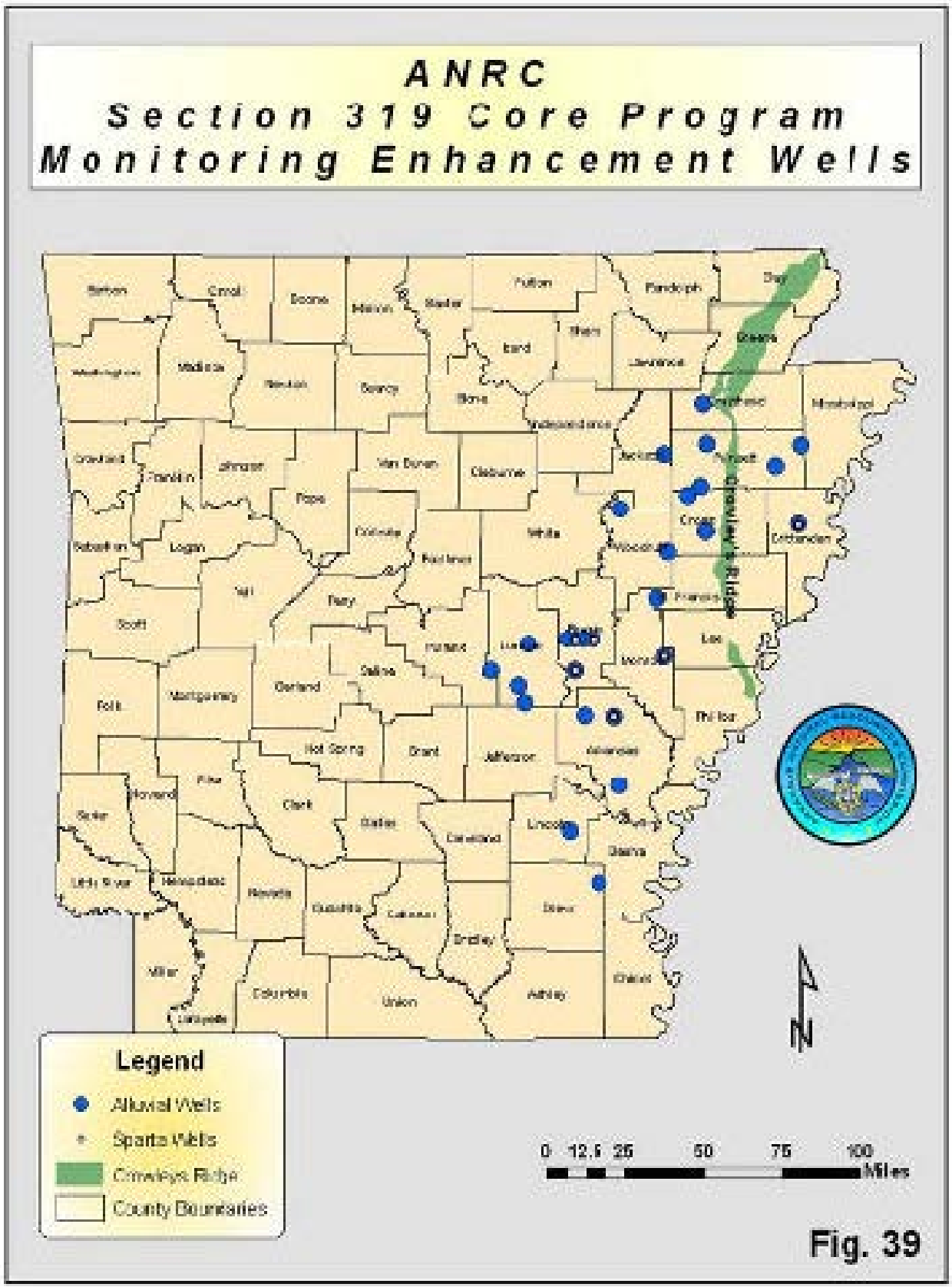
Water quality analyses include parameters that allow evaluation of basic water quality conditions, as well as specific constituents, which indicate potential water quality degradation in the State's aquifers. Analyses include selected metals, nutrients, inorganic water parameters, and selected pesticides. The analyses selected for each well (or spring) are determined by the naturally occurring and/or anthropogenic induced effect on the aquifer being monitored.

Ground-water sampling is performed in all newly installed wells following installation, in addition to all wells annexed into the monitoring network. Samples are

analyzed by the Arkansas Water Resources Center laboratory or a contract associate. These results are presented in Appendix H. Pesticide analyses were performed on all alluvial wells installed through May of 2004 (SW22), however, due to the high cost of analyses and the absence of significant detections, pesticide analyses are currently performed on samples from selected alluvial wells. Pesticide analyses are performed by ADEQ.

In northern Arkansas, a project documenting karst features has been initiated. Ground-water studies during the past twenty five years have documented water-quality degradation in springs and wells in the karst areas of the State (Odgen, 1979; Steele and Adamski, 1987). The inordinate rural population growth in the region, with associated reliance on individual wastewater treatment systems for homes and businesses, represent a threat to ground-water quality. ANRC plans to document karst features through review of relevant publications and maps, and generate maps displaying sinkholes, lineaments, losing stream segments, and critical soils. These maps and other training materials associated with the hydrogeology of karst terrain will be presented to DHHS Sanitarians and Designated Representatives to result in improved septic and alternative system design in karst areas. These training materials will also be distributed to governmental agencies and the general public to provide information regarding the potential for ground-water contamination in karst terrain.

These projects represent the State's commitment to improve and monitor ground-water quality as part of the Nonpoint Source Pollution Management Program.


ANRC
Section 319 Core Program
Monitoring Enhancement Wells
Legend
Alluvial Wells
Sparta Wells
Crowleys Ridge
County Boundaries
0 12.5 25 50 75 100
Miles
N
Fig. 39

ARKANSAS WATER WELL CONSTRUCTION COMMISSION

WATER WELL CONSTRUCTION PROGRAM

The Arkansas Water Well Construction Commission (AWWCC) is designed to insure "that the general health, safety, and welfare be protected by providing a means for the proper development of the natural resource of underground water in an orderly, sanitary, reasonable, and safe manner, without waste, so that sufficient potable supplies for the continued economic growth of our state may be assured" (Arkansas Water Well Construction Act, 1969). The AWWCC is composed of seven members. The members consist of: the director of the Department of Health or a designated representative, the director of the Arkansas Natural Resources Commission or a designated representative, one member involved in the heat pump industry, and four members involved the water well drilling industry.

The commission achieves its goal by monitoring the construction of water wells in the state. There were 2,650 wells reported drilled in 2004. Of these wells 1,224 (46.2%) are irrigation wells and 1,369 (51.7%) are domestic wells. The remaining 2.1% include monitoring wells, geothermal use, semi-public use wells, and commercial wells. Figure 40 shows the type and location of the reported wells drilled in one year. In addition to monitoring the drilling industry the commission also provides services to licensed drillers as well as to the public. Some of the services include providing information on water levels in wells, construction information about wells in an area, and proper well abandonment procedures. The commission also is equipped to assist drillers in the assessment of repair work, which may be needed in damaged wells.

One way the AWWCC keeps up with where well construction is taking place is through its relationship with Arkansas Department of Health. The Health Department has local sanitarians in each county. The sanitarians know where in the county wells would be required, and often layout lots showing landowners where to place their septic system and well on their property. The AWWCC inspectors try to visit each

county's environmental health specialist at least once a year. The AWWCC also conducts well inspections in each county. These inspections are to insure the protection of our ground-water, through compliance with the rules and regulations set forth by the AWWCC.

The inspectors also visit licensed contractors during their county surveys and inspections. These visits provide valuable insight about the area and industry. The local water well contractor knows more about drilling wells in his area than anyone else. This knowledge, along with grouting and sealing requirements in the AWWCC rules, ensure the customer clean safe water, and protect this precious resource.

During the 2003 legislative sessions an act was passed to allow the AWWCC to develop an apprenticeship program for drillers and pump installers. The apprentice program will allow people wanting to become registered a way to gain verifiable experience in their chosen field. This program is now in effect. The program allows a person with one year experience apply for the apprenticeship program

The AWWCC fields complaints from the public about water well construction, as well as inspecting wells for violations of the AWWCC rules and regulations. The following is a summary of those activities for the 2004-2005 licensing year.

1. Fifteen (15) complaints were recorded in which it was determined an investigation or arbitration was required, or in which it was determined that a violation had occurred as a result of noncompliance.

2. There were 10 cases, which required civil penalties to be assessed.

3. Eight (8) administrative hearings were conducted regarding contractors.

4. Sixty (60) new applications to become a licensed pump installer or certified driller were received.

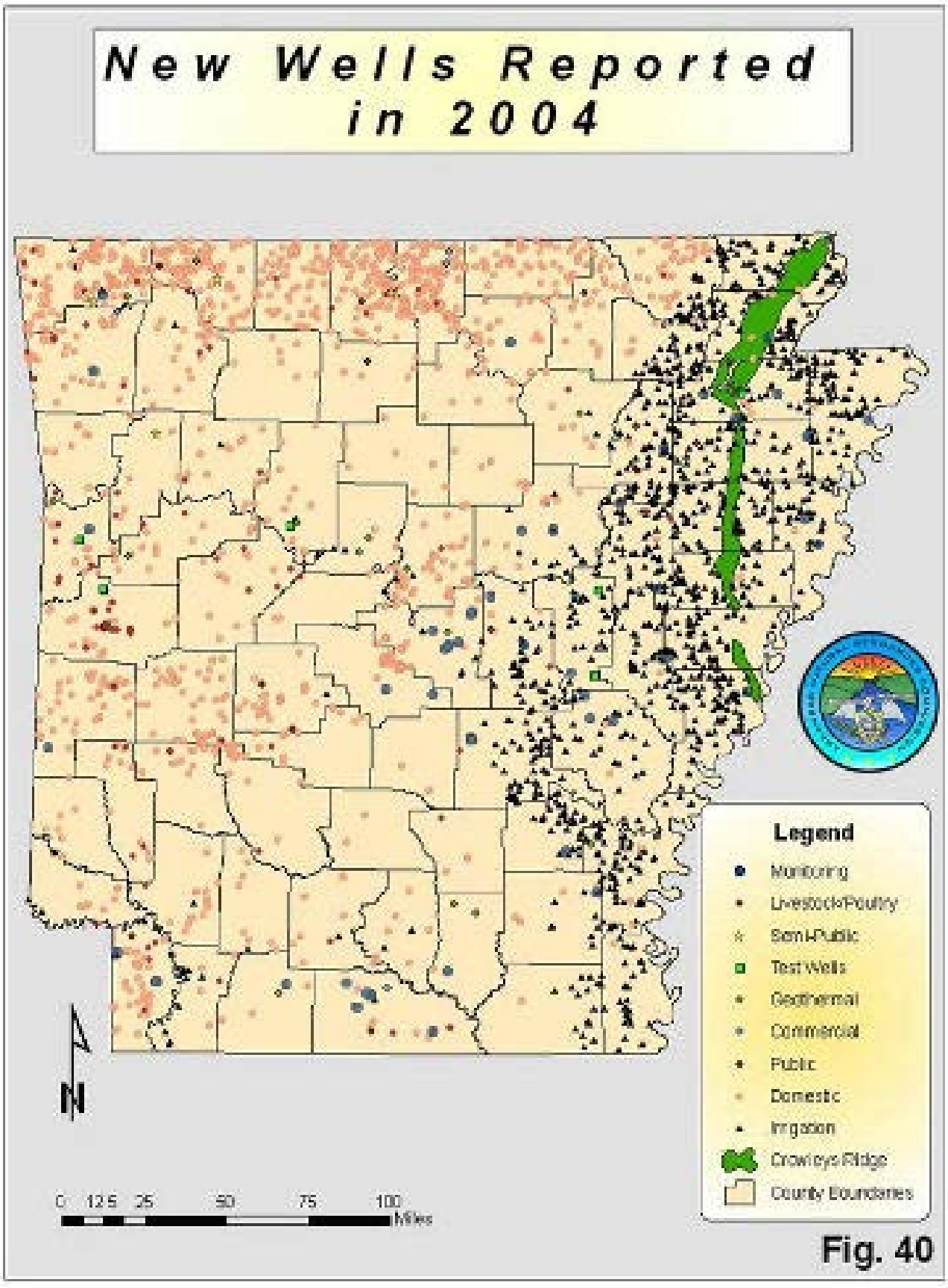

New Wells Reported in 2004
Legend
Monitoring
Livestock/Poultry
Semi-Public
Test Wells
Geothermal
Commercial
Public
Domestic
Irrigation
Crowleys Ridge
County Boundaries
N
0 12.5 25 50 75 100
Miles

Fig. 40

GROUND WATER USE

REGISTERED WELLS

In accordance with Act 1051 of 1985, all wells in Arkansas that have the capacity to produce fifty thousand (50,000) gallons per day must be registered with the ANRC. Domestic wells are exempt. The quantity used must be reported by March 1st of the following year. In 2003, there were approximately 45,941 registered wells reported in the State. Of this total, 44,922 (97.8%) are agricultural wells most of which are irrigation wells located primarily in eastern Arkansas. The remaining 1,019 reported wells are used predominately for municipal or industrial purposes.

REPORTED WATER USE

In 2003, an estimated 6,649.66 million gallons per day (mgd) of water were reported to be withdrawn from the State's aquifers. The greatest reported volume is pumped from the alluvial aquifer and used primarily for irrigation. Poinsett County and Cross County used the most alluvial water of all counties, with 537.91 mgd and 512.82 mgd respectively. The reported total ground-water use from the alluvial aquifer during 2003 was 6,317.71 Mgal/d. The Sparta/Memphis aquifer is the second largest aquifer in terms of withdrawals. The reported ground-water use from the Sparta/Memphis aquifer for 2003 was 244.30 Mgal/d, mostly used for municipal and industrial purposes. Arkansas County was the largest user of Sparta/Memphis water of all the counties with an average withdrawal rate of 47.04 Mgal/d, followed by Jefferson County with a rate of 43.81 Mgal/d. (Holland, 2005)

Table 4 contains the 2003 ground-water reported water use, by aquifer per county in Arkansas for 2003 and is the most recent information as supplied to the ANRC by the USGS. During this reporting period the alluvial aquifer had an average

withdrawal rate of 6,317.71 Mgal/d. Poinsett County showed the highest water use with an average rate of 537.91 Mgal/d, followed by Cross County with a rate of 512.82 Mgal/d.

The Sparta/Memphis aquifer had a reported average withdrawal of 244.30 Mgal/d during the 2003 reporting period. It is important to note that mainly due to increases in the Sparta/Memphis aquifer for irrigation in the area, Arkansas County is now the leading user of this aquifers' resources, with an average withdrawal of 47.04 Mgal/d. Jefferson County is the second largest user of Sparta/Memphis ground-water by far, with an average withdrawal of 43.81 Mgal/d. (Table 4) Figure 41 shows water use in million gallons per day (mgd) for the entire state from 1965 to 2000 in increments of 5 years, and also for 2003 respectively. Figure 42 shows the quantity of ground water use for each county in Arkansas as reported.

The estimated sustainable yield of the Sparta/Memphis aquifer is discussed in the following section of this report, however the relation to this figure and reported water use are significant. The 2003 reported ground-water use from the Sparta/Memphis aquifer was an estimated 126 Mgal/d for agricultural uses, 52 Mgal/d for public supply use, and 66 Mgal/d for industrial uses, which combine for an estimated total use of 244 Mgal/d. The estimated sustainable use for the entire aquifer is 83 Mgal/d based on 1997 reported water use. This leaves a deficit of 161 Mgal/day, or 66% of the 1997 rate that is an unmet demand. Each single use; industrial, irrigation, and public supply solely exceed, or come close to exceeding the estimated sustainable yield for the Sparta/Memphis aquifer. (Holland, 2003)

Table 4 Withdrawals of ground water from aquifers in Arkansas Counties, 2003

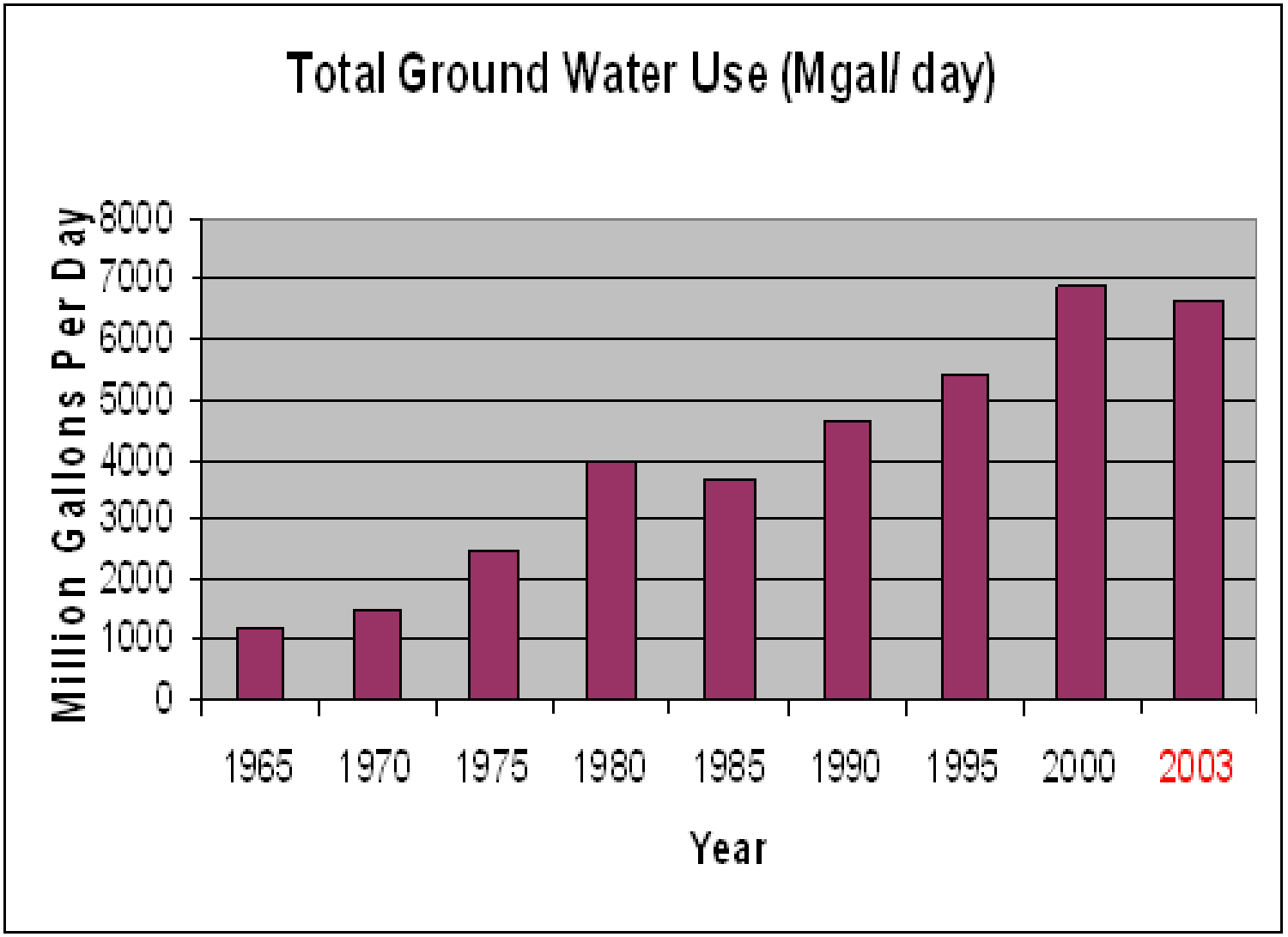
(In millions of gallons per day:---, no available data)

County	Quaternary Age	Cockfield Formation	Cane River Formation	parts/Memphi Sand	Wilcox /adifferentiate	Clayton Formation	Macatoch Sand	Tokio Formation	Trinity Group	aleozoic Ag Rocks	County Total	County
ARKANSAS	420.4	0.6	---	47.04	---	---	---	---	---	---	468.04	ARKANSAS
ASHLEY	118.46	9.62	---	18	---	---	---	---	---	---	146.08	ASHLEY
BAXTER	---	---	---	---	---	---	---	---	---	1.33	1.33	BAXTER
BENTON	---	---	---	---	---	---	---	---	---	4.85	4.85	BENTON
BOONE	---	---	---	---	---	---	---	---	---	1.72	1.72	BOONE
BRADLEY	---	0.07	---	1.78	---	---	---	---	---	---	1.85	BRADLEY
CALHOUN	---	---	---	0.5	---	---	---	---	---	---	0.50	CALHOUN
CARROLL	---	---	---	---	---	---	---	---	---	2.16	2.16	CARROLL
CHICOT	175.11	0.93	---	0	---	---	---	---	---	---	176.04	CHICOT
CLARK	---	---	---	---	---	---	0.12	0.06	---	0	0.36	CLARK
CLAY	313.93	---	---	0.32	3.09	---	1.18	---	---	0.2	318.72	CLAY
CLEBURNE										1.05	1.05	CLEBURNE
CLEVELAND	---	---	---	2.09	---	---	---	---	---	---	2.09	CLEVELAND
COLUMBIA	---	---	---	1.57	---	---	---	---	0.02	---	1.59	COLUMBIA
CONWAY	1.82	---	---	---	---	---	---	---	---	---	1.82	CONWAY
CRAIGHEAD	301.34	---	---	29.09	1.43	---	---	---	---	---	331.86	CRAIGHEAD
CRAWFORD	0.66	---	---	---	---	---	---	---	---	---	0.66	CRAWFORD
CRITTENDEN	170.34	0.07	---	0.41	2.53	---	---	---	---	---	173.35	CRITTENDEN
CROSS	512.82	---	---	4.69	---	---	---	---	---	---	517.51	CROSS
DALLAS	---	---	0.05	1.01	---	---	---	---	---	---	1.06	DALLAS
DESHA	267.14	0.2	---	7.01	---	---	---	---	---	---	274.35	DESHA
DREW	58.43	0.47	---	2.72	---	---	---	---	---	---	61.62	DREW
FAULKNER	2.12	---	---	---	---	---	---	---	---	0.23	2.35	FAULKNER
FRANKLIN	0.76	---	---	---	---	---	---	---	---	---	0.76	FRANKLIN
FULTON	---	---	---	---	---	---	---	---	---	1.36	1.36	FULTON
GARLAND	---	---	---	---	---	---	---	---	---	1.42	1.42	GARLAND
GRANT	0.02	---	---	1.62	---	---	---	---	---	---	1.64	GRANT
GREENE	177.55	---	---	---	8.86	---	0.6	---	---	---	187.41	GREENE
HEMPSTEAD	---	---	---	---	---	---	0.69	3.08	---	---	3.77	HEMPSTEAD
HOT SPRING	---	---	---	---	---	---	---	---	---	0.43	0.43	HOT SPRING
HOWARD	---	---	---	---	---	---	---	0.73	---	0	0.73	HOWARD
CE	24.42	---	---	---	---	---	---	---	---	---	24.42	CE
IZARD	---	---	---	---	---	---	---	---	---	1.01	1.01	IZARD
JACKSON	320.99	---	---	0.16	---	---	---	---	---	---	321.15	JACKSON
JEFFERSON	233.6	2.35	---	43.81	---	---	---	---	---	---	279.76	JEFFERSON
JOHNSON	0.3	---	---	---	---	---	---	---	---	---	0.30	JOHNSON
LAFAYETTE	13.22	---	0.43	0.23	---	---	---	---	---	---	13.34	LAFAYETTE
LAWRENCE	314.3	---	---	4.31	---	---	0	---	---	0.75	319.36	LAWRENCE
LEE	241.24	---	---	1.34	0.05	---	---	---	---	---	243.23	LEE
LINCOLN	163.04	---	---	2.51	---	---	---	---	---	---	165.55	LINCOLN
LOGAN	1.36	---	---	---	---	---	---	---	---	---	1.36	LOGAN
LONOKE	302.34	0.28	---	20.13	0.72	---	---	---	---	---	323.53	LONOKE
MADISON	---	---	---	---	---	---	---	---	---	1.31	1.31	MADISON
MARION	---	---	---	---	---	---	---	---	---	0.33	0.33	MARION

Table 4 Withdrawals of ground water from aquifers in Arkansas Counties, 2003

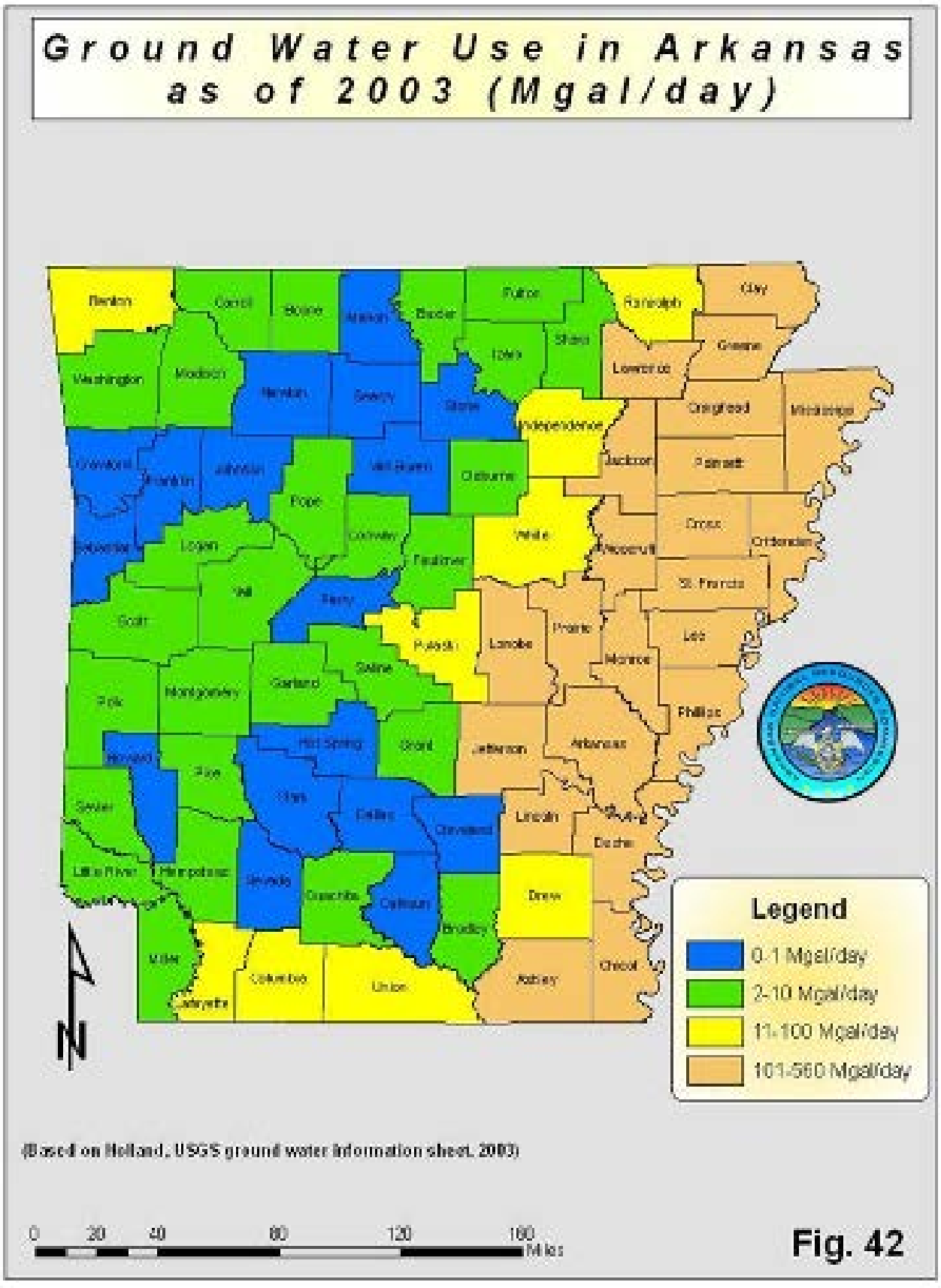
(In millions of gallons per day;---, no available data)

County	Quaternary Age	Cockfield Formation	Cane River Formation	parta/Memphi Sand	Wilcox ladifferentiate	Clayton Formation	Nacatoch Sand	Tokio Formation	Trinity Group	aleozoic Ag Rocks	County Total	County
MILLER	13.67	---	---	---	0.13	---	---	---	---	---	13.80	MILLER
MISSISSIPPI	259.48	---	---	0.31	9.36	---	---	---	---	---	269.15	MISSISSIPPI
MONROE	270.51	---	---	0.44	---	---	---	---	---	---	270.95	MONROE
MONTGOMER	---	---	---	---	---	---	---	---	---	0.71	0.71	MONTGOME
NEVADA	0.01	---	---	0.04	0.68	---	0.04	---	---	---	0.77	NEVADA
NEWTON	---	---	---	---	---	---	---	---	---	0.66	0.66	NEWTON
OUACHITA	---	---	0	1.72	---	---	---	---	---	---	1.72	OUACHITA
PERRY	0	---	---	---	---	---	---	---	---	0.67	0.67	PERRY
PHILLIPS	185.42	0	---	3.62	---	---	---	---	---	---	189.04	PHILLIPS
PIKE	0.81	---	---	---	---	---	---	---	---	0.01	0.82	PIKE
POINSETT	537.91	---	---	1.8	2.55	---	---	---	---	---	542.26	POINSETT
POLK	1.05	---	---	---	---	---	---	---	---	0	1.05	POLK
POPE	2.81	---	---	---	---	---	---	---	---	0.34	3.15	POPE
PRAIRIE	183.9	---	---	24.38	---	---	---	---	---	---	208.28	PRAIRIE
PULASKI	23.73	---	---	0.55	---	---	---	---	---	0.38	24.66	PULASKI
RANDOLPH	34.05	---	---	---	---	---	---	---	---	0.31	34.36	RANDOLPH
ST FRANCIS	261.74	---	---	0.63	0.19	---	---	---	---	---	262.56	ST FRANCIS
SALINE	0.04	---	---	0.39	3.45	---	---	---	---	---	3.88	SALINE
SCOTT	---	---	---	---	---	---	---	---	---	0.38	0.38	SCOTT
SEARCY	---	---	---	---	---	---	---	---	---	0.7	0.70	SEARCY
SEBASTIAN										0.43	0.43	SEBASTIAN
SEVIER	---	---	---	0	---	---	0	1.18	0.1	---	1.28	SEVIER
SHARP	0	---	---	---	---	---	---	0.07	---	0.86	0.93	SHARP
STONE	---	---	---	---	---	---	---	---	---	0.52	0.52	STONE
UNION	---	---	---	15.79	---	---	---	---	---	---	15.79	UNION
VAN BUREN										0.71	0.71	VAN BUREN
WASHINGTON	0	---	---	---	---	---	---	---	---	4.15	4.15	WASHINGTO
WHITE	34.53	---	---	---	1.43	---	---	---	---	---	35.96	WHITE
WOODRUFF	294.68	---	---	3.63	---	---	---	---	---	---	298.31	WOODRUFF
YELL	2.03	---	---	---	---	---	---	---	---	---	2.03	YELL
**TOTALS	6303.68	14.53	0.54	244.30	34.47	0.00	3.23	5.12	0.12	29.58	*****	**TOTALS



Based on Holland, USGS Ground Water Use Information Sheet, 2003

Fig. 41


Ground Water Use in Arkansas as of 2003 (Mgal/day)
Benton
Carroll
Boone
Marion
Baxter
Fulton
Randolph
Clay
Izard
Sharp
Lawrence
Greene
Washington
Madison
Newton
Searcy
Stone
Independence
Craighead
Mississippi
Crawford
Franklin
Johnson
Van Buren
Cleburne
Jackson
Poinsett
Pope
Conway
White
Cross
Crittenden
Yell
Perry
Faulkner
Pulaski
Lonoke
Prairie
Monroe
Lee
St. Francis
Scott
Logan
Sebastian
Polk
Montgomery
Garland
Saline
Grant
Jefferson
Arkansas
Phillips
Hot Spring
Clark
Dallas
Cleveland
Lincoln
Desha
Howard
Pike
Sevier
Little River
Hempstead
Nevada
Ouachita
Calhoun
Drew
Bradley
Ashley
Chicot
Miller
Lafayette
Columbia
Union
Legend
0-1 Mgal/day
2-10 Mgal/day
11-100 Mgal/day
101-560 Mgal/day
N
(Based on Holland, USGS ground water information sheet, 2003)
0
20
40
80
120
160
Miles
Fig. 42

Ground-Water Modeling and Sustainable Yield

The USGS recently completed recalibration, conjunctive-use optimization, and sustainable yield optimization of ground-water flow models for the Sparta and alluvial aquifers in eastern and southern Arkansas. These reports define and document future projected ground-water declines in Arkansas based on current water use trends, and quantify a sustainable yield for each aquifer based on the head constraints consistent with State water policy. Though the ANRC has not formally defined a safe yield for these aquifers, these models provide the tool that will be used as the State considers such a definition. It is essential that the State pursue protection of a sustainable yield for its aquifers, in order to protect this valuable resource from adverse impacts such as damage to the aquifer system, land subsidence, reduced yield to wells, saline water encroachment, increased cost to well users, and reduced base flow to streams and wetlands.

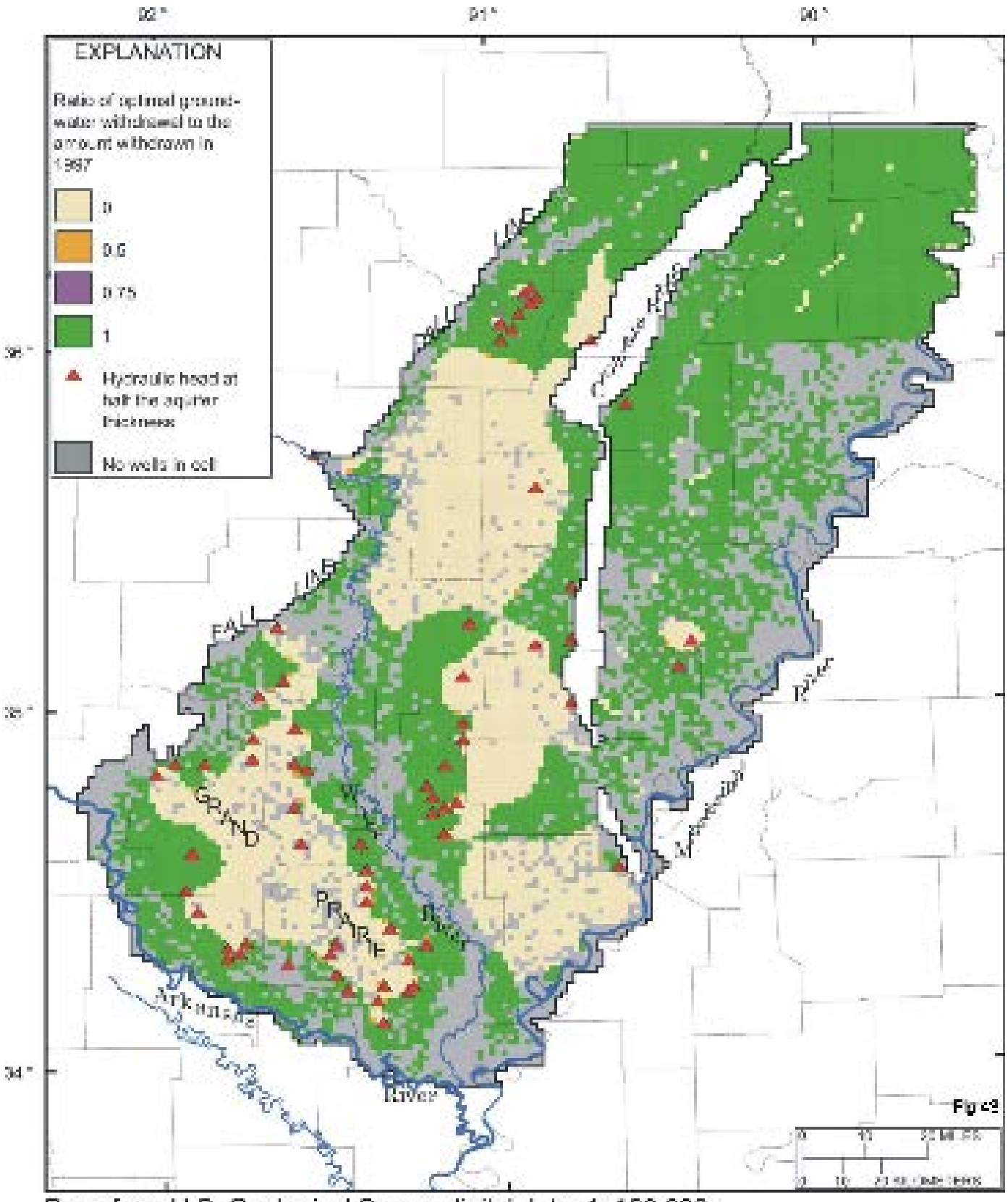
Any attempt to establish a "safe yield" for an aquifer should appropriately be consistent with the preferred concept of "sustainable yield", which includes the often dynamic needs of society, ecology, hydrology and the environment. (Maimone, 2004). The misperception of setting a fixed safe yield, has been replaced with the goal of establishing a process of defining a sustainable yield that is adaptive and flexible to changing needs and additional scientific knowledge.

The scale of these models is immense, and the methodology and complete results can be found in the USGS Water-Resources Investigations Reports; 03-4230, 03 4231, and 03-4233, which are all listed in the "References" section of this report. One product of these models was the determination of maximum withdrawal rates from each one square mile cell in the model based on 1997 ground-water use, while not violating specified constraints imposed on the model. (Czarnecki, and others, 2003) The constraints were based on predetermined stream flow levels, as well as aquifer

saturated thickness percentages that must be maintained. A minimum of 50% has been utilized for the alluvial aquifer as the sustainable yield thickness in Arkansas.

The ground-water models showed that a sustainable yield for the alluvial and Sparta aquifers could not be met using the 1997 pumping rate. The alluvial model is split into a North Optimization Model, and a South Optimization Model. The sustainable yield from ground water in the North Model was 360.3 million cubic feet per day, and the demand was 635.7 million cubic feet per day, based on 1997 pumping rates. This leaves an unmet demand of 275.5 million cubic feet per day (43%). In the South Optimization Model the sustainable yield from ground water, based in 1997 pumping rates, was 70.3 million gallons per day with a demand of 73.6 million gallons per day. This leaves an unmet demand of 3.3 million gallons per day, or 5% for the south model. (Czarnecki and others, 2003) The unmet demand represents the amount by which water use must be reduced to achieve a sustainable yield. Figure 43 provides an a real view of those portions of the State which could continue to pump from the alluvial aquifer within a sustainable yield pumping rate, based on head constraints as described. This figure also shows those portions of the State where no pumping from the alluvial aquifer could be maintained.

It should be noted that the aforementioned sustainable yield and demand figures were based on 1997 ground-water rates. The amount of water use, as well as the unmet demand has both increased since this time due to the number of new irrigation wells drilled each year. There have been approximately 10,000 new wells drilled in the alluvial aquifer since 1997.


92°
91°
90°
EXPLANATION
Ratio of optimal ground-water withdrawal to the amount withdrawn in 1987
0
0.5
0.75
1
Hydraulic head at half the aquifer thickness
No wells in cell
36°
35°
34°
FALL
LAKE
WHITE
GRAND
PRAIRIE
River
Arkansas
Mississippi
River
Base from U.S. Geological Survey digital data, 1: 100,000

SUMMARY

The Ground Water Protection and Management Report for 2005 is a summary of the activities and significant findings of the Arkansas Natural Resources Commission (ANRC). This report is prepared annually in response to legislative mandates that direct the ANRC to study the State's ground-water resources. The report also describes ground-water protection activities administered through Region VI of the U.S. Environmental Protection Agency, which are funded through Sections 106 and 319 of the Clean Water Act.

The purposes of the programs outlined in this report are to monitor the condition of the State's ground-water resources and to evaluate trends in water level and water quality fluctuations. The ANRC, the NRCS, and the USGS monitor over 1,700 water wells each year for water levels and prescribed water quality parameters. This monitoring is accomplished through a cooperative agreement with the ANRC, the USGS, and the Arkansas Geological Commission (AGC).

Spring water level measurements from 2004 to 2005 provided short term data indicating a slight rise in water levels, probably because of the above average precipitation in 2004. However, significant long-term ground-water depletion continues throughout study areas in Arkansas. Elevated levels of dissolved solids are being recorded in areas of significant water-level decline in the Cache and Grand Prairie Study Areas. The areas of heightened concern due to water-level decline continue to be in the Grand Prairie, South Arkansas, and Cache Study Areas. Fluctuations may be observed in ground-water levels over a short time period, however long term records illustrate the seriousness of the declines in ground-water levels as illustrated by the hydrographs and long term change maps.

As shown by the recently completed model by the USGS, ground-water use in the alluvial aquifer in eastern Arkansas was 4,760 mgd in 1997, well above the estimated sustainable yield of 2,700 mgd. A check of the 1985 water use data for the alluvial aquifer shows that in that year there was already greater than 3,400 mgd being pumped form the aquifer. The State of Arkansas can only sustain about 57

percent of the 1997 withdrawals from the alluvial aquifer, and approximately 49 percent from the Sparta aquifer. If additional conservation measures, and the development of excess surface water are not successfully implemented in the very near future, the State may have to consider other alternatives to preserve the aquifers at a sustainable level.

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Appendix A

Alluvial Aquifer Water Level Monitoring Data

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt. 05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Arkansas	02S04W11DBB1	343232.89	912415.21	2/14/2005	99.80	113.24	113.26	113.52		-0.02	-0.28	
Arkansas	02S05W15AAB1	343212.68	913126.72	3/8/2005	106.40	106.60	105.34	97.00		1.26	9.60	
Arkansas	03S02W27ABB1	342447.92	911251.01	2/24/2005	67.80	129.20	131.42	131.98		-2.22	-2.78	
Arkansas	03S03W05CCD1	342737.02	912131.83	2/14/2005	97.60	103.40	103.15	107.00		0.25	-3.60	
Arkansas	03S03W27BBC1	342454.73	911944.08	2/14/2005	90.90	104.10	104.17	107.00		-0.07	-2.90	
Arkansas	03S04W02BBB1	342831	912454	2/14/2005	91.85	105.78	105.71			0.07		
Arkansas	03S04W03DCA16	342753.04	912515.37	2/14/2005	99.80	105.20	104.63	106.11		0.57	-0.91	
Arkansas	03S05W24DAA1	342525	912922	2/14/2005	16.75	190.25						
Arkansas	03S06W35ADD1	342411.4	913651.67	3/1/2005	52.80	137.20	138.02	133.00		-0.82	4.20	
Arkansas	04S01W19AAD1	342012	910919	2/24/2005	62.95	133.05		122.67			10.38	
Arkansas	04S01W31DCB1	341753	910947	2/24/2005	52.05	126.95	126.96	110.71		-0.01	16.24	
Arkansas	04S02W11AAA1	342208.6	911123.27	2/24/2005	66.40	128.68	128.68	130.00		0.00	-1.32	
Arkansas	04S02W29CCC1	341846.35	911538.5	2/24/2005	83.95	107.05	109.20	107.00		-2.15	0.05	
Arkansas	04S03W17ADD1	342101.87	912058.11	2/24/2005	107.13	92.87	92.92	92.87		-0.05	0.00	
Arkansas	04S03W32BCB1	341820.31	912202.18	2/24/2005	116.10	75.90	75.57	87.00		0.33	-11.10	
Arkansas	04S04W02ABB1	342313.2	912423.69	2/14/2005	108.50	91.50	91.46	87.00		0.04	4.50	
Arkansas	04S04W35ABC1	341835	912437	4/25/2005	105.50	91.50	89.50			2.00		
Arkansas	04S05W16CDC1	342044.68	913320.89	3/1/2005	69.10	131.90	130.42	130.00		1.48	1.90	
Arkansas	04S05W24DAA1	342001.3	912929.57	3/8/2005	90.30	107.70	107.51	108.00		0.19	-0.30	
Arkansas	04S06W15DBB1	342122.37	913826.67	3/1/2005	31.60	158.40	157.16	157.00		1.24	1.40	
Arkansas	05S01W16BAB1	341551.59	910729.49	2/24/2005	45.50	137.50	133.39	150.61		4.11	-13.11	
Arkansas	05S01W17CAD1	341521	910820	2/24/2005	40.50	139.50		134.00			5.50	
Arkansas	05S02W16ABD1	341551.84	911357.77	2/24/2005	83.00	107.00	110.64	113.00		-3.64	-6.00	
Arkansas	05S03W16ABB1	341551	912019	2/24/2005	113.90	82.10	82.00	87.00	88.00	0.10	-4.90	-3.90
Arkansas	05S03W21BAA1	341510	912035	2/24/2005	113.40	82.60		80.00			2.60	
Arkansas	05S03W22ABB1	341511	911930	2/24/2005	110.90	84.10		88.00			-3.90	
Arkansas	05S04W04BAA	341785	912691	2/24/2005	91.50	94.50	93.30	96.00	92.00	1.20	-1.50	2.50
Arkansas	05S04W07CCC1	341555.36	912931.61	3/1/2005	74.45	119.55	118.80	113.00		0.75	6.55	
Arkansas	05S04W14AAD1	341549	912411	3/1/2005	92.50	93.50	93.40	95.00	91.00	0.10	-1.50	2.50
Arkansas	05S04W32BBA1	341315.97	912821.81	3/1/2005	59.13	131.87	132.97	131.00		-1.10	0.87	
Arkansas	05S04W34BAC1	341318	912609	3/1/2005	68.80	122.20	120.90	121.00	119.00	1.30	1.20	3.20
Arkansas	05S06W02DDD1	341723.66	913650.8	3/1/2005	19.85	163.08	162.45	162.00		0.63	1.08	
Arkansas	05S06W07DDC1	3416415	914129.68	2/14/2005	3.15	177.33	177.70	170.31		-0.37	7.02	
Arkansas	06S02W23DCD1	340852.62	911206.48	2/22/2005	59.50	128.50	119.83	123.00		8.67	5.50	
Arkansas	06S03W03ABA1	341228.4	911302.3	2/24/2005	68.20	118.80	117.30			1.50		
Arkansas	06S03W10BBA1	341135.97	911953.82	2/24/2005	81.50	102.50	101.58	101.00		0.92	1.50	
Arkansas	06S03W27AAA1	340857.58	911912.78	2/22/2005	66.70	116.44	116.42	117.00		0.02	-0.56	
Arkansas	06S03W32DDA	340740	912115	2/22/2005	56.38	123.62	122.66			0.96		

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Arkansas	06S04W18CBB1	341018.86	912948.68	3/1/2005	36.40	154.03	152.59	151.00		1.44	3.03	
Arkansas	07S02W04BBB1	340707.15	911451.89	2/22/2005	36.00	140.00	140.62	143.01		-0.62	-3.01	
Arkansas	07S02W17BBA1	340707.15	911451.89	2/15/2005	48.55	135.45	131.77	131.00		3.68	4.45	
Arkansas	07S03W10ACD1	340560	911944	2/22/2005	47.60	139.40	137.80	134.00		1.60	5.40	
Arkansas	07S03W18CCD1	340435.28	912316.09	2/22/2005	44.00	142.18	143.10	142.04		-0.92	0.14	
Arkansas	07S03W32BBC1	340240	912216	2/24/2005	24.81	152.11	151.42			0.69		
Arkansas	07S04W01DDD1	340625.25	912327.15	2/22/2005	46.50	139.50	141.48	138.00		-1.98	1.50	
Arkansas	08S02W08ACA1	340041.03	911505.57	2/22/2005	39.75	139.25	136.77	134.00		2.48	5.25	
Arkansas	08S03WT2289	340147.45	912202.5	2/22/2005	21.00	157.00	156.38	156.00		0.62	1.00	
							Declines/Wells:			**13/42**	**16/41**	**1/4**
							Average Change:			**0.58**	**1.05**	**1.08**
Ashley	15S4W23DBD1	332245	912852	2/21/2005	31.30	96.70	95.71			0.99		
Ashley	15S07W21CBA1	332315.7	915001.37	2/17/2005	4.70	205.30	206.26			-0.96		
Ashley	16S04W10ABB	331902	913002	2/16/2005	26.40	103.60	95.30			8.30		
Ashley	16S06W27BAB1	331729	914240	2/17/2005	83.55	98.45	98.80			-0.35		
Ashley	16S06W35BAD	331624	914143	2/17/2005	72.30	102.70	103.20			-0.50		
Ashley	17S04W03ABB1	331528	913010	2/16/2005	25.45	98.55	95.03			3.52		
Ashley	17S04W15DDC1	331252.48	912954.09	2/16/2005	18.40	97.60	89.55	89.00		8.05	8.60	
Ashley	17S04W21ABA1	331252	913108	2/21/2005	17.70	99.30	95.63			3.67		
Ashley	17S06W01ADD1	331517.9	913956.26	2/17/2005	83.05	98.95	99.43	101.00		-0.48	-2.05	
Ashley	17S06W35CAC1	331049	914136	2/17/2005	72.30	106.70	100.71			5.99		
Ashley	18S04W08CAD1	330852	913218	2/16/2005	27.59	92.41	88.60			3.81		
Ashley	18S05W01CCD1	330816.6	913537.3	4/4/2005	19.40	98.60						
Ashley	18S05W22DDA1	330712	913555	4/4/2005	16.11	108.89	113.00	104.00	110.00	-4.11	4.89	-1.11
Ashley	18S05W24BDC1	330730	913435	2/16/2005	20.35	97.65	96.10			1.55		
Ashley	18S08W01AAB1	331014.97	915225.12	2/17/2005	86.55	94.45	94.67	94.00		-0.22	0.45	
Ashley	18S08W28DDD2	330624.8	915528.46	5/10/2005	85.20	77.80	85.53			-7.73		
Ashley	19S04W06BAB2	330503.98	913328.56	2/17/2005	19.60	90.40	85.93	85.00		4.47	5.40	
Ashley	19S04W09CEB	330346	913146	2/16/2005	19.76	85.24	81.30			3.94		
Ashley	19S05W08ACA1	330405	913815	4/4/2005	12.20	98.80	100.00	86.00		-1.20	12.80	
Ashley	19S05W16ABB1	330323	913718	4/4/2005	20.30	95.70	97.00	99.00	97.50	-1.30	-3.30	-1.80
Ashley	19S05W22DCD1	330139	913615	4/4/2005	14.60	92.40	87.00	84.00	92.00	5.40	8.40	0.40
Ashley	19S06W07BCC1	330403.56	914607.92	2/17/2005	27.35	107.35	103.27	103.00		4.08	4.35	
							Declines/Wells:			**9/21**	**2/9**	**2/3**
							Average Change:			**1.76**	**4.39**	**-0.84**

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Chicot	13S03W27AAA1	333253	912310	3/29/2005	43.00	95.00	95.00	100.00	111.00	0.00	-5.00	-16.00
Chicot	13S03W34BAA1	333110.24	912539.38	2/16/2005	39.49	93.51	93.23	96.51		0.28	-3.00	
Chicot	13S03W34CAA1	333135.52	912335.8	2/16/2005	37.01	92.99						
Chicot	13S03W35BAC1	333154.05	912245.53	2/16/2005	38.80	95.20	95.13	99.00		0.07	-3.80	
Chicot	14S02W09BDD1	332859	911729	3/29/2005	28.00	105.00	104.00	104.00	108.00	1.00	1.00	-3.00
Chicot	14S02W18BBA1	332859	912038	3/29/2005	33.00	97.00		102.00	109.00		-5.00	-12.00
Chicot	14S03W07BBD1	333011	911729	2/16/2005	24.81	109.19	108.00	108.00		1.19	1.19	
Chicot	14S03W32CDB2	332613.47	912551.45	2/10/2005	35.45	98.55	99.07	100.00		-0.52	-1.45	
Chicot	15S02W20DDC1	332226.59	911919.83	2/10/2005	28.20	97.80		98.00	108.00		-0.20	-10.20
Chicot	15S03W18BBB1	332226.59	911919.83	3/29/2005	35.00	90.00	90.00			0.00		
Chicot	17S01W06BCC1	331501.18	911505.22	2/10/2005	20.80	94.20	92.83	92.00		1.37	2.20	
Chicot	17S01W18ADA1	331340	910755	2/10/2005	3.60	117.40						
Chicot	17S02W10AAA1	331429	911712	2/9/2005	25.10	88.90	86.96			1.94		
Chicot	17S02W33DDA1	331021	911820	2/16/2005	31.25	88.75						
Chicot	17S03W18CBC1	331257	912736	3/30/2005	31.00	86.00	84.00	79.00	91.00	2.00	7.00	-5.00
Chicot	17S03W24ABB1	331259	912159	2/10/2005	21.42	98.58	97.50			1.08		
Chicot	18S01W33BDA1	330543	911245	3/30/2005	10.00	105.00		94.00	100.00		11.00	5.00
Chicot	18S03W22ABA2	330728	912341	2/10/2005	11.60	91.40	90.47			0.93		
Chicot	19S01W17BBB	330309	911415	2/10/2005	9.80	95.20	87.50			7.70		
							Declines/Wells:			**1/13**	**6/11**	**5/6**
							Average Change:			**1.31**	**0.36**	**-6.87**
Clay	18N08E03DAB1	351323.23	901153.03	3/23/2005	7.30	249.70	250.16	249.00		-0.46	0.70	
Clay	18N08E11BAA1	351253	901117	4/27/2005	6.60	252.40	252.20	251.00	253.30	0.20	1.40	-0.90
Clay	19N03E24AAA1	351654.99	904157.11	3/22/2005	19.80	258.20	259.82	258.00		-1.62	0.20	
Clay	19N04E11DAA1	351805	903621	4/27/2005	22.40	257.60	257.40	258.50	263.10	0.20	-0.90	-5.50
Clay	19N04E19AAA1	351654.4	904049.99	3/22/2005	29.00	253.00	252.97	253.00		0.03	0.00	
Clay	19N04E19EAA1	351649	904125	4/27/2005	21.00	258.00	257.50	258.00		0.50	0.00	
Clay	19N05E15EBD1	351716	903152	4/27/2005	32.60	256.40	256.50	260.50	265.30	-0.10	-4.10	-8.90
Clay	19N06E18DBC1	351642	902815	4/27/2005	32.20	264.80	264.50	266.10	271.40	0.30	-1.30	-6.60
Clay	19N07E25BCB1	351519	901700	4/27/2005	16.30	251.70	251.40	249.90	253.50	0.30	1.80	-1.80
Clay	19N08E08DCA1	351729	901402	4/27/2005	7.70	262.30	262.00	262.90	266.50	0.30	-0.60	-4.20
Clay	19N08E27DAA1	351459	901140	3/22/2005	3.97	257.03	256.60			0.43		
Clay	19N09E30BB1	351531	900921	4/27/2005	7.50	257.50						
Clay	20N03E25BAA1	352112	904225	4/27/2005	20.50	267.50	266.20	265.00		1.30	2.50	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Clay	20N04E02BBC1	362427	903722	3/22/2005	15.80	269.20	269.30			-0.10		
Clay	20N04E06BB1	362444.34	904131.25	3/22/2005	18.05	271.95	271.80	271.00		0.15	0.95	
Clay	20N05E22CADI	362118	903132	4/27/2005	27.10	262.90	263.00	267.00		-0.10	-4.10	
Clay	20N05E30CAC1	362003	903454	4/27/2005	16.80	266.20	266.10	267.00		0.10	-0.80	
Clay	20N05E34DBA1	361939.31	903117.17	3/22/2005	27.75	257.25	257.37	261.00		-0.12	-3.75	
Clay	20N06E09BB1	362327	902620	4/27/2005	19.60	270.40	270.20		277.00	0.20		-6.60
Clay	20N06E28CCDI	362005	902630	4/27/2005	26.90	263.10	263.00	267.00	272.20	0.10	-3.90	-9.10
Clay	20N08E22BDC1	362111	901220	4/27/2005	7.90	267.10	266.50	266.00	267.80	0.60	1.10	-0.70
Clay	20N09E09ABC1	362306	900642	4/27/2005	7.50	271.50	271.00	269.30	273.80	0.50	2.20	-2.30
Clay	20N09E33DDC1	361904	900628	4/27/2005	6.60	263.40	263.10	263.00		0.30	0.40	
Clay	21N03E15CBC1	362738	904453	4/27/2005	12.00	280.00	279.90	279.50	283.90	0.10	0.50	-3.90
Clay	21N03E36CDD1	362450	904214	4/27/2005	17.60	272.40	271.90	270.20	277.00	0.50	2.20	-4.60
Clay	20N04E03AA1	362425	903725	4/27/2005	15.80	274.20	273.10	272.60	277.00	1.10	1.60	-2.80
Clay	21N04E09DBC1	362828	903853	4/27/2005	10.80	280.20	280.00	280.40	284.90	0.20	-0.20	-4.70
Clay	21N05E17ABB1	362755.47	903328.9	3/22/2005	21.00	277.00	277.68	277.00		-0.68	0.00	
Clay	21N05E22BAB1	362704	903132	4/27/2005	6.50	281.50	281.50	281.00		0.00	0.50	
Clay	21N06E11BBB1	362839	902421	4/27/2005	11.70	284.30	284.10	283.10	290.00	0.20	1.20	-5.70
Clay	21N06E28BB1	362604.92	902607.97	3/22/2005	17.00	275.50	275.47	276.00		0.03	-0.50	
Clay	21N07E01DDC1	362835	901607	4/27/2005	18.50	284.50	284.50	281.40	286.70	0.00	3.10	-12.20
Clay	21N07E19BDA1	362640	902143	4/27/2005	18.00	277.00	277.00	277.10	283.80	0.00	-0.10	-6.80
Clay	21N08E03CD1	362842	901211	4/27/2005	18.80	289.20						
Clay	21N08E18CCC1	362650.9	901550.33	3/22/2005	31.50	292.50	293.13	287.00		-0.63	5.50	
Clay	21N08E36ABB1	362502	900958	3/22/2005	2.60	280.40	281.37			-0.97		
Clay	21N09E31BDA1	362447	900851	4/27/2005	5.70	278.30	278.60	276.10	281.00	-0.30	2.20	-2.70
							Declines/Wells:			**10/35**	**11/31**	**18/18**
							Average Change:			**0.07**	**0.25**	**-5.00**
Craighead	13N01E03AAA1	354739	905753	3/8/2005	52.40	187.60	187.80	188.50	196.60	-0.20	-0.90	-9.00
Craighead	13N01E21CAB	354434	905945	3/8/2005	60.70	179.30	181.00	181.40	181.00	-1.70	-2.10	-1.70
Craighead	13N01E23DAA1	354435.4	905651.69	4/5/2005	69.50	172.50	172.61	176.00	186.50	-0.11	-3.50	-14.00
Craighead	13N01E26BC1	353832	905800	3/8/2005	64.50	180.50	180.50			0.00		
Craighead	13N02E02AAB1	354731	905032	3/8/2005	86.30	164.70	166.00	168.90	175.80	-1.30	-4.20	-11.10
Craighead	13N02E03AAA1	354733	905129	3/8/2005	84.50	165.50	166.20	168.70	175.50	-0.70	-3.20	-10.00
Craighead	13N03E10BDB1	354625	904546	3/8/2005	81.90	183.10	182.50	183.00	189.20	0.60	0.10	-6.10
Craighead	13N03E23CDA1	354419	904434	3/8/2005	78.20	170.80	170.20	169.40	169.50	0.60	1.40	1.30
Craighead	13N03E28CDB1	354322	904652	3/8/2005	101.70	143.30	144.50	151.00	159.00	3.80	-2.70	-10.70
Craighead	13N03E29AAA1	354403.31	904712.98	4/5/2005	102.20	148.80	148.95	147.00		-0.15	1.80	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Craighead	13N03E35AAA1	354308	904401	3/7/2005	91.20	157.80	155.50			2.30		
Craighead	13N04E12ABB1	354635	903658	4/5/2005	21.90	209.10	207.54	208.00		1.56	1.10	
Craighead	13N04E15DBA1	354521	903857	3/2/2005	24.00	206.00	204.80	204.90	209.60	1.20	1.10	-3.60
Craighead	13N04E26BCC1	354340	903829	3/2/2005	25.60	199.40	197.60	198.00	202.20	1.80	1.40	-2.80
Craighead	13N05E02CCC1	354648	903202	3/5/2005	11.90	218.10	221.00	215.70	217.60	-2.90	2.40	0.50
Craighead	13N05E06DCC1	354637	903547	3/2/2005	18.50	210.50	209.00	207.20	211.70	1.50	3.30	-1.20
Craighead	13N05E22BAD1	354449	903243	4/27/2005	11.60	214.40	212.89	210.00		1.51	4.40	
Craighead	13N05E24BAC1	354451	903045	3/2/2005	8.30	216.70	219.50	213.10	216.00	-2.80	3.60	0.70
Craighead	13N06E21AD1	354421	902743	3/7/2005	12.00	208.00			213.40			-5.40
Craighead	13N07E02CAB1	354642	901901	3/7/2005	4.70	221.30	221.00	220.00		0.30	1.30	
Craighead	13N07E05ABB1	354716	902158	3/7/2005	5.50	219.50	219.50	214.30	218.10	0.00	5.20	1.40
Craighead	13N07E20BBA1	354439.77	902216.44	3/30/2005	2.40	220.80	219.30	217.86		1.50	2.94	
Craighead	13N07E35BCD1	354233	901837	3/7/2005	11.10	209.90	213.00	210.00		-3.10	-0.10	
Craighead	14N01E03ACB1	355246	905816	3/8/2005	49.50	199.50	200.90	203.40	209.00	-1.40	-3.90	-9.50
Craighead	14N01E10BAB1	355204	905823	3/8/2005	50.50	195.50	195.90	198.00	208.00	-0.40	-2.50	-12.50
Craighead	14N01E31DCA1	354817	910121	3/8/2005	60.00	191.00	194.30	196.60	203.80	-3.30	-5.60	-12.80
Craighead	14N02E15DD1	354852	905044	3/8/2005	72.10	182.90	184.00		193.00	-1.10		-10.10
Craighead	14N02E18BDC1	355040.91	905419.37	4/5/2005	50.10	191.90	191.75	190.00		0.15	1.90	
Craighead	14N02E27AA	354918	905125	3/30/2005	76.35	178.65						
Craighead	14N05E25ABB1	354920.85	903025.35	3/30/2005	17.00	221.00	219.86	218.48		1.14	2.52	
Craighead	14N06E06BAA1	355234	902934	3/2/2005	19.20	220.80	219.00	218.60	223.00	1.80	2.20	-2.20
Craighead	14N06E20CCD1	354922.16	902849.94	3/30/2005	4.50	221.50	219.87	219.00		1.63	2.50	
Craighead	14N06E27AAB1	354911.46	902559.08	4/12/2005	1.50	224.43	223.48			0.95		
Craighead	14N07E07BCB1	355124	902323	3/7/2005	4.00	226.00	225.00	218.40	224.40	1.00	7.60	1.60
Craighead	14N07E14DDC1	354956	901831	3/7/2005	3.50	226.50	225.50	217.30	221.80	1.00	9.20	4.70
Craighead	15N02E12DCB1	355626	904930	3/7/2005	32.00	218.00	218.30	222.00	228.20	-0.30	-4.00	-10.20
Craighead	15N03E19ADA1	355502.21	904802.05	4/5/2005	48.00	214.00	214.07	220.24		-0.07	-6.24	
Craighead	15N03E31ADA1	355313	904805	3/7/2005	58.70	211.30	212.00	216.60	225.30	-0.70	-5.30	-14.00
Craighead	15N05E22BAB1	355513	903241	3/2/2005	34.50	225.50	222.00	224.20	231.70	3.50	1.30	-6.20
Craighead	15N06E04BAD1	355744	902706	3/2/2005	10.50	228.50	228.00	222.30	228.50	0.50	6.20	0.00
Craighead	15N06E20DDD1	355426	902739	3/30/2005	7.50	226.50	225.38	223.00		1.12	3.50	
Craighead	15N07E10DAB1	355622	901934	3/7/2005	7.70	227.30	227.50	227.00	226.10	-0.20	0.30	1.20
Craighead	15N07E10DBA1	355627.56	901943.75	3/30/2005	5.60	230.40	228.42	226.00		1.98	4.40	
Craighead	15N07E21DAB1	355444	902043	3/7/2005	6.00	230.00	229.50	221.30	227.00	0.50	8.70	3.00
Craighead	15N07E35DCB1	355241	901831	3/7/2005	11.00	220.00	224.50	216.10	223.30	-4.50	3.90	-3.30
							Declines/Wells:			**18/43**	**13/39**	**20/29**
							Average Change:			**0.16**	**1.03**	**-4.90**

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Crittenden	04N07E21AAD1	345643.83	902121.49	4/19/2005	8.00	194.00	192.02	189.00		1.98	5.00	
Crittenden	05N07E08BDC1	350407	902234	4/27/2005	17.70	186.30	182.00	182.50	187.20	4.30	3.80	-0.90
Crittenden	05N07E28CBA1	350121.32	902139.85	4/19/2005	13.50	187.50	184.02	182.00		3.48	5.50	
Crittenden	05N07E34BAB1	350059.39	902029.86	4/19/2005	10.80	192.20	188.11	182.82		4.09	9.38	
Crittenden	05N07E34CDD1	350010	902028	4/27/2005	9.60	195.40	186.00	186.00	190.70	9.40	9.40	4.70
Crittenden	06N06E06BBB1	351043	903006	4/29/2005	32.30	181.70	183.00			-1.30		
Crittenden	06N07E13BAA1	350849.58	901807.57	4/19/2005	17.40	187.60	185.97	186.00		1.63	1.60	
Crittenden	06N07E14ABA1	350848	901858	4/27/2005	18.30	192.70	186.00	190.60	196.40	6.70	2.10	-3.70
Crittenden	07N06E24CCC1	351227	902445	4/27/2005	35.40	177.60	178.00			-0.40		
Crittenden	07N06E29CBC1	351152	902914	4/29/2005	40.10	169.90	173.00	174.00		-3.10	-4.10	
Crittenden	07N07E05DAD1	351504	902129	3/29/2005	28.05	186.95	186.90			0.05		
Crittenden	07N07E31CCC1	351041.9	902358.97	3/29/2005	33.30	173.70	175.44	177.00		-1.74	-3.30	
Crittenden	07N07E34DDA1	351116	901941	3/29/2005	26.60	188.40	187.80			0.60		
Crittenden	07N08E04BBD1	351538	901505	4/27/2005	21.90	202.10	205.00	202.00		-2.90	0.10	
Crittenden	07N09E05CDD1	351453.34	900933.58	4/20/2005	6.90	207.10	199.66	199.98		7.44	7.12	
Crittenden	08N06E01DCC1	352021	902408	4/27/2005	31.90	183.10	183.00	183.90	187.90	0.10	-0.80	-4.80
Crittenden	08N06E26BBA1	351737	902552	3/29/2005	32.50	182.50	183.60			-1.10		
Crittenden	08N07E13CCC2	351828.34	901811.95	4/4/2005	28.40	192.60	192.75	196.87		-0.15	-4.27	
Crittenden	08N07E14DAA2	351854.41	901832.68	3/29/2005	29.15	189.85	189.80	192.00		0.05	-2.15	
Crittenden	08N07E32DAA1	351618	902146	4/27/2005	28.80	186.20	189.00	187.40	192.00	-2.80	-1.20	-5.80
Crittenden	08N08E06ABB1	352103	901644	4/27/2005	31.90	191.10	195.50	196.00		-4.40	-4.90	
Crittenden	09N06E26ABC1	352255	902520	3/29/2005	29.10	180.90	180.60			0.30		
Crittenden	09N07E02CDB1	352537	901905	4/27/2005	32.80	192.20	192.00	194.50	197.50	0.20	-2.30	-5.30
Crittenden	09N07E10DDA1	352447.58	901924.64	3/29/2005	28.50	192.50	193.74	198.00		-1.24	-5.50	
Crittenden	09N07E20DDC1	352256	902158	3/29/2005	28.00	187.00	187.50			-0.50		
Crittenden	09N07E31AAA1	352200	902245	4/27/2005	31.50	188.50	189.00			-0.50		
Crittenden	09N07E31BAB1	352159.85	902326.57	3/29/2005	32.30	188.70	188.69	191.00		0.01	-2.30	
Crittenden	09N08E08CCB1	352501	901608	4/27/2005	23.40	190.60	190.00			0.60		
Crittenden	09N08E35BBD1	352144	901251	3/29/2005	11.58	213.42						
Crittenden	09N08E35BBD2	352143	901250	3/29/2005	12.87	212.13						
							Declines/Wells:			**12/28**	**10/19**	**5/6**
							Average Change:			**0.74**	**0.69**	**-2.63**
Cross	07N01E05CDA1	351517.52	910049.05	2/24/2005	72.50	144.50	145.25	150.90	152.00	-0.75	-6.40	-7.50
Cross	07N01E11AAA1	351501.25	905705.29	2/24/2005	75.40	141.60	142.23	147.14		-0.63	-5.54	
Cross	07N01E33BBA1	351134	910010	4/19/2005	72.00	143.00	145.00	151.00	156.00	-2.00	-8.00	-13.00
Cross	07N02E02CD	351510	905113	2/24/2005	80.57	144.43						

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Cross	07N02E29DDC1	351138.09	905409.17	2/24/2005	71.00	149.00	148.52	155.00	159.80	-0.52	-6.00	-10.80
Cross	07N03E05ADA1	351548.89	904738.6	2/24/2005	110.80	143.20	133.15	146.76	162.90	10.05	-3.56	-19.70
Cross	07N03E32DCC1	351045.29	904810.28	2/24/2005	96.70	154.30	155.12	159.00		-0.82	-4.70	
Cross	07N05E19CCC1	351237.65	903644.91	4/27/2005	38.50	168.50	172.09	172.00		-3.59	-3.50	
Cross	07N05E25ABA1	351228.87	903044.79	2/23/2005	36.10	168.90	169.19	173.00	175.70	-0.29	-4.10	-6.80
Cross	08N01E16DBB1	351855	905933	4/13/2005	87.00	138.00	141.00	148.00	153.50	-3.00	-10.00	-15.50
Cross	08N02E12DCC1	351933	905002	4/14/2005	84.00	146.00	142.00	149.00	151.80	4.00	-3.00	-5.80
Cross	08N02E17AAA1	351923	905354	4/13/2005	80.00	145.00	143.00	147.00	153.60	2.00	-2.00	-8.60
Cross	08N03E05AAD1	352549	901506	4/13/2005	91.00	164.00						
Cross	08N04E27ABB1	351745	903916	4/20/2005	28.00	177.00						
Cross	08N05E32ADD1	351631.65	903440.45	2/23/2005	26.60	177.40	175.53	174.00		1.87	3.40	
Cross	09N01E33BBA2	352202.76	910000.6	2/25/2005	79.80	145.20	146.60	145.23		-1.40	-0.03	
Cross	09N01E36AAB1	352155	905605	4/13/2005	82.00	143.00	142.00	148.00	153.30	1.00	-5.00	-10.30
Cross	09N02E20AAA1	352402	905342	4/13/2005	89.00	141.00	139.00	147.00	147.50	2.00	-6.00	-6.50
Cross	09N02E30CBB1	352243	905551	4/13/2005	86.00	139.00	138.00	143.00	153.00	1.00	-4.00	-14.00
Cross	09N03E17DCC1	352408.8	904725.6	3/10/2005	105.90	145.10	147.04	144.54		-1.94	0.56	
Cross	09N04E03DBB1	352614	903918	4/13/2005	28.00	187.00	184.00	190.00	191.70	3.00	-3.00	-4.70
Cross	09N05E32BDB1	352150.53	903512.11	2/23/2005	30.70	179.30	180.88	178.95	179.90	-1.58	0.35	-0.60
							Declines/Wells:			**11/19**	**16/19**	**13/13**
							Average Change:			**0.44**	**-3.71**	**-9.52**
Desha	07S01E19ABA1	340428	910303	4/28/2005	10.60	143.40	140.00	140.80	140.20	3.40	2.60	3.20
Desha	08S03W33ABD1	335802.92	912338.18	2/9/2005	4.84	160.20	159.72	157.04		0.48	3.16	
Desha	09S01W08BCA1	335608	911234	3/23/2005	18.00	138.00	131.00			7.00		
Desha	09S01W15CBB1	335501	911055	3/23/2005	35.00	117.00	117.00	119.00		0.00	-2.00	
Desha	09S02W17CBC1	355502	911920	3/23/2005	31.00	122.00						
Desha	09S02W26DDC1	335256.57	911529.64	2/9/2005	28.73	120.54	118.80	121.00	123.85	1.74	-0.46	-8.31
Desha	09S03W17DCB1	335448.23	912456.66	2/9/2005	32.58	122.50	121.26	122.35		1.24	0.15	
Desha	09S04W02CDA1	335823	912821	3/23/2005	38.00	125.00						
Desha	10S02W11ADC1	335045	911517	3/23/2005	27.00	119.00	118.00	122.00	130.00	1.00	-3.00	-11.00
Desha	10S02W24DBC1	334849.63	911453.44	2/9/2005	25.70	117.30	117.12	117.00		0.18	0.30	
Desha	10S03W26CAA1	334806	912144.55	2/9/2005	44.20	110.80	110.97	113.00		-0.17	-2.20	
Desha	10S03W26CCC	334759	912235	2/9/2005	40.70	109.30	106.60			2.70		
Desha	10S04W03BCD1	335059	913052	2/9/2005	30.81	133.19	132.10			1.09		
Desha	10S04W12BBB1	335048	912754	2/9/2005	31.50	123.50	122.60			0.90		
Desha	10S04W19DAC1	334901	913233	2/28/2005	25.51	134.49	133.00			1.49		
Desha	10S04W21AAA1	334929	913012	2/28/2005	26.70	133.30	131.80			1.50		

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Desha	11S03W21ABB1	334416	912412	3/23/2005	31.00	108.00						
Desha	11S02W10ADD1	334613	911635	2/15/2005	33.98	111.02						
Desha	11S02W15BAD1	334446	911635	3/23/2005	34.00	114.00	115.00		119.00	-1.00		-5.00
Desha	12S01W23DBC1	333803	911019	3/23/2005	16.00	130.00						
Desha	13S02W05CDD1	333535	911938	3/23/2005	44.00	102.00						
Desha	13S02W27CAC1	333223.99	911734.76	2/9/2005	29.70	103.30	101.08	101.00		2.22	2.30	
Desha	13S02W32DBD1	333126	911917	3/23/2005	38.00	97.00	97.00	98.00		0.00	-1.00	
Desha	13S03W10DAA1	333505.64	912301.83	2/15/2005	47.60	92.40	94.05	98.00		-1.65	-5.60	
Desha	13S03W11CAB1	333503	912241	3/23/2005	50.00	92.00	91.00	99.00	105.00	1.00	-7.00	-13.00
							Declines/Wells:			**3/19**	**7/12**	**4/5**
							Average Change:			**1.22**	**-1.06**	**-6.82**
Drew	11S04W08DBA1	334531.98	913136.2	2/21/2005	23.50	136.50	136.87	134.00		-0.37	2.50	
Drew	11S04W09BBB	334550	913404	2/21/2005	26.70	133.30	131.70			1.60		
Drew	11S04W35CCD1	334140	912906	2/21/2005	21.03	133.18						
Drew	11S04W35DC1	334144	912842	2/21/2005	24.56	129.44						
Drew	11S05W08CCC1	334546.48	913837.16	2/21/2005	35.30	149.70	149.21	150.00		0.49	-0.30	
Drew	12S04W03ABB1	334133.92	912946.13	2/21/2005	22.40	132.60	130.89	132.00		1.71	0.60	
Drew	12S04W25DBB1	333739	912738	2/21/2005	27.60	122.40	120.60			1.80		
Drew	13S04W09ACD1	333512	913034	4/18/2005	18.00	127.00	128.60	122.00		-1.60	5.00	
Drew	13S04W33BAA1	333206	913100	2/22/2005	15.70	122.30	118.97	120.00		3.33	2.30	
Drew	13S04W36DCC	333110	912757	2/21/2005	24.05	115.95	115.40			0.55		
Drew	13S05W29ADA1	333248	913747	2/21/2005	44.80	140.20	154.50			-14.30		
Drew	13S06W03DDC1	333544.69	914201.6	2/21/2005	57.75	133.25	129.94	133.00		3.31	0.25	
Drew	13S06W21DAA1	333324	914258	4/18/2005	73.00	134.00	118.00	120.00		16.00	14.00	
Drew	14S04W03CBA1	333039	912944	2/21/2005	20.85	119.15	115.00			4.15		
Drew	14S04W05CBA1	333047	913218	4/18/2005	12.00	119.00	119.00	117.00		0.00	2.00	
Drew	14S04W05CBC1	333042	913226	4/18/2005	11.00	120.00	118.00	116.00		2.00	4.00	
Drew	14S04W22CAA1	332805	912957	4/18/2005	20.00	115.00	116.00	111.00		-1.00	4.00	
Drew	14S05W23DCB1	332801.62	913512.21	2/21/2005	28.50	132.50	131.12	130.00		1.38	2.50	
							Declines/Wells:			**4/16**	**1/11**	
							Average Change:			**1.19**	**3.35**	
Greene	16N03E03BA1	360315.87	904515.85	3/10/2005	28.80	231.20	230.96	234.00		0.24	-2.80	
Greene	16N03E05BBB1	360316	904750	4/14/2005	28.90	228.10	228.60	233.00		-0.50	-4.90	
Greene	16N03E16DDD1	360049	904547	4/14/2005	31.60	226.40	223.20	234.00		3.20	-7.60	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Greene	16N03E19DBC1	360000	904519	3/10/2005	36.80	228.20	228.30			-0.10		
Greene	16N03E29ACC1	355926	904722	4/14/2005	29.40	227.60	227.80	231.00		-0.20	-3.40	
Greene	16N06E03CCC1	360224.07	902625.9	3/10/2005	41.10	216.90	217.61	210.00		-0.71	6.90	
Greene	16N06E09ABB1	360215	902651	4/14/2005	48.80	212.20	220.60	223.00		-8.40	-10.80	
Greene	16N06E21BAA1	360031	902705	4/14/2005	23.80	225.20	224.00	220.00		1.20	5.20	
Greene	16N06E28ABB1	355938.31	902657.01	3/10/2005	22.40	228.60	227.11	224.00		1.49	4.60	
Greene	17N03E02DCC1	360806	904352	4/14/2005	31.30	235.70	236.00	239.00		-0.30	-3.30	
Greene	17N04E07DDA1	360712	904129	4/14/2005	36.90	234.10	234.90			-0.80		
Greene	17N04E30CDC1	360409.09	904217.57	3/10/2005	35.40	229.60	229.62	232.82		-0.02	-3.22	
Greene	17N07E03CCC1	360744	901951	4/14/2005	5.90	240.10	239.20	239.30	236.00	0.90	0.80	4.10
Greene	17N07E29CBC1	360419	902201	4/14/2005	3.30	241.70	240.80	239.10		0.90	2.60	
Greene	18N03E24ABA1	361141	904234	3/21/2005	29.87	240.13	240.85			-0.72		
Greene	18N03E24ACA1	361119	904216	4/14/2005	35.20	235.80	241.20	243.00		-5.40	-7.20	
Greene	18N04E04AAC1	361356	903854	4/14/2005	32.00	241.00	244.80	245.00		-3.80	-4.00	
Greene	18N04E21CBD1	361052.32	903724.76	3/10/2005	54.30	239.70	240.10	244.00		-0.40	-4.30	
Greene	18N06E23ACB1	361056	902357	4/14/2005	12.60	264.40	266.70	263.00		-2.30	1.40	
Greene	18N07E17BAB1	361203	902105	4/14/2005	6.60	255.40	253.70	250.20	249.00	1.70	5.20	6.40
Greene	18N07E20BBA1	361110.37	902113.23	3/10/2005	5.50	251.50	250.12	245.00		1.38	6.50	
Greene	18N07E23CCD1	361022	901747	3/10/2005	7.20	242.80	242.70			0.10		
Greene	19N03E26AD1	361600.72	904258.43	3/21/2005	27.64	253.36	253.41	254.00		-0.05	-0.64	
Greene	19N03E33DDD1	361418	904516	4/14/2005	34.50	241.50	242.20	245.00		-0.70	-3.50	
Greene	19N05E34AAD1	361437	903102	4/14/2005	31.50	250.50	251.50	254.00		-1.00	-3.50	
							Declines/Wells:			**16/25**	**13/21**	
							Average Change:			**-0.57**	**-1.24**	
Independence	11N04W02ABB1	353650	912416	4/6/2005	9.00	218.00	217.60	217.50	213.00	0.40	0.50	5.00
Independence	12N04W09CAA1	354047	912535	3/14/2005	19.20	216.80		209.00			7.80	
Independence	12N04W14DD1	353929.42	912236.26	3/14/2005	21.50	209.50	206.29	203.50		3.21	6.00	
Independence	12N04W34CBB1	353720.1	912512.5	3/14/2005	19.10	211.90	209.09	206.00		2.81	5.90	
Independence	12N05W36AAA1	353738.04	912827.22	3/14/2005	20.90	215.10	212.25	222.80	210.00	2.85	-7.70	5.10
Independence	13N04W02BBC1	354803	912347	3/14/2005	2.90	333.10						
Independence	14N03W12CCB1	355205	911559	4/6/2005	1.90	235.10						
Independence	14N03W14CBB1	355101	911703	3/14/2005	0.50	234.50	233.20	234.20		1.30	0.30	
Independence	14N03W14DAA2	355107	911602.11	3/14/2005	4.00	226.00	225.92	223.89		0.08	2.11	
Independence	14N03W14DBB1	355106	911640.42	3/14/2005	3.60	226.40	225.98	225.00		0.42	1.40	
							Declines/Wells:			**0/7**	**1/8**	
							Average Change:			**1.58**	**2.04**	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Jackson	09N01W15CDD1	352357	910433	4/5/2005	58.70	161.30	161.30	165.60	172.00	0.00	-4.30	-10.70
Jackson	09N01W22ADD1	352331.57	910432.57	3/17/2005	60.70	154.30	155.34	159.00		-1.04	-4.70	
Jackson	09N01W30BAC1	352258	910813	4/5/2005	42.50	175.50	176.00	178.20	173.00	-0.50	-2.70	2.50
Jackson	09N02W32BBB1	352215	911344	4/20/2005	29.60	190.40	190.80	189.70	198.00	-0.40	0.70	-7.60
Jackson	09N02W32CBB1	352151.79	911347.79	3/17/2005	29.00	191.00	191.65	191.00		-0.65	0.00	
Jackson	10N01W04DCB1	353114	910602	3/16/2005	52.00	173.00	173.00			0.00		
Jackson	10N01W05ADD1	353132	910702	4/5/2005	45.90	181.10	181.70	184.90	188.00	-0.60	-3.80	-6.90
Jackson	10N01W10ABA1	353055	910445	4/20/2005	56.60	166.40	165.60	170.00	171.00	0.80	-3.60	-4.60
Jackson	11N01W10DA	353358	910428	3/17/2005	51.97	179.03						
Jackson	11N01W26AAD1	353329.77	910323.21	3/16/2005	71.30	155.70	161.75	165.80		-6.05	-10.10	
Jackson	11N01W29AAD1	353338.66	910635.27	4/13/2005	40.05	184.95	185.99	187.00		-1.04	-2.05	
Jackson	11N02W23ADC1	353357	911002	4/5/2005	25.00	196.00	195.50			0.50		
Jackson	11N1W25BDA1	353322	910223	4/20/2005	65.60	161.40	161.90			-0.50		
Jackson	11N03W05ABA1	353722	912012	4/21/2005	11.50	212.50	206.00			6.50		
Jackson	11N03W06DAB1	353655.13	912008.5	3/25/2005	15.30	207.70	200.97	199.00		6.73	8.70	
Jackson	11N03W07BBD1	353615	912047	3/14/2005	15.50	199.50						
Jackson	12N01W11BCB1	354127	910416	3/17/2005	37.40	195.60	196.40	196.90	201.00	-0.80	-1.30	-5.40
Jackson	12N01W30CCC2	353812	910821	3/17/2005	31.50	195.50	195.20	196.70	206.00	0.30	-1.20	-10.50
Jackson	12N01W36CBC1	353724	910317	4/20/2005	51.70	184.30	185.60	186.90	190.00	-1.30	-2.60	-5.70
Jackson	12N02W25ABB2	353909.97	910852.17	3/24/2005	33.90	200.10	202.27	202.00		-2.17	-1.90	
Jackson	13N01W20AAA1	354514.14	910627.47	3/24/2005	39.20	202.80	204.36	206.00		-1.56	-3.20	
Jackson	13N01W23BCC1	354444	910413	3/17/2005	44.30	201.70	201.90	204.50	207.00	-0.20	-2.80	-5.30
Jackson	13N02W34CBB1	354306	911151	3/17/2005	18.00	222.00	220.50	221.00	229.00	1.50	1.00	-7.00
Jackson	13N03W15CDD1	354525.9	911749.46	3/24/2005	13.60	218.40	216.82	212.00		1.58	6.40	
Jackson	13N03W15DCB1	354540	911718	4/22/2005	12.90	225.10	221.50	218.10	215.00	3.60	7.00	10.10
Jackson	13N03W36ABB1	354337	911532	3/17/2005	13.20	227.80	226.80	224.30	220.00	1.00	3.50	7.80
Jackson	14N01W09AAA1	355216	910623	3/17/2005	33.30	218.70	218.30	219.70	225.00	0.40	-1.00	-6.30
Jackson	14N01W09AAA1	355220.36	910515.16	3/24/2005	39.40	211.60	210.68	212.20		0.92	-0.60	
Jackson	14N01W19BBB1	355032	910823	3/17/2005	29.80	216.20	219.30	217.40	220.00	-3.10	-1.20	-3.80
Jackson	14N01W28BCB1	354922	910407	4/20/2005	42.70	202.30		205.00	211.30		-2.70	-9.00
Jackson	14N01W33CCD1	354759	910610	3/17/2005	38.80	206.20	206.30	209.50	215.00	-0.10	-3.30	-8.80
Jackson	14N02W22BBC1	355026	911145	3/17/2005	25.80	224.20	224.00	223.00		0.20	1.20	
							Declines/Wells:			**15/29**	**18/26**	**13/16**
							Average Change:			**0.14**	**-0.94**	**-4.45**
Jefferson	03S08W24BBC1	342620.37	914953.19	3/3/2005	49.00	153.00	152.42	156.00		0.58	-3.00	
Jefferson	03S08W28CCC1	342452	915303	4/21/2005	11.50	183.50						

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Jefferson	03S09W14BCD1	342712	915712	4/22/2005	62.20	161.80		177.00	188.00		-15.20	-26.20
Jefferson	03S09W22AAA1	342639.63	915728.43	4/22/2005	42.90	175.10	175.00			0.10		
Jefferson	03S09W29CBD1	342516.81	920023.32	3/3/2005	27.20	188.80		191.00			-2.20	
Jefferson	03S09W36ACC1	342428	915555	4/22/2005	39.00	175.00	167.70	179.50	187.00	7.30	-4.50	-12.00
Jefferson	03S09W32CBC1	342415	902248	3/3/2005	18.30	199.70	187.80			11.90		
Jefferson	03S10W25BCA2	342537	920241	4/22/2005	15.50	199.50	196.70			2.80		
Jefferson	03S10W26BBB2	342427	920249	4/22/2005	11.50	203.50	199.00	199.50	204.00	4.50	4.00	-0.50
Jefferson	04S07W08CBB1	342226	914745	3/3/2005	49.40	145.60	147.00			-1.40		
Jefferson	04S07W35DDB1	341836	914347	4/22/2005	25.80	159.20	158.80	157.00	160.00	0.40	2.20	-0.80
Jefferson	04S08W13DCB1	342122.85	914926.45	4/5/2005	40.80	163.20	157.88	164.00		5.32	-0.80	
Jefferson	04S09W02CBD1	342325	915717	4/22/2005	32.50	180.50	168.30			12.20		
Jefferson	04S09W32DDA1	341859	920008	4/22/2005	18.50	193.50	192.30	194.00	196.20	1.20	-0.50	-2.70
Jefferson	05S06W31CAA1	341329.94	914206.1	3/3/2005	15.80	173.42	173.05	172.00		0.37	1.42	
Jefferson	05S08W12DAA1	341712	914907	3/3/2005	14.00	180.25	176.78			3.47		
Jefferson	06S05W15BCA1	341022.95	913245	3/3/2005	17.70	159.44	157.70	157.79		1.74	1.65	
Jefferson	06S06W23AAD1	341006.74	913712.2	3/3/2005	17.60	171.41	167.55	166.94		3.86	4.47	
Jefferson	07S07W18CAC1	340647.02	915036.77	4/5/2005	22.00	164.00	157.67	160.00		6.33	4.00	
Jefferson	07S08W06BAA1	340858.53	915647.26	3/8/2005	16.00	186.31	183.04	181.00		3.27	5.31	
							Declines/Wells:			**1/17**	**6/13**	**5/5**
							Average Change:			**3.76**	**-0.24**	**-8.44**
Lawrence	15N01E11ADD1	355657	905638	4/7/2005	44.00	211.00	213.00	216.00	219.20	-2.00	-5.00	-8.20
Lawrence	15N01W03BAB1	355831	910441	4/13/2005	36.40	222.60	223.80	223.00	232.50	-1.20	-0.40	-9.90
Lawrence	15N01E26DDA1	355412	905651	3/23/2005	49.60	201.40		206.00			-4.60	
Lawrence	15N01W35CBB1	355336.15	910356.33	3/23/2005	43.70	206.30	206.61	209.00		-0.31	-2.70	
Lawrence	16N01E11DAC2	360203.04	905639.37	3/23/2005	47.40	214.60	218.34	220.00		-3.74	-5.40	
Lawrence	16N01E27ADC1	355938	905750	3/23/2005	47.00	213.00						
Lawrence	16N01W30DDC1	355936.93	910723.26	4/13/2005	21.50	233.50	233.00	230.00	236.00	0.50	3.50	-2.50
Lawrence	16N02E09AAD1	360219	905212	4/15/2005	38.20	222.80	223.40	226.00	227.50	-0.60	-3.20	-4.70
Lawrence	16N02E19ACA1	360031	905442	4/14/2005	40.00	220.00	221.20	222.00	224.50	-1.20	-2.00	-4.50
Lawrence	16N02E34CBB1	355831	905208	4/7/2005	44.80	210.20	212.00	215.00	218.00	-1.80	-4.80	-7.80
Lawrence	16N02E35AAA1	360409	905004	4/7/2005	48.20	207.80	209.80			-2.00		
Lawrence	17N01E02BBA1	360901	905707	4/8/2005	12.90	247.10	247.80	248.00	250.60	-0.70	-0.90	-3.50
Lawrence	17N01E21CBC1	360543	905931	4/12/2005	20.20	244.80	245.40	245.00	249.70	-0.60	-0.20	-4.90
Lawrence	17N01E26CCC1	360522	905738	3/23/2005	33.20	231.80						
Lawrence	17N01E27AAA1	360519	905732	4/12/2005	34.50	235.50	236.20	238.00	241.40	-0.70	-2.50	-5.90
Lawrence	17N01W35AAB1	360435	910158	4/12/2005	11.00	246.00	245.50	246.00	248.80	0.50	0.00	-2.80

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Lawrence	17N02E03BBB1	360901	905158	3/23/2005	41.60	228.40						
Lawrence	17N02E04DCA1	360758	905224	4/8/2005	39.40	230.60	232.00	234.00	240.60	-1.40	-3.40	-10.00
Lawrence	17N02E19CDC1	360515.91	905449.43	4/8/2005	38.20	226.80	226.77	230.00	235.50	0.03	-3.20	-8.70
Lawrence	17N02E21ABD1	360554	905225	4/8/2005	42.00	226.00	227.00	230.00	234.50	-1.00	-4.00	-8.50
Lawrence	17N02E25CBD1	360423	904948	4/8/2005	37.40	227.60	230.00	234.00	237.00	-2.40	-6.40	-9.40
							Declines/Wells:			**14/17**	**15/17**	**14/14**
							Average Change:			**-1.10**	**-2.66**	**-6.52**
Lee	01N01E04AAB1	344358	910015	5/3/2005	20.00	155.00		153.50	158.50		1.50	-3.50
Lee	01N01E09CCC1	344215	910054	4/20/2005	26.50	155.50	151.50	158.00	168.00	4.00	-2.50	-12.50
Lee	01N01E21CCC1	344030	910055	4/22/2005	52.00	157.00	154.00			3.00		
Lee	01N01E24CBD1	344033	905729	4/20/2005	9.30	175.70	168.70	170.00	176.50	7.00	5.70	-0.80
Lee	01N02E01ADD1	344330	905016	5/3/2005	17.00	193.00						
Lee	01N02E11BAB1	344255	905208	4/20/2005	17.00	185.00						
Lee	01N02E12ABB1	344254	905040	4/20/2005	18.00	188.00			194.00			-6.00
Lee	01N02E22CBA1	344056	905318	4/20/2005	18.50	181.50			180.50			1.00
Lee	01N02E33CBB1	343858	905434	4/20/2005	9.00	177.00	172.00	172.00	177.50	5.00	5.00	-0.50
Lee	01N02E33CCB1	343851	905433	4/20/2005	8.00	177.00	172.00	172.00	176.00	5.00	5.00	1.00
Lee	01N03E02BBC1	344339.29	904601.14	2/15/2005	38.40	198.03	189.39	175.00		8.64	23.03	
Lee	01N03E27ADD1	343952	904605	5/3/2005	3.00	201.00	197.00	193.00	196.50	4.00	18.00	4.50
Lee	02N01E21BAA1	344633	910005	4/22/2005	39.00	146.00	151.70	157.00	163.00	-5.70	-11.00	-17.00
Lee	02N01E23BAA2	34463174	905820.4	2/15/2005	49.30	152.70	152.78	158.00		-0.08	-5.30	
Lee	02N01E29ABC1	344542	910108	2/15/2005	46.50	138.50	138.00			0.50		
Lee	02N01W12BAA1	344828.26	910329.55	2/15/2005	42.15	142.85	142.93			-0.08		
Lee	02N01w34DDC1	344410	910520	5/3/2005	47.00	133.00	133.00	140.00	154.00	0.00	-7.00	-21.00
Lee	02N02E07ACA1	344752	905602	2/15/2005	45.70	154.30	154.10			0.20		
Lee	02N02E08ADC1	344807.34	905338.75	2/15/2005	42.50	158.50	157.07	164.00		1.43	-5.50	
Lee	02N02E21ABC1	34462157	905358.16	2/15/2005	36.85	163.15	161.27	167.00		1.88	-3.85	
Lee	02N02E22BBB1	344628	905327	5/3/2005	22.00	178.00						
Lee	02N03E09DDD1	344723	904707	4/22/2005	42.00	178.00	170.00	169.00	172.60	8.00	9.00	5.40
Lee	02N03E29CAD1	344500	904846	5/3/2005	30.00	185.00			188.00			-3.00
Lee	02N04E03ABD1	344855	903954	4/26/2005	21.00	171.00	163.50	167.00	168.40	7.50	4.00	2.60
Lee	02N04E15DAC1	344636.73	903950.39	2/15/2005	16.30	175.70	173.85	171.00		1.85	4.70	
Lee	03N01E03CBC1	345355	905941	4/26/2005	60.00	145.00	142.00	150.00	152.50	3.00	-5.00	-7.50
Lee	03N01E32BCC1	344951	910150	4/20/2005	62.00	138.00	140.00	145.00	150.00	-2.00	-7.00	-12.00
Lee	03N01W10DCC1	345201	910455	2/15/2005	73.00	132.00	133.00			-1.00		
Lee	03N02E12CDC1	345239	905053	4/20/2005	44.00	168.00			171.40			-5.40

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Lee	03N02E13EBA1	345237.4	905107.32	2/15/2005	47.50	164.50	163.45	166.00		1.05	-1.50	
Lee	03N02E29DAD1	345013.62	905429.78	2/15/2005	42.30	162.70	162.34	165.00		0.36	-2.30	
Lee	03N03E05CDD1	345327	904837	5/3/2005	45.00	159.00	171.50	159.00	166.50	-12.50	0.00	-7.50
Lee	03N03E18DAB1	345206	904913	5/3/2005	26.00	170.00	169.00	174.00	177.00	1.00	-4.00	-7.00
Lee	03N03E32CAB1	344932.65	904926.23	2/15/2005	45.50	158.50	155.65	158.00		2.85	0.50	
Lee	03N04E07CBB1	345245	904312	4/19/2005	25.00	175.00						
Lee	03N05E14DDA1	345148.08	903203.25	2/17/2005	11.20	181.80	179.45	178.00		2.35	3.80	
Lee	03N05E26ADC1	345020	903215	4/26/2005	4.00	181.00	180.00	178.00	178.00	1.00	3.00	3.00
							Declines/Wells:			**6/28**	**11/24**	**13/19**
							Average Change:			**1.72**	**1.18**	**-4.54**
Lincoln	07S06W03CCA2	340828	914114	4/15/2005	18.00	172.00	174.00	179.00	175.00	-2.00	-7.00	-3.00
Lincoln	07S07W36CBD1	340411	914529	4/15/2005	37.00	146.00	145.00	148.00	160.00	1.00	-2.00	-14.00
Lincoln	08S04W06ABD1	340341	913116	4/15/2005	13.00	158.00	154.00	155.00	161.00	4.00	3.00	-3.00
Lincoln	08S04W08EBB2	340253.92	913100.76	2/15/2005	29.00	142.00	149.77	151.00		-7.77	-9.00	
Lincoln	08S04W31CBA1	335901.09	913149.59	2/15/2005	33.05	128.85	129.10	133.00		-0.25	-4.15	
Lincoln	08S05W12CBA1	340229	913222	4/15/2005	21.00	150.00						
Lincoln	08S05W21CCD1	340027	913533	4/15/2005	35.00	134.00	135.00	124.00	152.00	-1.00	10.00	-18.00
Lincoln	08S05W29ABC1	340021	913044	4/15/2005	45.00	131.00		139.00	144.00		-8.00	-13.00
Lincoln	08S05W32DCC1	335840	913644	4/15/2005	44.00	128.00	139.00	129.00	143.00	-11.00	-1.00	-15.00
Lincoln	08S06W02ACB1	340338.84	913957.73	2/15/2005	41.10	139.93	138.39	143.00		1.54	-3.07	
Lincoln	08S07W05DDD1	340301	914903	2/15/2005	29.00	161.00		161.00			0.00	
Lincoln	08S07W09BBD1	340248	914845	2/15/2005	30.20	159.60						
Lincoln	09S04W06CBB1	335721	913252	4/15/2005	39.00	124.00	118.00	130.00	138.00	6.00	-6.00	-14.00
Lincon	09S05W13CDB1	335505	913350	2/15/2005	42.20	131.60						
Lincoln	09S05W14ABC1	335553.02	913439.08	2/15/2005	37.20	135.30	134.92	138.00		0.38	-2.70	
Lincoln	09S05W17ECB1	335551.59	913819.95	2/15/2005	36.50	134.50	129.23	133.00		5.27	1.50	
Lincoln	09S06W04BCD1	335821.38	914345.83	2/15/2005	40.10	140.90	142.62	144.00		-1.72	-3.10	
Lincoln	09S06W04BDD1	335759	914335	4/15/2005	37.00	141.00	137.00	141.00	150.00	4.00	0.00	-9.00
Lincoln	09S06W23CDB1	335439.57	914136.37	2/15/2005	29.50	145.50	144.83	143.00		0.67	2.50	
Lincoln	09S06W24DAA1	335452	913954	4/15/2005	33.00	144.00						
Lincoln	10S05W04EBB1	335233	913725	2/15/2005	28.30	141.70	140.95			0.75		
Lincoln	10S05W05CB	335529	913832	2/15/2005	25.30	146.70						
Lincoln	10S05W06DCC1	335155.3	913907.96	2/15/2005	26.15	148.85	144.62	147.00		4.23	1.85	
							Declines/Wells:			**6/16**	**10/17**	**8/8**
							Average Change:			**0.26**	**-1.60**	**-11.13**
Lonoke	01N07W27AAD1	344103	914410	3/1/2005	128.65	71.35		92.00			-20.65	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Lonoke	01N08W03DDA1	344411	915850	4/19/2005	144.40	84.60	88.60	103.00		-4.00	-18.40	
Lonoke	01N08W26CCB1	344034	915843	2/25/2005	103.00	109.00		114.00			-5.00	
Lonoke	01N09W13DAB1	344235.17	915517.01	2/25/2005	87.50	138.50	138.88	141.00		-0.38	-2.50	
Lonoke	01N09W07DAA1	344330	900028	4/19/2005	47.80	192.20	191.20			1.00		
Lonoke	01N10W15CDA1	344236	920414	4/19/2005	22.40	217.60	213.20	214.00	219.00	4.40	3.60	-1.40
Lonoke	01N10W11BBD1	344355	920321	3/2/2005	28.80	211.20		211.00			0.20	
Lonoke	01S06W31ABB1	343459.39	91413148	2/25/2005	78.35	121.65	121.30	123.00		0.35	-1.35	
Lonoke	01S06W32BBB1	343501	914056	4/19/2005	81.30	119.70	114.10	124.00	130.00	5.60	-4.30	-10.30
Lonoke	01S07W12ABA1	343834.31	914229.84	3/1/2005	61.70	145.30	138.23			7.07		
Lonoke	01S07W12BCB1	343820	914308	4/12/2005	126.25	84.75		79.00			5.75	
Lonoke	01S08W24CDD1	343605.64	914912.37	2/25/2005	80.75	129.25	126.07	134.00		3.18	-4.75	
Lonoke	01S09W02DDD1	343857	915623	4/19/2005	83.30	146.70	140.40	144.00		6.30	2.70	
Lonoke	01S09W36CCC1	343435.31	915618.98	2/23/2005	61.94	158.06	157.73	162.00	167.00	0.33	-3.94	-8.94
Lonoke	01S10W01ACB1	343926.84	920214.96	2/23/2005	39.20	196.80	188.76	192.00		8.04	4.80	
Lonoke	01S10W11CCB1	343839	920337	2/23/2005	30.17	204.83						
Lonoke	02N07W07DAA1	344845	914707	4/19/2005	143.50	88.40	100.50	110.00	110.00	-12.10	-21.60	-21.60
Lonoke	02N07W16BAB1	344815.2	914539.5	3/1/2005	137.40	102.60	103.81	109.00		-1.21	-6.40	
Lonoke	02N08W16ABC1	344806.48	915113.61	3/2/2005	118.10	111.90	110.11	116.00		1.79	-4.10	
Lonoke	02N08W23CAB1	344659	915118	4/19/2005	143.40	85.60	91.00	101.00	104.00	-5.40	-15.40	-18.40
Lonoke	02N08W34BA1	344543	915106	2/25/2005	127.22	102.78						
Lonoke	02N09W02BDB1	344955.06	915840.93	3/2/2005	119.70	131.30	127.13	142.00		4.17	-10.70	
Lonoke	02N09W17CCB1	344746	920006	3/9/2005	82.80	170.40		171.00			-0.60	
Lonoke	02N09W17CBC1	344753	920010	3/9/2005	84.72	170.28						
Lonoke	02N09W17CBC2	344751	920010	3/9/2005	83.07	171.93						
Lonoke	02N09W18DAA1	344755	920022	3/9/2005	86.50	168.50						
Lonoke	02N09W18DAD2	344754	920020	3/9/2005	81.98	173.02						
Lonoke	02N09W18DAD3	344754	920011	3/9/2005	85.53	169.47						
Lonoke	02N10W15ACC1	344807	920352	4/19/2005	30.60	211.40	211.00	209.50	206.00	0.40	1.90	5.40
Lonoke	02N10W23BCA1	344725	920321	3/2/2005	6.20	235.80						
Lonoke	02S07W05CDC1	343326	914715	4/19/2005	70.50	134.50	131.50	141.00		3.00	-6.50	
Lonoke	02S07W10CCB1	343246.45	914524.67	2/25/2005	62.30	138.70	138.52	143.00		0.18	-4.30	
Lonoke	02S07W20ACD1	343112	914655	4/19/2005	59.60	141.40	141.10	145.00		0.30	-3.60	
Lonoke	02S08W06AAB1	343430	915447	2/23/2005	66.69	154.31						
Lonoke	02S08W28CDC	343008	915237	2/23/2005	59.68	151.32						
Lonoke	02S08W34DBB1	343002.96	915149.75	3/1/2005	64.01	149.99	151.32	144.00		-1.33	5.99	
Lonoke	02S09W30CDD1	343014.34	920116.01	2/23/2005	36.40	189.60	188.12	191.00	191.50	1.48	-1.40	-1.90
Lonoke	02S09W35ABI	343008	915652	4/19/2005	54.80	162.20	167.60	171.00		-5.40	-8.80	
Lonoke	03N07W08BDB1	345406.62	914638.28	1/11/2005	92.78	157.22	155.12			2.10		

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Lonoke	03N07W15DBC2	345252.79	914416.62	3/1/2005	31.35	145.65	146.50	151.00		-0.85	-5.35	
Lonoke	03N07W29ADA1	345128.53	914558.4	4/19/2005	92.00	142.00	144.73			-2.73		
Lonoke	03N07W35CDC2	344957.16	914332.11	3/1/2005	115.60	116.40	117.37			-0.97		
Lonoke	03N08W03BAA1	345518.54	915053.52	1/12/2005	91.99	168.01	168.00			0.01		
Lonoke	03N08W03CCC1	345429.86	915123.2	1/11/2005	100.40	159.60	161.13			-1.53		
Lonoke	03N08W05CCC1	345429.38	915323.47	1/11/2005	78.97	178.03	178.04			-0.01		
Lonoke	03N08W08ABA1	345426.98	915247.87	1/11/2005	90.45	167.55	166.55			1.00		
Lonoke	03N08W10ACB1	345414.65	915052.74	1/11/2005	87.87	162.13	161.57			0.56		
Lonoke	03N08W10ADD1	345401.06	915022.78	1/11/2005	89.50	160.50	161.01			-0.51		
Lonoke	03N08W11ABD1	345419.05	914935.94	1/11/2005	102.03	157.97	159.46			-1.49		
Lonoke	03N08W11ACA1	345412.72	914934.26	1/11/2005	99.34	156.66	157.50			-0.84		
Lonoke	03N08W21BCC1	345157	915224	3/2/2005	104.00	143.00	138.74	170.00		4.26	-27.00	
Lonoke	03N08W29BBB1	345147.1	915332.81	1/10/2005	111.38	137.62	138.74			-1.12		
Lonoke	03N08W29BCC1	345125.01	915333.4	1/10/2005	127.25	122.75	128.94			-6.19		
Lonoke	03N08W32ABB2	345057	915258	3/5/2005	117.94	132.06	132.76			-0.70		
Lonoke	03N08W32ABB3	345058.68	915255.43	5/5/2005	117.79	132.21	133.25			-1.04		
Lonoke	03N08W34ADD1	345034.89	915028.32	1/10/2005	117.79	122.21	118.45			3.76		
Lonoke	03N08W32BBA3	345057	915300	3/2/2005	49.85	200.15						
Lonoke	03N10W34ABB1	345058	920356	3/2/2005	56.80	200.20		197.00			3.20	
Lonoke	04N08W05ACA1	350020.48	915246.51	1/11/2005	43.27	194.73	193.88			0.85		
Lonoke	04N08W10BDD1	345917.09	915055.45	1/11/2005	23.46	194.54	190.86			3.68		
Lonoke	04N08W15BCB2	345832.92	915121.25	3/2/2005	32.20	192.80	191.46	193.00		1.34	-0.20	
Lonoke	04N08W16DCC1	345757.26	915154.02	1/11/2005	44.84	180.16	179.88			0.28		
Lonoke	04N08W20ADD1	345735.25	915229.26	1/12/2005	67.67	180.33	180.45			-0.12		
Lonoke	04N08W26AAD1	345652.24	914916.76	1/12/2005	70.02	175.98	175.84			0.14		
Lonoke	04N08W28CAC1	345620.27	915215.78	1/11/2005	53.74	181.26	181.73			-0.47		
Lonoke	04N08W28CAD1	345626.08	915203.96	1/11/2005	68.98	180.02	180.43			-0.41		
Lonoke	04N08W28CCC1	345614.57	915225.31	1/11/2005	59.31	180.69	180.91			-0.22		
Lonoke	04N08W31CBB2	345547.43	915439.07	1/11/2005	26.80	256.20	253.47			2.73		
							Declines/Wells:			**23/51**	**22/30**	**6/7**
							Average Change:			**0.38**	**-4.96**	**-8.16**
Mississippi	10N08E21ABA1	352852	901415	3/7/2005	25.00	199.00	199.00	199.00	202.00	0.00	0.00	-3.00
Mississippi	10N08E21BDC1	352830	901407	3/7/2005	24.00	200.00	199.00	199.00	201.80	1.00	1.00	-1.80
Mississippi	10N08E22ABA2	352850.89	901312.16	3/8/2005	22.60	201.40	201.66	203.00		-0.26	-1.60	
Mississippi	10N09E08ACC1	352949.05	900925.56	3/28/2005	12.70	217.30	216.21	215.00		1.09	2.30	
Mississippi	11N09E34BBB1	353217.73	900715.17	3/8/2005	12.90	222.10	220.22	218.00		1.88	4.10	

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County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Mississippi	11N10E09BCB1	353530	900202	3/7/2005	14.00	222.00	219.00	221.00	221.00	3.00	1.00	1.00
Mississippi	12N08E08BCB1	354047.06	901559.25	3/29/2005	6.00	219.00	216.68	215.00		2.32	4.00	
Mississippi	12N08E27ACA1	353851	901104	3/29/2005	10.70	214.30	211.90			2.40		
Mississippi	12N08E28DDB1	353707	S01406	3/7/2005	12.00	213.00	210.60	205.00	207.80	2.40	8.00	5.20
Mississippi	12N09E12ABC1	354054	900449	3/7/2005	9.00	223.00	224.70	209.00	215.20	-1.70	14.00	7.80
Mississippi	12N10E04CAA1	354124	S00136	3/7/2005	8.00	227.00	227.00	222.00	220.30	0.00	5.00	6.70
Mississippi	12N10E07BCD1	354036	900404	3/7/2005	11.00	223.00	223.00	214.00	216.50	0.00	9.00	6.50
Mississippi	12N10E21DBA1	353842	S00122	3/7/2005	8.00	228.00	224.30	220.00	220.30	3.70	8.00	7.70
Mississippi	13N08E24ABB1	354428	901112	4/4/2005	16.00	214.00	213.20	219.00	217.70	0.80	-5.00	-3.70
Mississippi	13N09E01DDA1	354437	900425	3/29/2005	4.46	227.54	225.90			1.64		
Mississippi	13N09E30CCD1	354247.81	901028.63	3/29/2005	7.00	223.00	221.05	217.00		1.95	6.00	
Mississippi	13N10E34DBB1	354218	900024	3/29/2005	5.60	229.40	228.16	221.00		1.24	8.40	
Mississippi	14N08E12DAB1	355104.17	901051.94	3/29/2005	3.80	231.20	229.67	227.00		1.53	4.20	
Mississippi	14N08E20DAA1	354921	S01458	4/4/2005	10.00	215.00	215.00	217.00	218.50	0.00	-2.00	-3.50
Mississippi	14N08E26DCC1	354803	S01235	3/7/2005	4.00	226.00	226.00	223.00		0.00	3.00	
Mississippi	14N10E18ABC1	355022.36	900345.36	3/29/2005	11.43	224.57	225.10	222.00		-0.53	2.57	
Mississippi	14N11E03BCB1	355158.11	895432.97	4/5/2005	2.70	244.30	243.64	237.00		0.66	7.30	
Mississippi	14N11E17CCB1	354955	895639	4/4/2005	3.50	236.50	230.00	230.00		6.50	6.50	
Mississippi	14N11E33CAA1	354727	895508	4/4/2005	8.50	231.50	228.00	224.00	224.40	3.50	7.50	7.10
Mississippi	14N12E05DCB1	355134.03	894935.44	3/29/2005	7.80	242.20	240.40	235.00		1.80	7.20	
Mississippi	15N08E08DBC2	355604.96	901526.26	3/29/2005	8.50	227.50	225.50	224.00		2.00	3.50	
Mississippi	15N08E27AAA1	355402	S01247	3/29/2005	4.60	225.40	224.05			1.35		
Mississippi	15N10E21ABC1	355447	S00135	4/4/2005	8.50	231.50	228.00	225.00	226.40	3.50	6.50	5.10
Mississippi	15N10E34AAC1	355259	S00018	4/5/2005	7.05	232.95	230.80			2.15		
Mississippi	15N12E01BCD1	355704	894601	4/4/2005	4.00	254.00	251.00	244.00	245.40	3.00	10.00	8.60
Mississippi	16N10E28BBD1	355906.13	900156.03	4/5/2005	8.55	229.45	230.44	230.00	225.30	-0.99	-0.55	4.15
Mississippi	16N11E23ADA1	355947.24	895231.23	3/29/2005	10.70	244.30	242.69	240.00		1.61	4.30	
							Declines/Wells:			**4/32**	**4/28**	**4/14**
							Average Change:			**1.49**	**4.44**	**3.41**
Monroe	01N01W21CDC2	344037.18	910706.96	4/7/2005	42.90	138.10	146.53	149.00		-8.43	-10.90	
Monroe	01N01W15CBD1	344139	S10542	3/22/2005	46.94	138.06	138.26			-0.20		
Monroe	01N02W12CBC1	344242.3	911031.9	3/22/2005	37.08	144.92	144.61			0.31		
Monroe	01N03W23BAC1	344124	911743	4/13/2005	10.50	159.50	156.00	156.00	160.50	3.50	3.50	-1.00
Monroe	01N03W24BBB1	344135.21	911650.59	3/23/2005	26.40	158.60	157.66	152.00		0.94	6.60	
Monroe	01N04W33BBB2	343959.52	912648.52	3/22/2005	98.10	119.90	123.72	125.00		-3.82	-5.10	
Monroe	01S01W13CDD1	343610.94	910340.54	3/22/2005	17.80	160.20	157.56	161.00		2.64	-0.80	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Monroe	01S01W16DB	343615	910632	4/13/2005	22.00	153.00	158.00	160.00	161.00	-5.00	-7.00	-8.00
Monroe	01S01W18DCD1	343617.75	910849.2	3/22/2005	21.50	156.50	155.36	157.00		1.14	-0.50	
Monroe	01S02W20BBB1	343612.7	911456.1	3/22/2005	7.00	163.00	158.26	156.00	161.00	4.74	7.00	2.00
Monroe	01S03W20CCD1	343525	912121	4/8/2005	77.00	133.00	132.00			1.00		
Monroe	01S04W01BAB1	343905.86	912316.73	3/23/2005	75.60	134.40	133.66	130.00		0.74	4.40	
Monroe	02N01W19ADD1	344524	910814	4/13/2005	52.00	136.00	137.00	141.00	139.50	-1.00	-5.00	-3.50
Monroe	02N01W19BBA1	344645.21	910912.46	3/31/2005	52.60	138.40	138.44	142.00		-0.04	-3.60	
Monroe	02N03W35BCA1	344455	911745	4/13/2005	28.00	160.00	157.00	157.00	162.00	3.00	3.00	-2.00
Monroe	02S01W01BCD1	343305	910408	4/13/2005	18.00	158.00	156.00	158.00	164.00	2.00	0.00	-6.00
Monroe	02S02W11DAC1	343208.97	911100.58	3/22/2005	7.70	156.30	154.07			2.23		
Monroe	03N01W20ABA1	345201.18	910722.83	3/22/2005	46.80	142.20	141.65	145.00		0.55	-2.80	
Monroe	03N03W36AAA1	345026.65	911547.12	3/23/2005	18.10	157.90	155.70	153.00		2.20	4.90	
Monroe	04N02W01BCC1	345929	911004	4/15/2005	38.00	137.00	137.00	139.00	143.00	0.00	-2.00	-6.00
Monroe	04N02W05BBB1	345957	911311	4/15/2005	11.00	177.00	173.00	173.00	174.50	4.00	4.00	2.50
Monroe	04N02W27CDD3	345540.22	911149.73	3/23/2005	45.20	154.80	154.57	156.00		0.23	-1.20	
Monroe	04N02W28DDD3	345535.05	911220.68	3/22/2005	32.65	159.35	158.96	160.00		0.39	-0.65	
Monroe	04N02W30BBB1	345627.88	911524.71	3/23/2005	10.70	174.46	171.75	168.00		2.71	6.46	
							Declines/Wells:			**6/24**	**11/20**	**6/8**
							Average Change:			**0.58**	**0.02**	**-2.75**
Philips	01S01E20DDB1	343529	910058	4/25/2005	18.00	167.00	160.00	167.00	169.60	7.00	0.00	-2.60
Philips	01S02E09CBB1	343718.73	905434.06	4/12/2005	7.20	177.80	173.54	168.00	176.80	4.26	9.80	1.00
Philips	01S02E32BCC1	343350	905526	4/25/2005	36.00	164.00	168.40	166.00	170.00	-4.40	-2.00	-6.00
Philips	01S03E02ADD1	343814	904511	4/25/2005	9.00	191.00	187.00	184.00	187.00	4.00	7.00	4.00
Philips	01S03E02CBB1	343809	904604	4/5/2005	6.30	193.70	187.70			6.00		
Philips	01S03E10ABB1	343741	904634	4/25/2005	8.60	196.40	191.00	190.00	191.20	5.40	6.40	5.20
Philips	01S03E20BDD1	343533	904846	4/25/2005	24.00	186.00	180.00	176.00	179.40	6.00	10.00	6.60
Philips	01S03E23CDA1	343516	904511	5/6/2005	30.90	189.10	185.00			4.10		
Philips	01S04E05DCD1	343802	904151	4/5/2005	41.37	188.63	185.00	186.00	187.30	3.63	2.63	1.33
Philips	02S01E23CAC1	343004	905842	4/6/2005	13.50	161.50	157.10			4.40		
Philips	02S01E28CCB1	342916.37	910058.18	4/6/2005	14.30	159.70	156.44	156.00		3.26	3.70	
Philips	02S02E29DDD1	342901	905444	4/25/2005	20.00	160.00	154.40	157.00	158.80	5.60	3.00	1.20
Philips	02S02E33ACC1	342824	905412	4/25/2005	20.00	157.00	152.00	154.00	155.20	5.00	3.00	1.80
Philips	02S02E33DCA1	342812	905347	4/12/2005	14.00	171.00	166.10			4.90		
Philips	02S03E34BCD1	342823	904653	4/28/2005	12.60	152.40	147.20	148.00	150.40	5.20	4.40	2.00
Philips	02S04E27AAC1	342931.57	904001.09	4/12/2005	4.90	174.10	175.07	167.00	171.20	-0.97	7.10	2.90
Philips	03S02E35DDA1	342256.24	905129.93	4/12/2005	18.40	144.60	143.10	145.00		1.50	-0.40	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Phillips	03S03E02CDC1	342706	904504	4/19/2005	19.40	155.60	153.60			2.00		
Phillips	03S03E04DAA1	342735	904710	4/12/2005	17.05	153.95	152.73			1.22		
Phillips	03S04E02CAA1	342732	903918	4/12/2005	8.15	167.85	167.77	161.00	162.89	0.08	6.85	4.96
Phillips	04S01E01AAD1	342238	905700	4/28/2005	15.00	141.00	141.60	145.00	144.30	-0.60	-4.00	-3.30
Phillips	04S01E12CAB1	342128	905748	4/12/2005	8.70	141.30	139.50			1.80		
Phillips	04S01E14CCD1	342014	905837	4/28/2005	9.00	146.00	143.00	142.00	144.00	3.00	4.00	2.00
Phillips	04S01E23CCA1	341931.3	905852.62	4/12/2005	8.70	147.30	144.04	142.00		3.26	5.30	
Phillips	04S01E29CDC1	341844	910148	4/28/2005	4.00	146.00	142.10	142.00	143.40	3.90	4.00	2.60
Phillips	04S02E01DBB1	342220	905053	4/28/2005	12.00	151.00	153.40	156.00	155.40	-2.40	-5.00	-4.40
							Declines/Wells:			4/26	4/19	4/16
							Average Change:			2.97	3.46	1.21
Poinsett	10N01E02AAA	353205	905654	4/6/2005	97.00	138.00	138.00	145.00	152.00	0.00	-7.00	-14.00
Poinsett	10N01E14CC1	352909.77	905813.38	4/6/2005	90.40	140.60	141.28	146.00		-0.68	-5.40	
Poinsett	10N01E16CCB1	352921.87	910005.35	4/6/2005	72.65	152.35	152.61	156.00		-0.26	-3.65	
Poinsett	10N01E32CBB1	352657	910053	4/19/2005	74.00	148.00	152.00	174.00	181.00	-4.00	-26.00	-33.00
Poinsett	10N01E33ACB1	352746	905931	4/19/2005	76.00	144.00	144.00	149.00	157.00	0.00	-5.00	-13.00
Poinsett	10N02E13BCC1	352948.52	905026.29	4/6/2005	101.40	135.60	137.10	141.00	145.00	-1.50	-5.40	-9.40
Poinsett	10N02E15CAA1	352939	905026	4/27/2005	102.00	135.00						
Poinsett	10N02E20BAB1	352906	905418	4/27/2005	105.00	132.00	133.00	141.00	151.00	-1.00	-9.00	-19.00
Poinsett	10N03E13BCB1	353001	904352	4/27/2005	129.00	141.00						
Poinsett	10N03E14DAB1	352947.21	904404.93	4/6/2005	117.30	145.70	146.05	149.00		-0.35	-3.30	
Poinsett	10N03E19BCB1	352906	904021	4/27/2005	97.00	142.00						
Poinsett	10N03E26BBD1	352817	904449	4/27/2005	114.00	143.00						
Poinsett	10N04E35BBA1	352745	903831	4/20/2005	18.00	197.00		191.00	194.00		6.00	3.00
Poinsett	10N6E11AAA1	353045	902501	4/27/2005	11.90	200.10						
Poinsett	10N07E22AAC1	352847	901935	4/4/2005	28.00	187.00	187.44	188.00		-0.44	-1.00	
Poinsett	10N07E28CBB1	352743	902128	4/20/2005	29.00	186.00						
Poinsett	11N01E17DDD1	353436.83	910013.21	4/9/2005	76.30	153.70	153.88	158.00	166.00	-0.18	-4.30	-12.30
Poinsett	11N01E26AA1	353340.33	905653.32	4/6/2005	90.00	146.00	144.05	142.00		1.95	4.00	
Poinsett	11N01E34AAA	353256	905759	4/6/2005	87.00	142.00	144.00	148.00	146.00	-2.00	-6.00	-4.00
Poinsett	11N02E26AAB1	353350.31	905034.19	4/6/2005	105.50	135.50	135.58	140.00		-0.08	-4.50	
Poinsett	11N02E30BBB1	353352	905540	4/6/2005	100.00	139.00	139.00	142.00	144.00	0.00	-3.00	-5.00
Poinsett	11N02E34CBA1	353238	905222	4/18/2005	106.00	134.00	135.00	147.00	142.00	-1.00	-13.00	-8.00
Poinsett	11N03E10DCA1	353545.69	904456.54	4/27/2005	103.35	139.65	140.01	144.00		-0.36	-4.35	
Poinsett	11N03E17AAA1	353534	904713	4/19/2005	104.00	139.00						
Poinsett	11N03E18BAB1	353537.76	904852.42	4/27/2005	110.30	132.70	139.77	144.00		-7.07	-11.30	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Poinsett	11N04E13DDA1	353447	903631	4/20/2005	14.00	196.00						
Poinsett	11N04E36ABA1	353251	903554	4/20/2005	15.00	196.00	195.00	193.00	196.00	1.00	3.00	0.00
Poinsett	11N05E26BDB1	353318	903155	4/20/2005	6.00	207.00						
Poinsett	11N07E18CAB1	353435	902320	4/4/2005	13.60	203.40	203.11	201.00		0.29	2.40	
Poinsett	11N07E22ADD1	353349	901922	4/4/2005	20.90	197.10						
Poinsett	11N07E28CBB1	353250	902125	4/20/2005	21.00	197.00						
Poinsett	12N01E07CDA1	354053.69	910141.25	4/6/2005	58.25	177.75	184.11	179.00		-6.36	-1.25	
Poinsett	12N01E22DAB1	353922	905809	4/19/2005	72.00	163.00	162.00	166.00	172.00	1.00	-3.00	-9.00
Poinsett	12N02E25DCC1	353820	904944	4/27/2005	111.00	134.00	133.00	142.00	142.00	1.00	-8.00	-8.00
Poinsett	12N02E34CCC1	353724	905230	4/19/2005	111.00	134.00	135.00	140.00	147.00	-1.00	-6.00	-13.00
Poinsett	12N03E01CBD1	354154	904329	4/27/2005	92.00	158.00	158.00	161.00	167.00	0.00	-3.00	-9.00
Poinsett	12N03E04DAD1	354158.01	904600.16	4/27/2005	103.00	144.00	144.39	148.00	156.00	-0.39	-4.00	-12.00
Poinsett	12N03E35DDA1	353735	904355	4/27/2005	101.00	144.00						
Poinsett	12N04E08CDA	354053	904112	4/27/2005	86.00	164.00	163.00	166.00	171.00	1.00	-2.00	-7.00
Poinsett	12N05E16ABA1	354039	903333	4/20/2005	6.00	215.00	212.00	208.00	212.00	3.00	7.00	3.00
Poinsett	12N05E34ABA1	353805.38	903230.45	4/5/2005	4.55	210.45	207.53	203.00		2.92	7.45	
Poinsett	12N07E04BAA1	354201.95	902059.69	4/4/2005	5.60	217.40	214.85	216.00		2.55	1.40	
Poinsett	12N07E10BCC1	354042	902022	4/20/2005	8.00	220.00	210.00	208.00	207.00	10.00	12.00	13.00
Poinsett	12N07E25DC1	353740	901802	4/4/2005	14.32	211.68						
Poinsett	11N06E34AB1	353224	902646	4/5/2005	12.22	198.78						
							Declines/Wells:			**16/30**	**23/31**	**15/19**
							Average Change:			**-0.07**	**-3.10**	**-8.25**
Prairie	01N06W05CCB1	344352.97	914049.08	3/7/2005	116.80	103.20	102.90	107.00		0.30	-3.80	
Prairie	01N06W26CDD1	344014.88	913707.61	3/7/2005	76.95	141.05	159.63			-18.58		
Prairie	01N06W29DDD1	344017.54	913951.45	3/7/2005	115.45	107.55	115.91			-8.36		
Prairie	01S04W28BBC1	343529	912650	5/6/2005	114.80	91.20	84.40	108.00	110.50	6.80	-16.80	-19.30
Prairie	01S04W28BDB1	343522.68	912629.73	3/8/2005	96.60	108.40	107.75	110.00		0.65	-1.60	
Prairie	01S05W14BBC1	343721.96	913108.76	3/8/2005	108.25	102.75	103.26	105.00		-0.51	-2.25	
Prairie	01S06W12BAB1	343826	913613	3/7/2005	117.97	110.03	108.99			1.04		
Prairie	02N04W02BCB1	344916.31	912418.61	3/7/2005	15.80	172.20	168.87	159.00		3.33	13.20	
Prairie	02N04W32CCB1	344436.43	912737.79	3/7/2005	82.20	138.80	137.27	138.00		1.53	0.80	
Prairie	02N05W06BAB1	344957.63	913420.77	3/7/2005	89.17	132.83	132.21	135.00		0.62	-2.17	
Prairie	02N05W13AAB1	344805.45	912854.34	3/7/2005	74.70	148.30	145.23	160.00		3.07	-11.70	
Prairie	02N05W21CB1	344649	913300	3/7/2005	107.57	117.43	117.25			0.18		
Prairie	02N05W24ACB	344659	912937	3/7/2005	86.74	138.26	136.65			1.61		
Prairie	02N05W29DDB2	344544	913308	3/7/2005	117.60	110.40	109.76	111.00		0.64	-0.60	

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
Prairie	02N05W32AAA1	344534	913305	3/7/2005	114.70	110.30	108.10			2.20		
Prairie	02N06W17ABB1	344809.48	913959.44	3/7/2005	122.20	112.80	111.84	117.00		0.96	-4.20	
Prairie	02S06W14EBB1	343213.38	913728.62	3/7/2005	77.90	123.10	138.75	125.00		-15.65	-1.90	
Prairie	02N06W21DAA1	344653	913827	3/7/2005	115.61	109.39	117.73			-8.34		
Prairie	02N06W24CAA1	344651	913551	3/7/2005	117.74	105.26	114.88			-9.62		
Prairie	03N04W03AAC1	345439.23	912424.37	4/15/2005	20.00	167.00	160.17	162.00		6.83	5.00	
Prairie	03N05W03BDD2	345444.06	913115.35	3/7/2005	62.20	144.80	140.73	144.00		4.07	0.80	
Prairie	03N06W01BCB1	345454.54	913601.39	3/7/2005	81.00	135.00	135.36	134.00		-0.36	1.00	
Prairie	04N04W07ADC1	345850.31	912733.07	3/4/2005	20.45	174.55	169.47	167.00		5.08	7.55	
Prairie	04N05W07CDC1	345042.62	913440.92	3/4/2005	75.40	136.60	137.58	141.00		-0.98	-4.40	
Prairie	04N05W31DDC1	345513.66	913405.83	3/7/2005	76.00	138.00	129.77	133.00		8.23	-3.00	
Prairie	04N06W05CCC1	345933.76	914017.96	3/4/2005	60.00	146.00	146.04	149.00		-0.04	-3.00	
Prairie	04N07W03DCB1	345942.1	914412.48	3/4/2005	86.60	168.40	168.39	171.00		0.01	-2.60	
Prairie	04N07W20DCB1	345709.23	914607.27	1/11/2005	109.33	145.67	145.48			0.19		
Prairie	04N07W28BBA1	345700.53	914544.88	3/4/2005	94.90	163.10	163.25	167.00		-0.15	-3.90	
Prairie	05N05W14DCD1	350252.43	913034.06	3/4/2005	32.50	172.50	167.04	167.00		5.46	5.50	
Prairie	05N05W25BAA1	350153	912949	5/18/2005	17.20	169.80	169.50	164.00	175.00	0.30	5.80	-5.20
Prairie	05N05W28DCA1	350119	913228	5/18/2005	29.40	161.60	157.90	160.00	163.50	3.70	1.60	-1.90
							Declines/Wells:			**10/32**	**14/23**	**3/3**
							Average Change:			**-0.43**	**-0.90**	**-8.80**
Pulaski	01S10W29CC1	343537.78	920707.66	4/19/2005	13.50	225.50	222.35	220.00		3.15	5.50	
Pulaski	02N10W05BCC1	344953	920635	4/20/2005	23.01	215.99						
Pulaski	02S10W14DC1	343204.71	920333.75	4/19/2005	21.50	203.50	199.43	197.00		4.07	6.50	
Pulaski	02S10W16CCA1	343216.99	920549.36	4/19/2005	18.30	212.46	205.84	207.00		6.62	5.46	
Pulaski	02S11W23BCB1	343150	921022	4/21/2005	26.00	210.79						
							Declines/Wells:			**0/3**	**0/3**	
							Average Change:			**4.61**	**5.82**	
Randolph	18N01E28AAD1	361040	905820	4/12/2005	21.50	243.50	249.70	248.00	253.20	-6.20	-4.50	-9.70
Randolph	18N01E34AAC1	360942.69	905729.13	3/23/2005	14.90	251.10	250.07	250.00		1.03	1.10	
Randolph	18N02E03DAD1	361336	905043	4/6/2005	54.50	225.50	245.10	246.00	251.80	-19.60	-20.50	-26.30
Randolph	18N02E17CBB1	361204	905356	4/12/2005	23.00	242.00	249.00	250.00	256.20	-7.00	-8.00	-14.20
Randolph	18N02E20BDA1	361125	905332	4/12/2005	42.00	232.00	238.80	244.00	252.10	-6.80	-12.00	-20.10
Randolph	18N02E22DCD1	361045.76	905104.7	3/23/2005	36.02	236.98	247.73	239.00		-10.75	-2.02	
Randolph	18N02E34EAB1	360933	905150	4/12/2005	31.00	239.00	255.10	233.00	226.80	-16.10	6.00	12.20

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Randolph	19N02E09DCA1	361759	905158	3/23/2005	11.30	255.70	256.88	256.00	261.30	-1.18	-0.30	-5.60
Randolph	19N02E22DAB1	361622	905049	4/6/2005	14.50	251.50	259.00	257.00	262.60	-7.50	-5.50	-11.10
Randolph	19N03E33CCB1			4/6/2005	26.00	259.00						
Randolph	20N02E01ADD1	362424.21	904811.39	3/23/2005	10.40	269.60	268.78	267.00		0.82	2.60	
Randolph	20N02E06DAD1	362410	905339	4/6/2005	20.00	261.00	268.00			-7.00		
Randolph	20N02E12BAA1	362352	904848	4/6/2005	7.00	274.00	274.00	273.00		0.00	1.00	
Randolph	20N02E14DAB1	362232	904930	4/6/2005	12.00	262.00	265.40	264.00	264.10	-3.40	-2.00	-2.10
Randolph	20N02E21CDD1	362117	905107	4/6/2005	13.00	257.00		261.70	263.90		-4.70	-6.90
Randolph	20N03E28BA1	362113.53	904537.97	3/23/2005	10.00	266.00	265.07	263.00		0.93	3.00	
							Declines/Wells:			**10/14**	**9/14**	**8/9**
							Average Change:			**-5.91**	**-3.27**	**-9.31**
St. Francis	04N01W17CBC1	345735	910801	2/16/2005	58.90	149.10						
St. Francis	04N01W20BBB1	345716	910759	4/21/2005	58.00	142.00	142.50	142.00	149.70	-0.50	0.00	-7.70
St. Francis	04N01W25DBD1	345549	910303	4/21/2005	74.00	125.00	125.00	144.00	134.00	0.00	-19.00	-9.00
St. Francis	04N01W28CDD1	345535.26	910633.55	2/16/2005	71.55	136.45	139.72	143.00		-3.27	-6.55	
St. Francis	04N02E03DDD3	345848	905219	2/16/2005	44.30	165.70	168.22	153.00		-2.52	12.70	
St. Francis	04N02E16ACD1	345733	905341	4/21/2005	50.00	159.00	158.00	166.00		1.00	-7.00	
St. Francis	04N02E19BBB1	345701	905633	2/16/2005	59.60	149.40	150.64	156.00		-1.24	-6.60	
St. Francis	04N02E27AAA1	345604	905220	4/21/2005	47.00	164.00	164.00	171.00		0.00	-7.00	
St. Francis	04N04E15ABA1	345752	903948	4/21/2005	33.00	168.00	168.00	171.00	172.50	0.00	-3.00	-4.50
St. Francis	05N01E15BCB1	350302.57	905942.41	2/16/2005	65.80	143.20	145.52	147.00		-2.32	-3.80	
St. Francis	05N01E27BBA1	350135.73	905928.78	2/16/2005	66.50	142.50	143.57			-1.07		
St. Francis	05N02E20ADC1	350156.9	905437.16	2/16/2005	54.00	157.00	157.92	160.00		-0.92	-3.00	
St. Francis	05N03E20AAA2	350214.31	904800.83	2/17/2005	95.50	154.50	147.27	157.00		7.23	-2.50	
St. Francis	05N05E1CBB1	350928	903131	2/17/2005	35.30	164.70	163.70			1.00		
St. Francis	05N05E19DCA1	350128	903629	2/17/2005	31.86	171.14		167.00			4.14	
St. Francis	05N05E33BCC1	350004	903506	4/21/2005	29.00	167.00	167.00	167.00		0.00	0.00	
St. Francis	05N06E34CAB1	350025.57	902656.87	2/17/2005	25.10	174.90	173.54	179.00		1.36	-4.10	
St. Francis	06N01E06DA1			4/21/2005	70.00							
St. Francis	06N01E16CCC1	350804	905403	4/21/2005	64.50	145.50	146.00	155.50	159.50	-0.50	-10.00	-14.00
St. Francis	06N01E33ACA2	350552.33	905941.6	2/16/2005	69.60	141.40	145.66	151.00		-4.26	-9.60	
St. Francis	06N02E13DCA1	350812.64	905002.71	2/16/2005	71.90	159.10	157.39	158.00		1.71	1.10	
St. Francis	06N02E15BDD1	350841.91	905247.31	2/16/2005	59.20	155.44	156.07	160.00		-0.63	-4.56	
St. Francis	06N02E24AAA1	350755.19	905002.42	2/16/2005	74.40	157.60	160.51	165.00		-2.91	-7.40	
St. Francis	06N03E17CAA1	350822	904810	4/21/2005	103.00	155.00	158.00	161.00		-3.00	-6.00	
St. Francis	06N05E05BB1			4/21/2005	34.00	156.00	156.00			0.00		

Alluvial Aquifer 95-00-04-05 WL Change

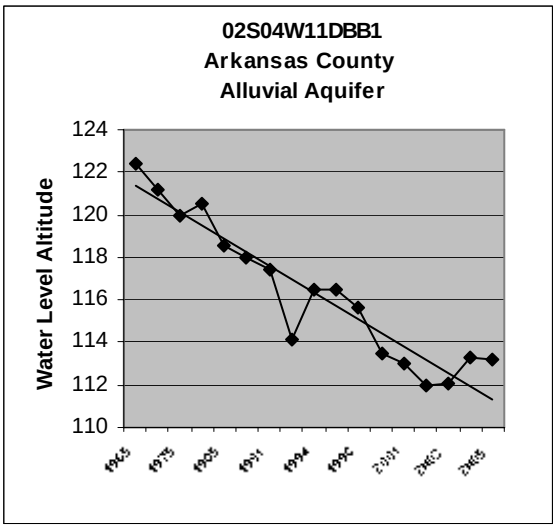
County	Station ID	Latitude	Longitude	Date Measured	Depth To Water	WL Alt.05	WL Alt.04	WL Alt.00	WL Alt.95	WL Change 05-04	WL Change 05-00	WL Change 05-95
St. Francis	06N06E17DD1	350912	902853	4/21/2005	34.00	166.00						
St. Francis	06N06E20ABB2	350747.06	902841.2	2/17/2005	34.90	165.10	164.75	168.00		0.35	-2.90	
							Declines/Wells:			**12/23**	**16/21**	**4/4**
							Average Change:			**-0.46**	**-4.05**	**-8.80**
White	05N07W09AAA1	350446.87	914441.48	3/9/2005	14.13	190.87	190.18	191.00		0.69	-0.13	
White	05N07W10CCC1	350400.22	914436	3/10/2005	8.20	194.80	194.22	196.00		0.58	-1.20	
White	05N08W16BD1	350346	915151	4/14/2005	28.70	201.30						
White	05N08W21DB1	350301	915139	4/14/2005	19.10	198.90						
White	06N06W04AAD1	351037	913839	3/9/2005	38.24	178.76	177.40			1.36		
White	06N06W04BAA1	351047.21	913909.91	3/10/2005	34.25	185.75	183.55	182.00		2.20	3.75	
White	06N06W04BAD1	351037	913903	4/14/2005	37.70	177.30	173.50	172.00	171.10	3.80	5.30	6.20
White	06N06W13DBB1	350918	913552	4/14/2005	49.10	163.90	166.10	166.00	170.90	-2.20	-2.10	-7.00
White	06N06W18EBC1	350851.33	914151.92	3/10/2005	13.20	196.80	195.33	197.00		1.47	9.80	
White	06N06W18ECA1	350835	914150	4/14/2005	17.00	193.00	185.80	185.00	186.50	7.20	8.00	6.50
White	06N06W34AAB1	350623.57	913753.55	3/10/2005	60.20	152.80	153.30	155.00		-0.50	-2.20	
White	06N07W17CCC1	350822.47	914634.73	3/10/2005	10.50	206.50	204.79	200.00		1.71	6.50	
White	06N08W13ABA1	350907.73	914824.37	3/9/2005	6.58	221.42	220.60	214.00		0.82	7.42	
White	07N05W26AAA1	351224	913003	3/9/2005	15.79	184.21	182.70			1.51		
White	07N05W32BAB1	351136.63	913406.19	3/10/2005	24.80	188.90	184.70	182.00		4.20	6.90	
White	08N04W06CCB1	352023.21	912846.51	3/14/2005	15.50	198.50	197.84	193.00		0.66	5.50	
White	08N05W32CBC1	351615.66	913416.96	3/10/2005	1.40	197.60	197.50	197.00		0.10	0.60	
White	10N04W36CCA1	352513	912250	3/14/2005	17.40	197.60						
							Declines/Wells:			**2/15**	**4/13**	**1/3**
							Average Change:			**1.57**	**3.70**	**1.90**
Woodruff	04N03W03AB1	350020.93	911819.87	3/24/2005	9.60	175.40	171.52	169.00		3.88	6.40	
Woodruff	05N01W13CDC1	350244	910331	4/5/2005	75.40	134.60	135.90	142.00	147.90	-1.30	-7.40	-13.30
Woodruff	05N01W13DCC1	350242	910311	2/22/2005	73.35	137.65						
Woodruff	05N01W31CCC1	350106	910900	4/5/2005	57.80	152.20	150.90	155.00	158.10	1.30	-2.80	-5.90
Woodruff	05N02W20DCB1	350207.8	911356.19	3/24/2005	11.00	181.00	178.06	177.00		2.94	4.00	
Woodruff	05N03W25DDB1	350133	911531	4/5/2005	8.50	181.50	177.30	176.00	180.30	4.20	5.50	1.20
Woodruff	05N03W35CC2	350021	911735	3/24/2005	5.45	181.55						
Woodruff	06N04W12DBA1	350426.78	912210.78	3/24/2005	3.93	182.07	181.33	178.00		0.74	4.07	
Woodruff	06N01W33ABD2	350600	910555901	2/22/2005	67.70	148.30						
Woodruff	06N02W19AAA1	350802	911419	4/5/2005	44.00	181.00	180.30	179.00	177.00	0.70	2.00	4.00

Alluvial Aquifer 95-00-04-05 WL Change

County	Station ID	Latitude	Longitude	Date	Depth To	WL	WL	WL	WL	WL Change	WL Change	WL Change
				Measured	Water	Alt.05	Alt.04	Alt.00	Alt.95	05-04	05-00	05-95
Woodruff	06N03W12BAA1	350955	911607	4/9/2005	4.55	180.45						
Woodruff	06N03W15BABI	350903.06	911807.41	3/24/2005	4.20	184.59	183.07	182.00		1.52	2.59	
Woodruff	06N03W31BCBI	350623	912144	4/9/2005	1.44	183.56	182.74			0.82		
Woodruff	06N04W22BDA1	350807	912428	4/5/2005	3.20	182.80	181.10	179.00	183.80	1.70	3.80	-1.00
Woodruff	07N01W04ACBI	351541	910626	4/5/2005	80.00	145.00	164.70	168.00	170.80	-19.70	-23.00	-25.80
Woodruff	07N03W06BAC1	351607	912109	4/5/2005	21.43	189.57	190.00	189.00		-0.43	0.57	
Woodruff	07N03W19AAA1	351335	912025.42	3/24/2005	9.10	193.49	190.89	188.00		2.60	5.49	
Woodruff	07N03W31BBA1	351152	912103	4/5/2005	11.10	178.90	175.30	176.00	177.50	3.60	2.90	1.40
Woodruff	08N01W06DCD1	352028	910747	3/24/2005	43.10	174.90	175.77	184.00		-0.87	-9.10	
Woodruff	08N02W27DDB1	351711	911107	4/5/2005	25.50	187.50	187.50	187.00	192.90	0.00	0.50	-5.40
Woodruff	08N02W31DCD1	351611	911411	3/24/2005	3.75	190.80	189.19	190.00		1.61	0.80	
Woodruff	08N03W04BBB1	352128	911919	3/24/2005	14.08	206.92						
Woodruff	08N03W31AADI	351655	912028	3/24/2005	21.50	190.50	190.23	190.00		0.27	0.50	
Woodruff	08N04W27AAA1	351757	912341	3/24/2005	10.05	189.95	189.67	186.00		0.28	3.95	
Woodruff	09N03W29AAD1	352258	911921	3/24/2005	18.90	201.10	199.40	197.00		1.70	4.10	
Woodruff	09N03W32ACA1	352205	911936	4/5/2005	15.70	201.30	197.70	197.00		3.60	4.30	
							Declines/Wells:			**4/21**	**4/20**	**5/8**
							Average Change:			**0.44**	**0.46**	**-5.60**
							Total Average Change			**0.55**	**-0.20**	**-4.75**
							Total Declines/Wells:			**230/646**	**267/540**	**177/237**
										35.6%	**49.4%**	**74.6%**

Appendix B

Selected Alluvial Aquifer Well Hydrographs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Arkansas County
Alluvial Aquifer
Water Level Altitude
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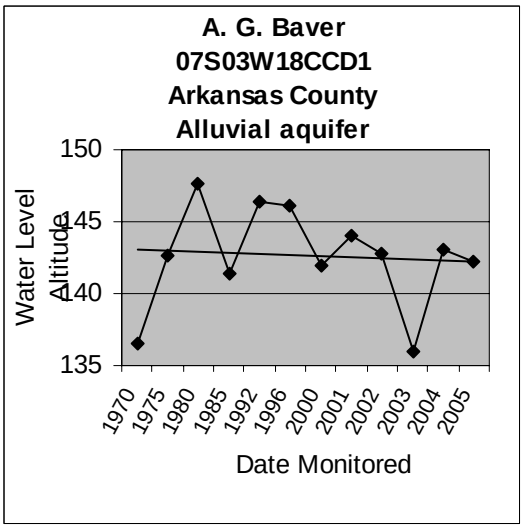
114
112
110


A. G. Baver
07S03W18CCD1
Arkansas County
Alluvial aquifer
Water Level Altitude
150
145
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1970
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1985
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1996
2000
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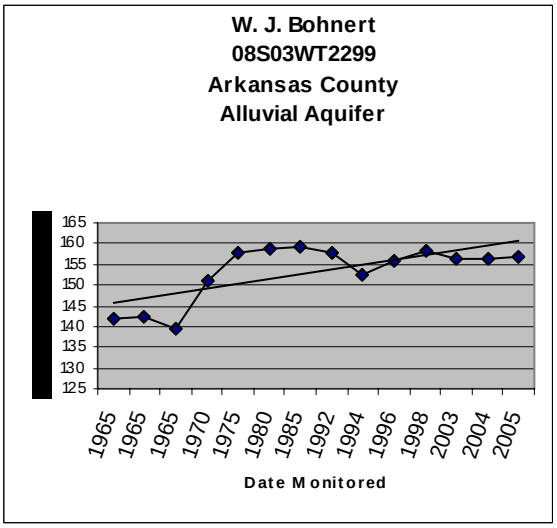
2003
2004
2005
Date Monitored


W. J. Bohnert
08S03WT2299
Arkansas County
Alluvial Aquifer
165
160
155
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125
1965
1965
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1970
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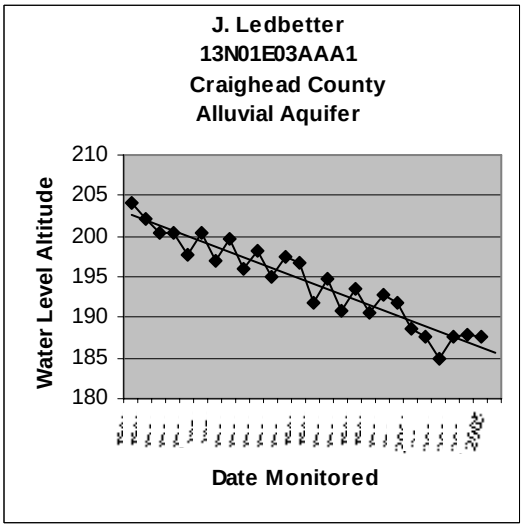
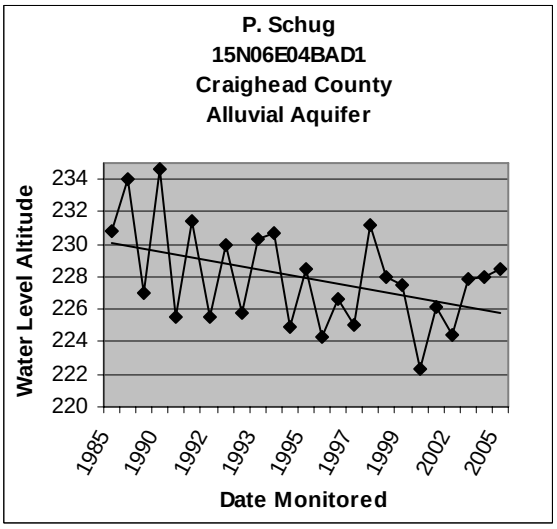
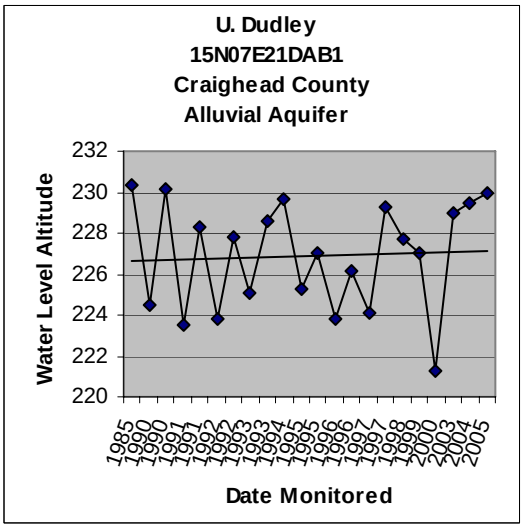
1994
1996
1998
2003
2004
2005
Date Monitored


J. Ledbetter
13N01E03AAA1
Craighead County
Alluvial Aquifer
Water Level Altitude
210
205
200
195
190
185
180
Date Monitored


P. Schug
15N06E04BAD1
Craighead County
Alluvial Aquifer
Water Level Altitude
234
232
230
228
226
224
222
220
1985
1990
1992
1993
1995
1997
1999
2002
2005
Date Monitored


U. Dudley
15N07E21DAB1
Craighead County
Alluvial Aquifer
Water Level Altitude
232
230
228
226
224
222
220
1985
1990
1990
1991
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2004
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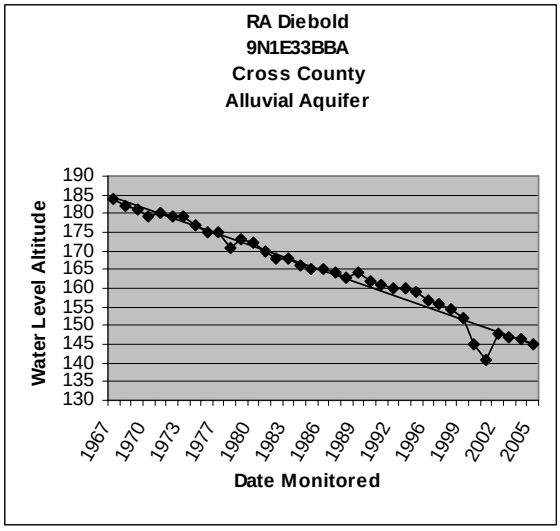
Date Monitored


RA Diebold
9N1E33BBA
Cross County
Alluvial Aquifer
Water Level Altitude
190
185
180
175
170
165
160
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135
130
1967
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1973
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1980
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1989
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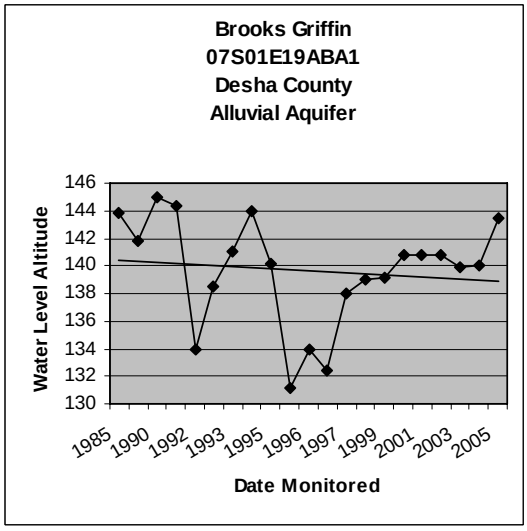
1996
1999
2002
2005
Date Monitored


Brooks Griffin
07S01E19ABA1
Desha County
Alluvial Aquifer
Water Level Altitude
146
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1985
1990
1992
1993
1995
1996
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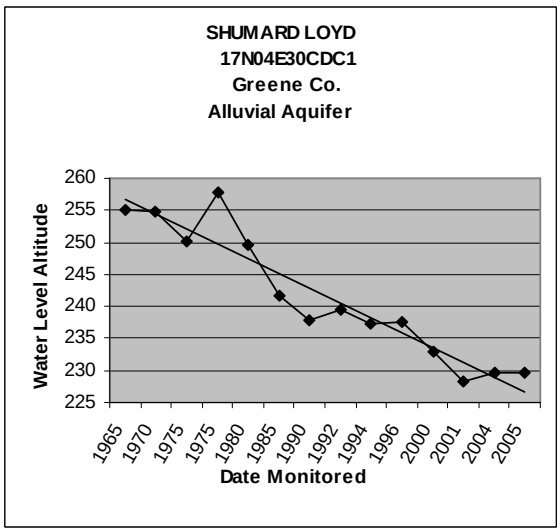
1999
2001
2003
2005
Date Monitored


SHUMARD LOYD
17N04E30CDC1
Greene Co.
Alluvial Aquifer
Water Level Altitude
260
255
250
245
240
235
230
225
1965
1970
1975
1975
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1985
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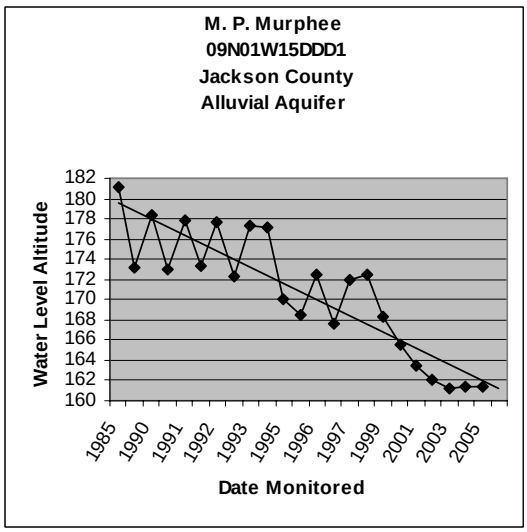
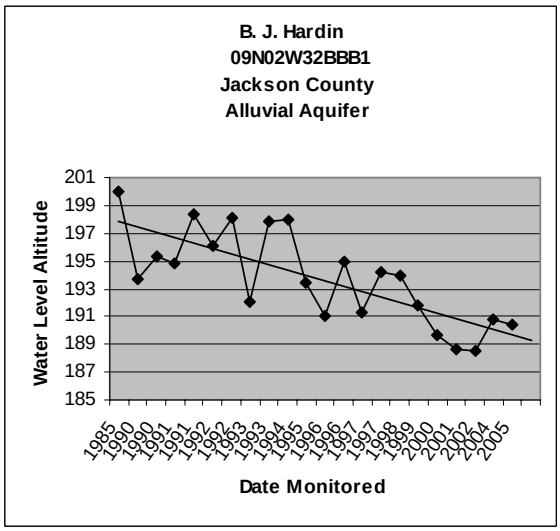
1992
1994
1996
2000
2001
2004
2005
Date Monitored


M. P. Murphee
09N01W15DDD1
Jackson County
Alluvial Aquifer
Water Level Altitude
182
180
178
176
174
172
170
168
166
164
162
160
1985
1990
1991
1992
1993
1995
1996
1997
1999
2001
2003
2005
Date Monitored


B. J. Hardin
09N02W32BBB1
Jackson County
Alluvial Aquifer
Water Level Altitude
201
199
197
195
193
191
189
187
185
1985
1990
1990
1991
1991
1992
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2002
2004
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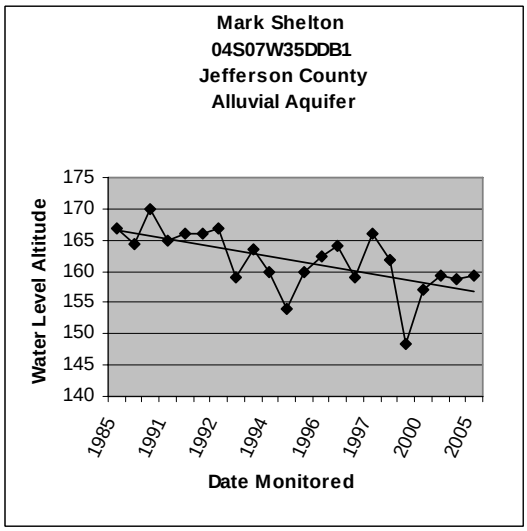
Date Monitored


Mark Shelton
04S07W35DDB1
Jefferson County
Alluvial Aquifer
Water Level Altitude
175
170
165
160
155
150
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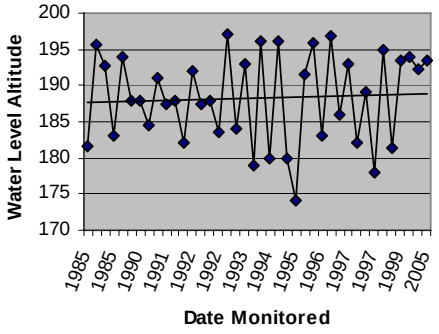
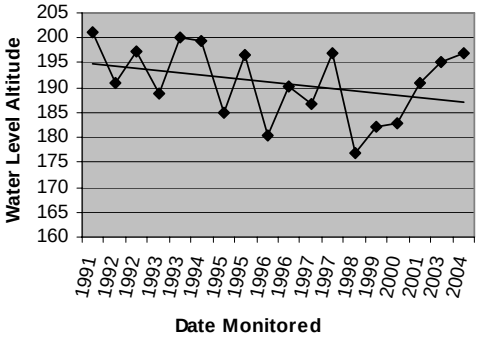
1985
1991
1992
1994
1996
1997
2000
2005
Date Monitored

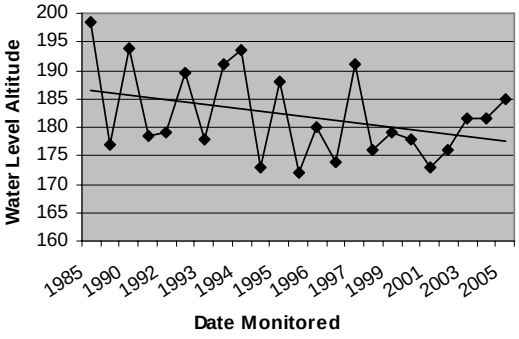
J. Blair
04S09W32DDA1
Jefferson County
Alluvial Aquifer



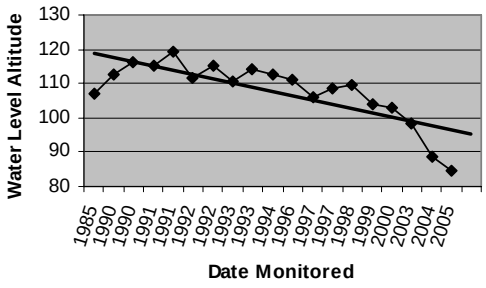
B. Hoard
01N03E27ADD1
Lee County
Alluvial Aquifer



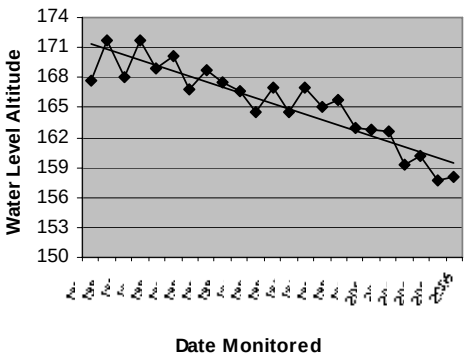
L. Parten
02N03E29CAD1
Lee County
Alluvial Aquifer



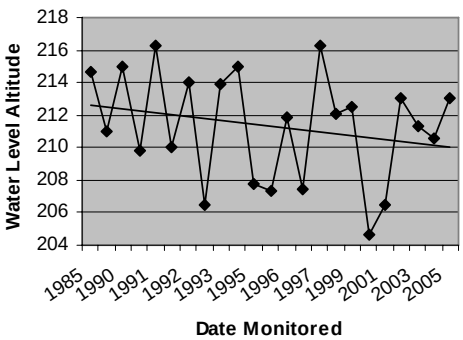
Winrock Farms
01N08W03DDA1
Lonoke County
Alluvial aquifer

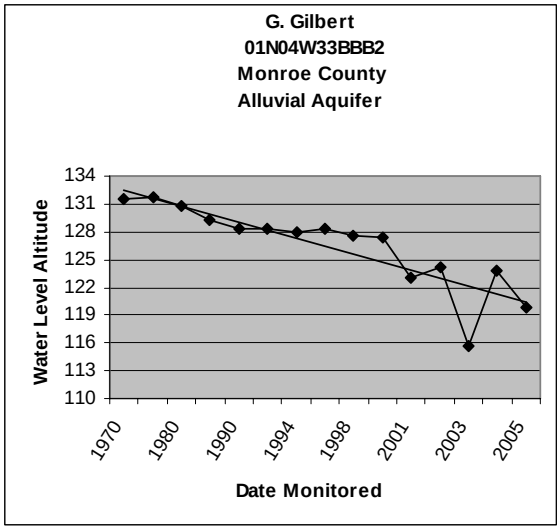


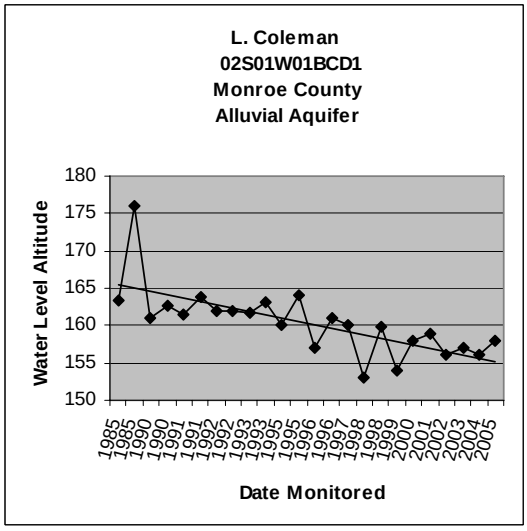
Marvin Burgess
01S09W36CCC1
Lonoke County
Alluvial Aquifer



Bond Bros.
12N08E28DDB1
Mississippi County
Alluvial Aquifer




G. Gilbert
01N04W33BBB2
Monroe County
Alluvial Aquifer
Water Level Altitude
134
131
128
125
122
119
116
113
110
1970
1980
1990
1994
1998
2001
2003
2005
Date Monitored


L. Coleman
02S01W01BCD1
Monroe County
Alluvial Aquifer
Water Level Altitude
180
175
170
165
160
155
150
1985
1985
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1990
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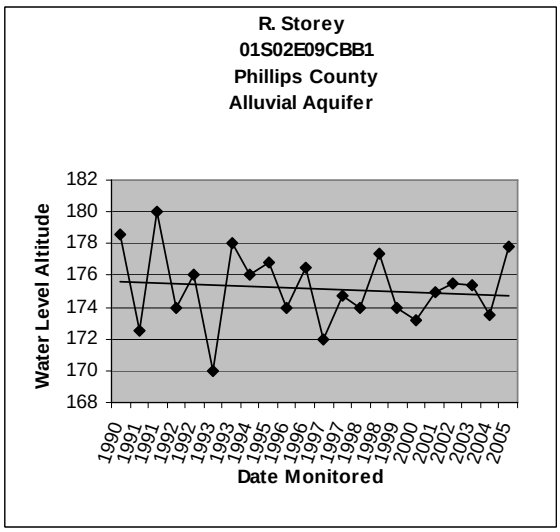
2004
2005
Date Monitored


R. Storey
01S02E09CBB1
Phillips County
Alluvial Aquifer
Water Level Altitude
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178
176
174
172
170
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1990
1991
1991
1992
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2003
2004
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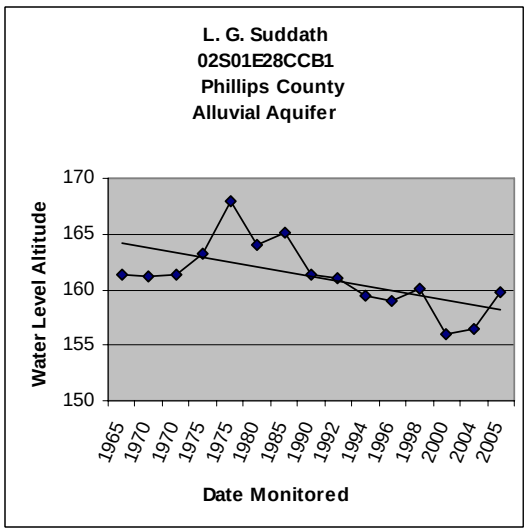
Date Monitored


L. G. Suddath
02S01E28CCB1
Phillips County
Alluvial Aquifer
Water Level Altitude
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1965
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1970
1975
1975
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1985
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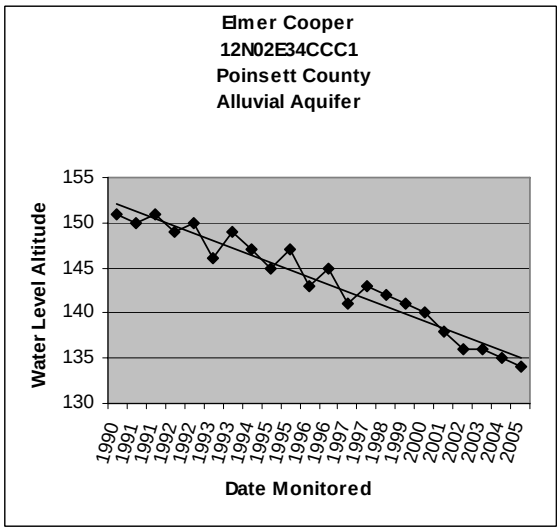
1996
1998
2000
2004
2005
Date Monitored


Elmer Cooper
12N02E34CCC1
Poinsett County
Alluvial Aquifer
Water Level Altitude
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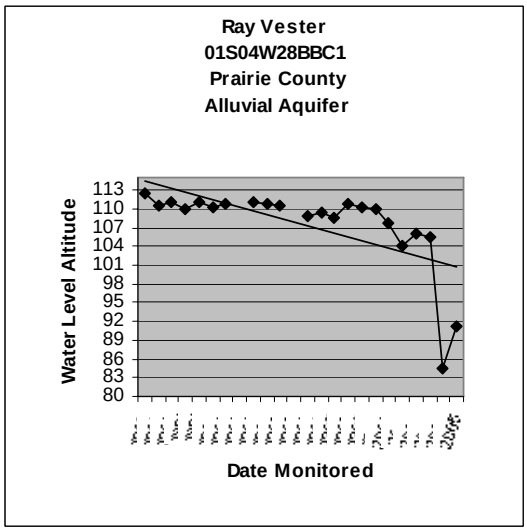
Date Monitored


Ray Vester
01S04W28BBC1
Prairie County
Alluvial Aquifer
Water Level Altitude
113
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98
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86
83
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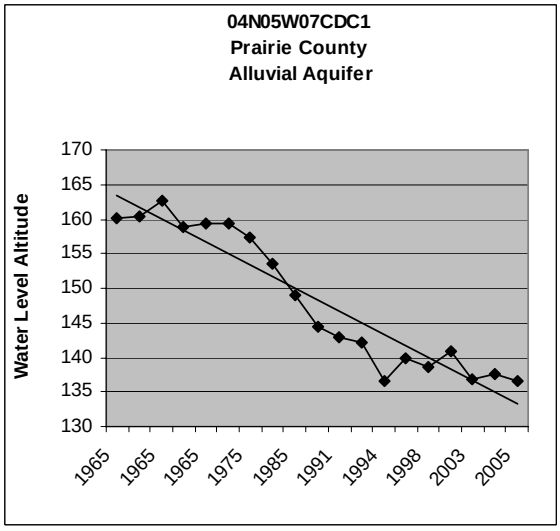
Date Monitored


04N05W07CDC1
Prairie County
Alluvial Aquifer
Water Level Altitude
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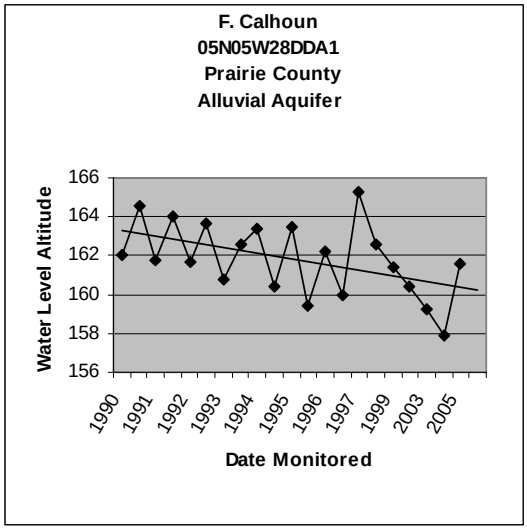
1994
1998
2003
2005


F. Calhoun
05N05W28DDA1
Prairie County
Alluvial Aquifer
Water Level Altitude
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156
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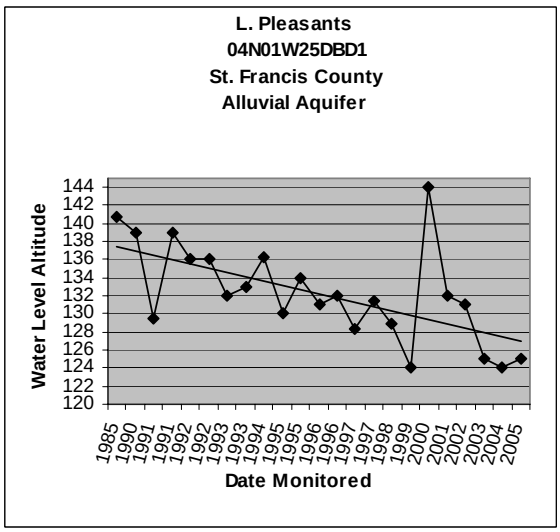
Date Monitored


L. Pleasants
04N01W25DBD1
St. Francis County
Alluvial Aquifer
Water Level Altitude
144
142
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138
136
134
132
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128
126
124
122
120
1985
1990
1991
1991
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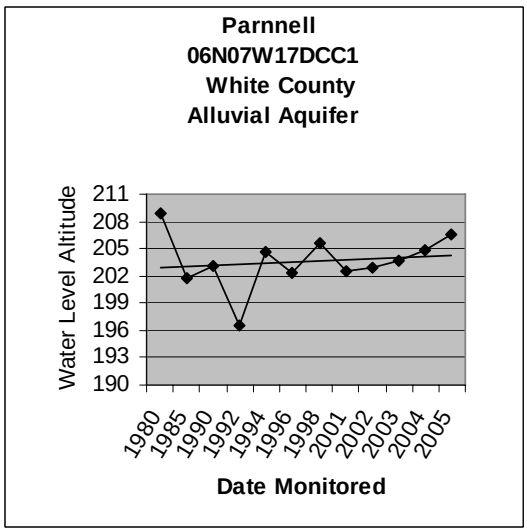
Date Monitored


Parnnell
06N07W17DCC1
White County
Alluvial Aquifer
Water Level Altitude
211
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190
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1992
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1996
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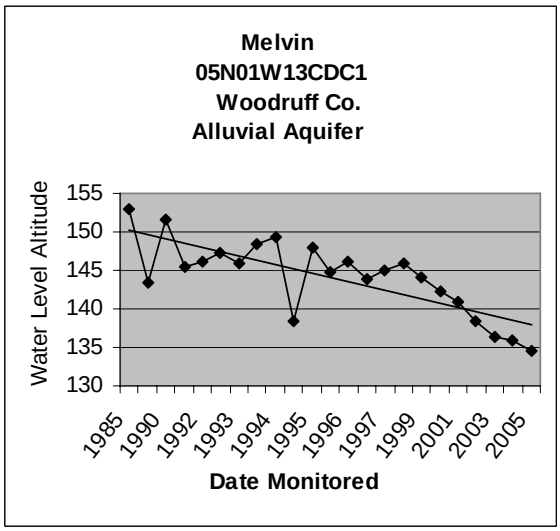
2003
2004
2005
Date Monitored


Melvin
05N01W13CDC1
Woodruff Co.
Alluvial Aquifer
Water Level Altitude
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130
1985
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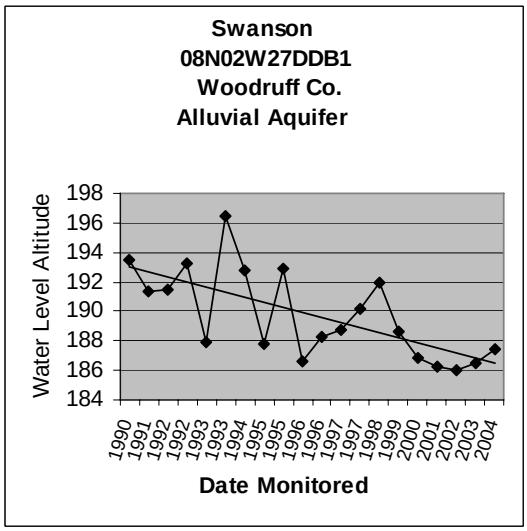
2005
Date Monitored


Swanson
08N02W27DDB1
Woodruff Co.
Alluvial Aquifer
Water Level Altitude
198
196
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190
188
186
184
1990
1991
1992
1992
1993
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1994
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1995
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1996
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1998
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2000
2001
2002
2003
2004
Date Monitored

Appendix C

Sparta / Memphis Aquifer Water Level Monitoring Data

Sparta/Memphis Aquifer Water Level Data

'95 - '00 – '04 – '05

County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Arkansas	02S04W06CDB1	343311.54	912849.29	4/19/2005	154.52	57.48	46.60	40.50	68.04	10.88	16.98	-11.56
Arkansas	02S04W23DAA1	343044.22	912354.53	4/18/2005	143.61	64.39	64.50		90.19	-0.11		-25.80
Arkansas	02S04W33BBB1	342922.14	912702.63	4/18/2005	149.96	55.04	42.50		63.78	12.54		-8.74
Arkansas	02S05W16CBC1	343143	913316	4/19/2005	168.10	44.90	42.80	26.20		2.10	18.70	
Arkansas	02S05W27BBB1	343028.45	913230.47	4/18/2005	164.26	51.74	43.50			8.24		
Arkansas	02S05W34BDA1	342924.58	913149.02	4/18/2005	174.54	41.06	37.80			3.56		
Arkansas	02S05W35AAB1	342929.98	913035.31	4/18/2005	171.05	44.95	41.90			3.05		
Arkansas	03S04W02CCB1	342747.58	912458.04	4/18/2005	144.05	57.95	50.80		67.10	7.15		-9.15
Arkansas	03S04W26CDA1	342621.03	912438.30	4/18/2005	137.79	65.21	58.30	45.90	61.56	6.91	19.31	3.65
Arkansas	03S05W02AAB1	342842.19	913033.71	4/18/2005	165.61	44.39	36.60		54.29	7.79		-9.90
Arkansas	03S05W13BDC1	342631.15	913004.57	4/18/2005	171.74	38.26	36.60	28.00	44.50	1.66	10.26	-6.24
Arkansas	03S05W15CBB1	342633.21	913229.33	4/18/2005	163.54	42.46	35.40	25.60		7.06	16.86	
Arkansas	03S05W18CAB1	342629.37	913524.63	4/14/2005	156.28	39.72	33.10	22.40	52.18	6.62	17.32	-12.46
Arkansas	03S05W26DAB1	342447.16	913240.25	4/18/2005	167.89	36.11	35.00			1.11		
Arkansas	03S06W21ACC1	342584	913925	4/14/2005	125.56	69.44	38.00	39.00	55.05	31.44	30.44	14.39
Arkansas	03S06W30BBD1	342515.54	914216.15	4/14/2005	161.27	28.73	34.60		49.66	-4.87		-19.93
Arkansas	04S01W36CBD1	342225.42	910808.42	4/15/2005	107.52	88.48	83.10			5.38		
Arkansas	04S02W09CDC	342123	911331	4/15/2005	65.05	109.95	110.30	112.00		-0.35	-2.05	
Arkansas	04S04W11BCC1	342156.96	912501.52	4/19/2005	151.06	46.94	38.70		53.80	8.24		-6.86
Arkansas	04S04W19CBB1	342003.73	912928.89	4/14/2005	151.75	43.25	38.30		53.27	4.95		-10.02
Arkansas	04S04W22DAA1	342006.89	912515.15	4/19/2005	155.51	39.49	41.20		60.61	-1.71		-21.12
Arkansas	04S05W01BAA1	342322.23	912956.45	4/19/2005	188.56	7.44	26.20			-18.76		
Arkansas	04S05W05ADC1	342302.67	913412.84	4/14/2005	151.05	34.95	28.60			6.35		
Arkansas	04S05W15AAA1	342132.16	913133.29	4/14/2005	159.17	41.83	36.00	27.20		5.83	14.63	
Arkansas	04S05W31DDA1	341819.25	913448.06	4/14/2005	24.62	159.38						
Arkansas	04S05W36DCC1	341752.00	913003.63	4/14/2005	153.85	42.15	40.60		50.94	1.55		-8.79
Arkansas	05S01W17BAA1	341550.68	910745.34	4/15/2005	89.08	86.92	84.10			2.82		
Arkansas	05S03W04ADB1	341734	912097.11	4/14/2005	156.52	30.48	51.10	47.30	64.66	-20.62	-16.82	-34.18
Arkansas	05S04W26ACA1	341358	912435	4/14/2005	115.78	68.22	49.00			19.22		
Arkansas	05S05W26CDD1	341324	913119	4/14/2005	30.39	157.61	149.15			8.46		
Arkansas	05S05W36DAA	341247	912946	4/14/2005	133.87	46.13	77.45	32.00	55.11	-31.32	14.13	-8.98
Arkansas	06S02W06ABB1	341227.90	911620.01	4/14/2005	102.32	78.68	63.95		77.07	14.73		1.61
Arkansas	06S02W17ADA1	341022.67	911453.14	4/14/2005	104.83	83.17	75.90			7.27		
Arkansas	06S02W22CDB1	340904	91133106	4/14/2005	98.12	87.88	75.70			12.18		
Arkansas	06S03W27BAA1	340859.22	912008.98	4/14/2005	112.51	68.49	62.75			5.74		
Arkansas	07S02W28ABA1	340339.67	911411.01	4/14/2005	96.23	82.77	77.00		91.78	5.77		-9.01

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County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Arkansas	07S03W06ABC1	340701.89	912247.68	4/14/2005	122.64	62.16	59.40	61.80	71.00	2.76	0.36	-8.84
Arkansas	08S02W09BCC1	340031.06	911447.65	4/14/2005	95.88	78.12	72.10			6.02		
								Declines/Wells:		7/37	2/12	16/19
								Average Change:		4.04	11.68	-10.10
Ashley	15S07W32CDD1	332117.77	915101.06	3/23/2005	138.72	51.28	53.50	29.50	37.63	-2.22	21.78	13.65
Ashley	17S09W15ACC1	331333.86	920116.44	3/23/2005	17.97	82.03						
Bradley	12S09W31CCB1	333711.24	920444.21	3/23/2005	186.36	44.64	45.52			-0.88		
Bradley	13S09W35ACA1	333647.90	920437.48	3/18/2005	191.82	9.18	17.84	15.00	12.00	-8.66	-5.82	-2.82
Bradley	13S11W17BCD1	333453.65	921607.25	3/18/2005	208.02	49.98	51.30	58.50	57.49	-2.32	-7.52	-8.51
Bradley	14S11W31DBB1	332715	921015	3/3/2005	99.70	50.30	51.93			-1.63		
Bradley	16S12W21CAA1	331839	922052	3/18/2005	74.26	25.74			29.43			-3.69
								Declines/Wells:		4/4		3/3
								Average Change:		-3.16		-0.34
Calhoun	11S14W12CAC3	334639.25	922928.17	3/17/2005	146.51	166.49	167.75	168.20		-1.26	-1.71	
Calhoun	13S13W32CDA1	333226.81	922741.66	3/17/2005	170.27	37.73	30.20	36.30	35.18	7.53	1.43	2.55
Calhoun	13S15W36CBD1	333227.34	923532.42	3/17/2005	77.12	80.88						
Calhoun	14S13W05BBD1	333206.66	922801.55	3/17/2005	156.36	32.64						
Calhoun	14S13W12CCB1	333048.05	922403.54	3/17/2005	170.89	34.11	35.90		38.21	-1.79		-4.10
Calhoun	14S15W16BAA1	333055.22	923912.24	3/17/2005	96.29	49.71	43.20	49.50		6.51	0.21	
Calhoun	15S13W20BDC1	332410.97	922806.59	3/17/2005	24.75	90.25	80.50	40.62		9.75	49.63	
Calhoun	15S13W32BBD1	332230	922921	3/2/2005	133.40	-31.40	-6.50			-24.90		
								Declines/Wells:		3/6	1/4	
								Average Change:		-0.69	12.39	
Chicot	13S03W22DAD1	333012.37	912307.62	3/23/2005	68.28	68.72						
Cleveland	08S12W13BDD1	340132.58	921637.61	3/29/2005	145.06	115.94	116.15			-0.21		
Cleveland	09S11W31DCA1	335729.02	921133.93	3/29/2005	207.21	22.79	32.30		45.19	-9.51		-22.40
Cleveland	09S11W01DDA2	335728.53	921120.17	3/29/2005	208.35	57.65			45.21			12.44
Cleveland	09S11W11CDB1	335622.66	921250.52	3/29/2005	161.94	71.06	71.35			-0.29		
Cleveland	10S09W23CDC1	334917.94	920020.5	3/29/2005	162.56	57.44			57.81			-0.37
Cleveland	10S09W35ACD1	334757.93	915957.13	3/29/2005	154.84	64.16						

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County	Station	Latitude	Longitude	VL Date	VL Measure	VL ALT 2005	VL ALT 2004	VL ALT 2000	VL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Cleveland	10S12W12BDC1	335132.99	921743.38	3/29/2005	119.04	100.96	100.60		108.00	0.36		-7.04
Cleveland	11S11W18AABI	334540.01	921423.47	3/29/2005	203.83	99.17			94.47			4.70
								Declines/Wells:		3/4		3/5
								Average Change:		-2.41		-2.53
Columbia	15S20W20CCB1	333453.37	931215.01	3/9/2005	216.13	155.87	155.20		155.16	0.67		0.71
Columbia	16S20W08DCC1	332114.08	931141.34	3/9/2005	317.23	84.77	84.00			0.77		
Columbia	16S20W18ACD1	332052.90	931237.40	3/9/2005	252.50	74.50	49.50		54.94	25.00		19.56
Columbia	16S21W14CBE1	332049.37	931617.23	3/9/2005	199.31	82.69	87.20		83.99	-4.51		18.70
Columbia	16S21W20DAD1	331955.06	931736.47	3/9/2005	243.24	101.76						
Columbia	16S22W22CCD1	331947.61	932224.89	3/9/2005	146.87	193.13	203.80	201.70	205.22	-10.67	-8.57	-12.09
Columbia	17S19W15ABC1	331837	930328	3/9/2005	272.87	52.13	30.90		50.02	21.23		2.11
Columbia	17S19W17ACA1	331538.06	930538.26	3/10/2005	247.20	55.80						
Columbia	17S19W19CBC1	331516.81	930655.59	3/10/2005	259.07	35.93	37.40	27.90		-1.47	8.03	
Columbia	17S19W19BCA1	331432.77	930734.56	3/9/2005	273.69	27.31						
Columbia	17S19W30CABB1	331406.12	930650.14	3/9/2005	221.74	26.26	29.60		30.50	-3.34		-4.24
Columbia	17S20W17CDA1	331519.76	931200.69	3/10/2005	317.24	7.85	24.75		8.98	-16.89		-1.12
Columbia	17S20W36AEC1	331307.06	930754.88	3/10/2005	295.42	38.58	37.60			0.98		
Columbia	17S21W01BBC1	331743.07	931423.65	3/10/2005	259.75	35.25	46.60	11.50		-11.35	23.75	
Columbia	17S21W09DCA1	331613.42	931758.30	3/9/2005	210.87	87.13						
Columbia	17S21W11DCC2	331608.55	931443.61	2/22/2005	273.57	24.43	19.35		-20.09	5.08		44.52
Columbia	17S21W17BAA1	331607	931818	3/9/2005	203.27	107.73	106.50			1.23		
Columbia	17S21W11DCC3	331609.3	931449.35	3/10/2005	280.37	17.63						
Columbia	17S22W21ABD1	331516	932303	3/9/2005	81.62	160.38	160.00			0.38		
Columbia	17S22W22ABC1	331521	932209	3/9/2005	137.00	181.00	115.80			65.20		
Columbia	17S22W23BBB1	331519	932136	3/9/2005	136.11	181.89	130.15			51.74		
Columbia	18S20W08CBC1	331114.79	931227.04	3/15/2005	273.44	-10.44						
Columbia	18S20W10CAA1	331054.37	931015.73	3/15/2005	277.51	12.49	15.00			-2.51		
Columbia	18S21W01ACC1	331223.06	931339.45	3/10/2005	299.63	-4.63						
Columbia	18S21W17ACC1	331033.97	931758.51	3/9/2005	223.80	86.20						
Columbia	18S22W27DCD1	330834.57	932158.59	3/9/2005	133.64	178.36	174.75			3.61		
Columbia	19S20W09CBD1	330555.38	931128.72	3/10/2005	255.92	66.08	65.30	79.20	74.03	0.78	-13.12	-7.95
Columbia	19S20W34BCD1	330239.09	931030.67	3/10/2005	127.13	162.87						
Columbia	19S21W16DBE1	330517	931725	3/9/2005	173.24	110.76	109.30		105.58	1.46		1.18
Columbia	19S22W10ABD1	330643.92	932833.03	3/9/2005	40.52	198.48	197.31			1.17		
Columbia	19S22W11CDA2	330605.39	932744.02	3/9/2005	52.45	195.55	195.30	193.70	192.89	0.25	1.85	2.66
Columbia	19S22W11DDE1	330604.90	932722.12	3/9/2005	54.03	191.97	192.30			-0.33		

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County	Station	Latitude	Longitude	VL Date	VL Measure	VL ALT 2005	VL ALT 2004	VL ALT 2000	VL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Columbia	19S23W14BAE2	330555.24	932752.36	3/9/2005	50.46	153.54	154.70			-1.16		
Columbia	20S22W03DCC1	330138.44	932236.27	3/10/2005	52.37	161.93	161.58			0.35		
Columbia	20S22W11ACD1	330109.20	932103.20	3/10/2005	107.13	163.67	163.20			0.47		
								Declines/Wells:		10/26	2/5	4/11
								Average Change:		4.90	2.39	5.83
Craighead	13N03E23CDD1	354404.17	904432.83	4/6/2005	87.15	160.85	161.40	164.10		-0.55	-3.25	
Craighead	14N04E22CBD1	354928.92	903920.99	4/6/2005	55.27	200.73	210.20		204.47	-9.47		-3.74
Craighead	14N04E28CBD1	354836.94	903953.27	4/6/2005	60.31	193.69	195.75		197.38	-2.06		-3.69
Craighead	14N05E36CBC1	354750.34	903100.18	4/6/2005	10.76	209.24	207.90	206.60		1.34	2.64	
Craighead	15N03E31ACA1	355313.63	904307.26	4/6/2005	55.90	214.10	214.90	216.60		-0.80	-2.50	
Craighead	15N04E20ADB1	355508.01	904043.21	4/6/2005	118.18	318.82	318.35			1.47		
Craighead	15N05E29CBB1	355359.33	903432.73	4/6/2005	21.08	236.92	234.00			2.92		
Craighead	15N06E18ACA1	355544.42	902956.20	4/6/2005	15.31	214.69	213.20	209.90		1.49	4.79	
								Declines/Wells:		4/8	2/4	
								Average Change:		-0.71	0.42	
Crittender	05N08E11CCA2	350344.58	901300.21	4/5/2005	22.34	188.06	184.50	181.90	188.04	3.56	6.16	0.02
Crittender	06N07E01DAD2	350958.04	901738.42	4/5/2005	0.42	206.58	183.30	183.00	188.40	24.78	25.58	20.18
Crittender	06N09E08DCC1	350849.72	900921.78	4/5/2005	6.10	206.90						
Crittender	06N09E23AAB1	350744.34	900553.13	4/5/2005	61.57	160.43						
Crittender	07N07E35BCC1	351629	901933	3/29/2005	32.07	188.93						
Crittender	07N09E14EAC1	351348.14	900526.23	4/5/2005	27.42	189.58						
Cross	06N04E06ACA1	351004.29	904237.72	4/5/2005	201.92	156.08	141.20		161.74	14.88		-5.66
Cross	07N05E04ADD1	351533.11	903329.85	4/5/2005	36.08	172.92	176.00		176.73	-3.08		-3.81
Cross	08N02E18EDB1	351908.15	905536.47	4/5/2005	32.72	145.28	146.30			-1.02		
Cross	09N01E16CAC1	352405.00	905950.75	4/5/2005	81.37	152.63	141.50		157.60	11.13		-4.97
Cross	09N01E25AAD1	352244.31	905554.00	4/5/2005	36.53	140.47	140.10			0.37		
Cross	09N03E22AAD1	352403.20	904511.77	4/5/2005	130.19	147.81	147.70	151.10	159.86	0.11	-3.29	-12.05
Cross	09N03E22AAB2	352403.32	904518.39	4/5/2005	123.92	150.08	151.40			-1.32		
Cross	09N04E30DCA1	352231	904215	4/5/2005	265.67	163.65	155.62		174.47	8.03		-10.82
								Declines/Wells:		3/8		5/5
								Average Change:		3.64		-7.46

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County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Dallas	07S14W33DCC1	340430.87	923359.85	3/7/2005	119.65	215.35						
Dallas	07S14W31AAA1	340425.29	923334.44	3/7/2005	109.53	220.47						
Dallas	07S16W23CAB1	340559	924541	3/7/2005	24.97	297.03	295.90			1.13		
Dallas	08S15W34BCC1	335853	923658	3/7/2005	25.63	214.37	216.40			-2.03		
Dallas	08S16W18ADC1	340152	922445	3/7/2005	16.03	235.97	236.40			-0.43		
Dallas	08S16W27DCD1	335935	924307	3/7/2005	32.77	239.23	238.20		240.36	1.03		-1.13
Dallas	09S13W35CCD1	335304	922413	3/7/2005	71.36	128.64	128.10		133.33	0.54		-4.69
Dallas	09S14W01BDC1	335753.63	922918.78	3/7/2005	78.66	186.34	185.90			0.44		
Dallas	09S16W19CAA1	335635.48	924701.17	3/7/2005	6.03	253.97	252.80			1.17		
Dallas	10S13W34ACA2	334829.46	922457.61	3/7/2005	151.47	120.53	120.70		126.41	-0.17		-5.88
Dallas	10S14W27CDB1	334907.60	923137.39	3/7/2005	31.93	238.07	244.50	225.14		-6.43	11.93	
Dallas	10S15W18BCC1	335119.53	924120.38	3/7/2005	75.78	252.22	251.20	250.57		1.02	1.65	
								Declines/Wells:		4/10		3/3
								Average Change:		-0.37		-3.90
Desha	09S02W26AAC1	335348.00	911520.82	3/24/2005	66.91	84.09	81.20	82.70	86.58	2.89	1.39	-2.49
Desha	09S04W28CDD1	335309.60	913006.71	3/24/2005	112.54	82.46	80.00	85.40	87.39	2.46	-2.94	-5.23
Desha	10S02W26CDC2	334750.23	911623.99	3/24/2005	71.24	76.76	75.80		64.35	0.96		12.41
Desha	10S04W11CBC1	335034.41	912905.14	3/24/2005	102.90	58.10	58.90			-0.80		
Desha	11S02W33CCA1	334615.73	911711.03	3/24/2005	69.02	65.98		76.30	82.23		-6.32	-12.30
Desha	12S03W23CEB1	333743.60	912259.18	3/24/2005	95.39	42.61	42.00			0.61		
Desha	12S03W34DAD1	333643.44	912305.04	3/24/2005	77.50	69.50	72.00	70.00	68.81	-2.50	-0.50	0.69
								Declines/Wells:		2/6	3/4	3/5
								Average Change:		0.60	-2.09	-1.38
Drew	17S04W02ACA2	334631.97	912826.56	3/23/2005	93.47	59.53	59.60	57.22		-0.07	2.31	
Drew	11S04W25CB2	334249.46	912706.38	3/23/2005	85.87	62.13	63.00	66.40	69.31	-0.87	-4.27	-7.18
Drew	11S06W17DBC1	334636.63	914122.37	3/23/2005	151.52	51.48						
Drew	12S06W30BED1	333807.15	914543.08	3/23/2005	223.33	78.17						
Drew	12S06W32DAD1	333649.09	914401.96	3/23/2005	170.35	56.65	49.00	66.60	53.23	7.65	-9.95	3.42
Drew	13S05W36ACB1	333150.93	913407.59	3/23/2005	90.31	78.69	79.90		80.37	-0.21		-2.16
Drew	15S04W12DDA1	332429.38	912723.59	3/23/2005	62.02	62.68	62.60	65.20	68.35	0.08	-2.52	-6.17
								Declines/Wells:		3/5	3/4	3/4
								Average Change:		1.32	-3.61	-3.03

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County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Grant	03S13W12AAA1	342845.65	922106.24	4/21/2005	101.01	229.99			234.49			-4.50
Grant	03S15W26DAA1	342600.52	923447.31	4/21/2005	9.87	327.13						
Grant	04S14W14CCC1	342201.17	922901.98	4/21/2005	81.23	175.77						
Grant	05S13W03CAA1	341843.97	922400.47	4/20/2005	32.09	177.91						
Grant	05S13W03CCA4	341837.64	922401.95	4/20/2005	110.63	170.37			191.31			-20.94
Grant	05S13W07ADB1	341810	922649.75	4/20/2005	59.43	198.57						
Grant	05S13W30AAA1	341550.1	922649.93	4/20/2005	120.09	209.91						
Grant	05S14W06DCC1	341842.5	923326.69	4/21/2005	99.47	206.53			205.07			1.46
Grant	05S15W05ABD1	341923.78	923826.87	4/21/2005	16.97	215.03			215.16			-0.13
Grant	06S11W05ACD1	341340.62	921413.01	4/21/2005	209.74	59.26						
Grant	06S15W26ACA1	341021.99	923637.59	4/20/2005	85.63	214.47			213.47			1.00
Grant	07S12W21BCB1	340558.11	921952.7	4/21/2005	2.12	220.88						
							Declines/Wells:					3/5
							Average Change:					-4.62
Jefferson	03S08W19BADI	342623.76	915443.67	4/12/2005	121.47	45.53	47.70			-2.17		
Jefferson	03S08W19BBDI	342628.36	915504.54	4/12/2005	166.74	43.26	45.70		61.16	2.56		-12.90
Jefferson	03S08W19BDBI	342618.71	915455.22	4/12/2005	168.38	43.62	48.40	47.80	61.55	-1.78	-1.18	-14.93
Jefferson	03S09W23BBDI	342626.95	915712.96	4/12/2005	165.45	56.55	59.10			-2.55		
Jefferson	03S10W14CAD1	342659.22	920330.26	4/12/2005	113.80	107.20	100.50			6.70		
Jefferson	03S10W27AADI	342502.05	920433.31	4/12/2005	126.25	95.75	99.40			-3.65		
Jefferson	03S11W22AEC1	342650.81	921058.27	4/13/2005	174.99	135.01	134.60		143.53	0.41		-8.57
Jefferson	04S07W17BCC1	342139.61	914741.65	4/12/2005	168.40	31.60	28.45	24.20	39.52	3.15	7.40	-7.92
Jefferson	04S08W35EBD1	341909.06	915056.13	4/12/2005	207.50	-7.50						
Jefferson	04S09W11BAA1	342309.29	915702.22	4/12/2005	135.51	71.49						
Jefferson	04S09W32EDA1	341924.77	920017.46	4/12/2005	126.91	32.09						
Jefferson	04S10W17BCA1	342212.14	920645.60	4/13/2005	151.72	73.28	57.55			15.53		
Jefferson	04S10W29ADB1	342025	920620	4/13/2005	207.96	59.59	51.45			8.14		
Jefferson	04S11W14BAD1	342219.74	921000.07	4/13/2005	309.76	90.24	90.80			-0.56		
Jefferson	05S08W30ADB1	341852.32	915440.20	4/12/2005	287.47	-76.47	-79.35			2.88		
Jefferson	05S08W30CBA1	341446.21	915526.54	4/13/2005	290.93	-83.47	-88.40	-81.84	-70.71	4.93	-1.63	-12.76
Jefferson	05S08W24CBD1	341529.68	915555.60	4/13/2005	277.12	-66.95	-72.20			5.25		
Jefferson	05S09W31DDC1	341338.65	920109.42	4/13/2005	276.94	-49.94	-50.65			0.71		
Jefferson	05S09W19BAA1	341805	920101	4/12/2005	257.64	-31.64						
Jefferson	05S09W35AAB1	341620.05	915653.1	4/13/2005	250.58	-45.58			-67.52			22.04
Jefferson	05S10W17ACA1	341741.24	920021.58	4/13/2005	171.02	53.98	28.80			35.18		
Jefferson	05S10W18BAD1	341730.46	920546.64	4/13/2005	241.67	35.33	31.80			3.53		

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County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Jefferson	05S10W16DBB1	341634.59	920542.79	4/12/2005	294.23	20.77	20.25	26.75		0.52	-5.98	
Jefferson	05S10W16DBD1	341634	920534	4/12/2005	283.89	16.11	12.80			3.31		
Jefferson	06S08W16CDC1	341843.07	915517.06	4/13/2005	255.74	-53.32	-56.38	-57.78	-40.18	3.06	4.46	-13.14
Jefferson	06S08W25ADC1	341024.88	915116.18	4/13/2005	225.65	-22.17	-22.52	-16.72		0.35	-5.45	
Jefferson	06S09W17CADI	341158.70	920206.91	4/13/2005	258.15	-25.15	-53.40			28.25		
Jefferson	06S09W17CCAI	341151.82	920220.85	4/13/2005	267.95	-33.51						
Jefferson	06S10W23ACA2	341123.09	920503.93	4/12/2005	223.68	11.32						
Jefferson	06S10W23ACDI	341115.54	920507.54	4/12/2005	223.97	8.03	7.10		3.18	0.93		4.85
Jefferson	06S10W23DBAI	341104.56	920506.17	4/12/2005	237.29	-7.29	-8.80	-8.50		2.51	1.21	
Jefferson	07S07W24BAB1	340632.68	914522.99	4/13/2005	164.84	23.16	24.60	25.80	35.73	-1.44	-2.64	-12.57
Jefferson	07S10W24CACI	340548.70	920420.81	4/13/2005	305.17	5.83	22.70	24.80	34.62	-16.87	-18.97	-28.79
							Declines/Wells:			7/26	6/9	8/10
							Average Change:			3.74	-2.53	-8.47
Lafayette	16S23W12CAD1	332142.57	932609.59	3/9/2005	74.85	247.15						
Lafayette	16S24W26AACI	331950.2	933302.96	3/9/2005	54.65	212.35						
Lafayette	17S23W19ACC1	331519.6	933127.61	3/9/2005	51.57	239.43						
Lafayette	17S24W23BBDI	331525.67	933402	3/9/2005	31.87	229.13						
Lafayette	18S23W29ACCI	330980.83	933039.27	3/9/2005	12.23	242.77			241.62			1.15
Lafayette	19S23W29BDBI	330351.94	933803.37	3/9/2005	41.56	208.44						
Lafayette	19S25W13CAB1	330555.42	933922.02	3/9/2005	38.50	216.50			221.46			-4.96
Lafayette	20S23W05ADA1	330222.7	933026.3	3/9/2005	34.86	207.14						
Lafayette	20S23W05ADB1	330223.35	933038.08	3/9/2005	40.15	201.85			203.58			-1.73
							Declines/Wells:					2/3
							Average Change:					-1.85
Lee	01N04E09CDDI	344209.69	904119.07	4/6/2005	59.65	144.35						
Lee	02N01E10CAD1	344743.36	905924.74	4/6/2005	51.88	149.12						
Lee	03N03E23CDB1	345005.93	904743.84	4/6/2005	61.97	145.03						
Lincoln	07S07W33CDC1	340443.93	915042.86	4/11/2005	160.38	27.62	29.60		42.13	-1.98		-14.51
Lincoln	08S04W22AAA1	340184.88	912752.79	4/11/2005	119.87	47.13	46.90			0.23		
Lincoln	08S05W03BAA2	340309.54	913453.58	4/11/2005	147.58	32.42	38.80		52.70	-6.38		-20.28
Lincoln	08S05W35ACC1	335906.6	913337.26	4/11/2005	139.97	25.03			59.37			-34.34
Lincoln	08S06W31DCC1	335849.71	914357.82	4/11/2005	132.63	48.37						
Lincoln	08S08W35DBB1	335858.35	915222.40	4/11/2005	201.98	83.02						

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County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Lincoln	08SC8V05DCB1	335850.57	915217.37	4/11/2005	210.54	81.46	56.30			25.16		
Lincoln	09SC7V07DAD1	335603.89	915128.31	4/11/2005	268.54	20.46	35.40			-14.94		
							Declines/Wells:			3/5		3/3
							Average Change:			0.42		-23.84
Lonoke	01NC7V03BCC1	344425.34	914503.28	4/19/2005	127.91	95.09			107.70			-12.61
Lonoke	01S08W02CBD1	343854.72	914959.73	4/20/2005	97.32	112.68						
Lonoke	02N07V06ACD1	344936.05	914737.03	4/19/2005	121.48	119.52						
Lonoke	02N07V09AAA1	344906.42	914500.30	4/19/2005	98.77	133.23	132.40	136.50		0.83	-3.27	
Lonoke	02N07V22DBA1	344851.49	914425.68	4/19/2005	126.45	98.55	96.20		111.29	2.35		-12.74
Lonoke	02N07V24DAC1	344650.20	914209.37	4/19/2005	146.54	84.46						
Lonoke	02N07V32DDD1	344453.26	914618.97	4/19/2005	129.33	96.67	88.10	102.80		8.57	-6.13	
Lonoke	02SC7V08DCC1	343235	914700	4/20/2005	140.15	61.85	64.80			-2.95		
Lonoke	02S08V16EDA1	343227	915227	4/20/2005	119.77	96.23		92.30	106.79		3.93	-10.56
Lonoke	02SC9V15BBB2	343248.5	915825.0	4/20/2005	71.35	154.65	155.00	158.07		-0.35	-3.42	
Lonoke	03N07V03CAA1	345444.90	914426.30	4/19/2005	78.28	156.72	157.05	160.05		-0.33	-3.33	
Lonoke	03N07V23CCC1	345144.19	914349.67	4/19/2005	65.33	142.67						
Lonoke	03N08W11ACD1	345402.52	914934.74	5/5/2005	91.62	156.38						
Lonoke	03N08V22DAD1	345205.16	915023.62	5/5/2005	92.69	140.31	142.70			-2.39		
Lonoke	03NC8V22DAD2	345204.58	915023.87	5/5/2005	96.57	136.43	141.08			-4.65		
Lonoke	03NC8V22DDD2	345152.18	915025.08	5/5/2005	96.24	138.76	138.15			0.61		
Lonoke	04N08V28CCC1	345814	915225	5/8/2005	60.07	164.93		170.1			-5.17	
							Declines/Wells:			5/9	5/6	3/3
							Average Change:			0.19	-2.90	-11.97
Mississippi	11N09E23AAC3	353302.32	900523.35	4/5/2005	19.06	220.94						
Mississippi	11N09E23ABA2	353304.1	900539	4/5/2005	15.34	220.66						
Monroe	01N01W15CED1	3/22/05	910542	3/22/2005	59.70	125.30						
Monroe	01N03W14CCB1	344143.93	911801.12	3/31/2005	72.73	99.27	103.60	101.30	114.42	-4.33	-2.03	-15.15
Monroe	03N01W33CDD1	345446.34	910835.08	3/31/2005	68.01	141.99	141.50			0.49		
Monroe	03N02W26DAB1	345043	911026	3/31/2005	47.13	144.87	143.50			1.37		
Monroe	04NC2W28DDD4	345535	911221	3/31/2005	30.49	161.51	160.50		165.07	1.01		-3.56
Monroe	04N02W30BAC1	345617.03	911503.95	3/31/2005	14.59	165.41	171.00			-5.59		
Monroe	04N02W30BAD1	345617.24	911514.62	3/31/2005	9.36	172.14						
							Declines/Wells:			2/5		
							Average Change:			-1.41		

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County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Nevada	14S20W29BCA1	33293128	93115157	3/8/2005	10.06	358.94	362.85			-3.91		
Nevada	14S21W04CCB1	33325122	931708.33	3/8/2005	58.44	301.56	301.20			0.36		
Ouachita	11S15W27ABD1	334440.87	923725.58	3/17/2005	71.72	128.28	129.70			-1.42		
Ouachita	11S17W14CAC1	33463135	924327.46	3/17/2005	18.70	127.30						
Ouachita	11S17W36CCA1	33434111	924834.21	3/17/2005	7.18	125.82			127.71			-1.89
Ouachita	11S18W20AAA1	334614.25	925759.33	3/17/2005	44.10	256.90						
Ouachita	12S15W09BBA1	334223.32	923922.44	3/17/2005	70.57	142.43	139.65	139.90		2.78	2.53	
Ouachita	12S15W25BDC1	333929.4	924210.32	3/17/2005	33.82	103.18	102.50			0.68		
Ouachita	12S15W26ABC1	333945.55	924304.12	3/17/2005	34.69	99.31	102.50			-3.19		
Ouachita	12S18W19CDC1	334018	925348	3/17/2005	8.00	227.00	219.20	193.90	202.72	7.80	33.10	24.28
Ouachita	12S18W25CAB1	333937.18	925441.37	3/17/2005	77.43	109.57	109.20			0.37		
Ouachita	12S19W09BAB1	33425146	930351.34	3/17/2005	10.01	279.99	274.80			5.19		
Ouachita	12S19W14AAA1	334143.44	930104.54	3/17/2005	5.03	231.97	231.60			0.37		
Ouachita	12S19W36BDC1	33390113	930145.97	3/17/2005	156.23	193.77	190.25			3.52		
Ouachita	13S15W26ADC1	333418.22	924450.63	3/22/2005	32.19	73.81						
Ouachita	13S18W01BDD1	333340	925358	3/22/2005	70.02	171.98	170.70		242.00	1.28		-70.02
Ouachita	13S19W26BCC1	333433.86	930417.81	3/22/2005	36.22	193.78	192.60			1.18		
Ouachita	14S15W32BDB1	332815.62	924539.52	3/22/2005	19.53	211.47	209.00			2.47		
Ouachita	14S17W05CAC1	333236.01	925254.64	3/22/2005	36.93	120.07	119.90	117.63	121.31	0.17	2.47	-1.24
Ouachita	14S17W19DBB1	333002.20	925345.44	3/22/2005	11.22	247.78	239.70			8.08		
Ouachita	14S17W32CAC1	332803.41	925251.18	3/22/2005	81.86	138.14	138.00			0.14		
Ouachita	14S18W27BDC1	332917.60	925703.97	3/22/2005	43.07	265.63	247.10			18.53		
Ouachita	14S19W29ABB1	33294145	930513.43	3/22/2005	87.52	192.48	193.30	193.30	195.11	-0.82	-0.82	-2.63
Ouachita	15S15W32DBB2	332233.72	924027.13	3/23/2005	176.39	-57.39	-56.00			-1.39		
Ouachita	15S16W07DDC1	332553	924716	3/23/2005	28.58	201.42	198.70			2.72		
Ouachita	15S18W36ADC1	332310.75	925436.06	3/22/2005	95.43	64.57	64.40			0.17		
Ouachita	15S19W10DCC1	332618.38	930318.37	3/23/2005	73.25	136.75	140.00		140.07	-3.25		-3.32
Ouachita	15S19W21CDD2	332438.02	930431.9	3/23/2005	198.38	81.62						
							Declines/Wells:			5/21	1/4	5/6
							Average Change:			1.82	9.32	-9.14
Phillips	01S02E32DDC1	343324.32	905455.41	3/31/2005	80.79	130.21	135.30	132.40	138.79	-5.09	-2.19	-8.58
Phillips	02S02E01ADC1	343323.48	905056.27	3/31/2005	36.62	139.38	140.50			-1.12		
Phillips	02S04E02DBA1	343242.87	903906.98	3/31/2005	112.84	137.16	146.70	143.40	131.96	-9.54	-6.24	5.20

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County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Phillips	02S05E16BCE1	343108.32	903525.54	3/31/2005	33.52	156.48	155.90		156.30	0.58		0.18
Phillips	02S05E29CCC1	342850.81	903635.44	3/31/2005	34.96	144.04	154.30		157.20	-10.26		-13.16
Phillips	03S03E30DAA1	342402.88	904314.59	3/31/2005	43.68	128.12	121.10	129.00	138.24	7.02	-0.88	-10.12
Phillips	03S05E36BAB1	342755.1	903521.23	3/31/2005	55.54	124.46						
Phillips	04S02E25CCC1	341824.20	90512145	3/31/2005	35.99	130.01	128.90		129.43	1.11		0.58
							Declines/Wells:			4/7	3/3	3/6
							Average Change:			-2.47	-3.10	-4.32
Poinsett	10N01E12BDC1	353026.35	905629.57	4/6/2005	95.10	136.90	131.00			7.90		
Poinsett	10N01E15DBB1	352930.54	905825.14	4/6/2005	94.74	137.26	142.80		147.98	-5.54		-10.72
Poinsett	10N01E33ABA1	352724.90	905924.05	4/6/2005	75.44	145.56	144.60			0.96		
Poinsett	10N03E02BCD1	353109.29	90444516	4/6/2005	109.89	141.11						
Poinsett	10N03E23CAC1	352944	904433	4/6/2005	111.69	146.31		147.30			-0.99	
Poinsett	11N02E16CCD1	353443.21	905321.22	4/6/2005	105.49	137.51	138.10			-0.59		
Poinsett	11N03E25ACC1	353225	904316	4/6/2005	120.71	152.29	146.40	155.20		5.89	-2.91	
Poinsett	12N03E12BBE1	354107.44	904340.09	4/6/2005	96.67	149.33						
Poinsett	12N03E35BCC1	353744.78	904455.70	4/6/2005	102.24	141.76	146.90			-5.14		
Poinsett	12N03E35DCA1	353727.35	904353.06	4/6/2005	101.36	145.64	145.60	149.20		-0.16	-3.56	
							Declines/Wells:			4/7	3/3	
							Average Change:			0.43	-2.49	
Prairie	01N05W19CCC1	344113.1	913505.27	3/30/2005	139.47	72.53			92.26			-19.73
Prairie	01N06W02ABB1	344442.4	913700.96	3/30/2005	115.65	107.35	97.40			9.95		
Prairie	01N06W34CBB1	343943.01	913846.17	3/30/2005	155.79	70.21	53.60			16.61		
Prairie	01S05W36BCB1	343903.38	91353163	3/30/2005	148.65	71.35						
Prairie	01S05W20AEB1	343639.91	91335189	3/30/2005	158.85	61.15	51.50	49.60		9.65	11.35	
Prairie	01S06W01BDD2	343859.48	91361277	3/30/2005	163.98	62.02	58.10			-4.08		
Prairie	01S06W11DBD1	343748.99	913654.24	3/30/2005	164.72	61.28	52.40		83.00	8.88		-21.72
Prairie	01S06W12BAE1	343826	91351	3/21/2005	158.33	69.67						
Prairie	02N04W19ACB1	344649 11	91280156	3/31/2005	9113	119.87			127.09			-7.22
Prairie	02N05W24ACA1	344559	912937	3/21/2005	98.70	126.30	122.55			3.75		
Prairie	02N06W19AAB1	344718.24	914049.95	3/30/2005	108.21	97.79	90.43			7.36		
Prairie	02N06W20ECB1	344706.57	914032.97	3/30/2005	142.00	94.00	82.00			12.00		
Prairie	02N06W21DAD1	344644.15	913928.47	3/30/2005	119.67	112.13	100.80	103.50	122.82	11.33	8.63	-10.69
Prairie	02N06W22EDD1	344553.53	913800.68	3/30/2005	118.96	114.04	108.70		120.02	5.34		-5.98
Prairie	02N06W24CAA1	344651	91355	3/21/2005	114.75	117.85	116.10			1.75		

Sparta/Memphis Aquifer Water Level Data

'95 - '00 – '04 – '05

County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Prairie	03N05W03ADA2	345451.65	913042.51	3/3/2005	60.03	144.97	137.80	145.60		7.17	-0.63	
Prairie	03N05W20CCC1	345144.72	913056.35	3/3/2005	70.41	142.59						
Prairie	03N06W20CDD1	345140.24	914003.90	3/30/2005	63.79	141.21	140.40	142.78		0.81	-1.57	
							Declines/Wells:			1/13	2/4	5/5
							Average Change:			6.96	4.45	-13.07
St. Francis	04N04E18BAB1	345743.38	904319.00	4/4/2005	63.23	156.72	153.50	153.69		3.22	3.03	
Union	16S14W15CAE1	331944.03	923218.09	3/15/2005	160.88	-56.88	-62.40	-53.00	-55.66	-4.48	-13.88	-11.22
Union	16S15W20DAA1	331859.92	923957.97	3/15/2005	286.32	-98.32	-83.30	-87.95	-76.79	-15.02	-10.37	-21.53
Union	16S15W31ACC1	331717.09	924128.90	3/15/2005	294.15	-128.15	-132.10			5.95		
Union	16S16W02ABC1	332205	924330	2/23/2005	168.36	-52.36	-54.40	-51.60	-56.35	2.04	-0.75	3.99
Union	16S16W03CBB1	332136	924507	3/2/2005	225.20	-25.20	-27.40	-29.50		2.20	4.30	
Union	16S13W34AEC2	331805	925709	3/15/2005	205.26	44.74	37.95			6.79		
Union	17S12W31CCC1	331206.4	922225.88	3/16/2005	238.1	-16.1						
Union	17S12W32BBC1	331202.09	922219.02	3/16/2005	250.58	-20.58	-9.00	-5.76	-5.26	-11.58	-14.82	-15.32
Union	17S13W31EAC1	331200.17	922315.70	3/16/2005	306.13	-90.13	-75.02		-65.59	-15.11		-24.54
Union	17S14W10CCC1	331456.79	923203.26	3/16/2005	93.02	92.98	84.66		89.40	8.32		3.58
Union	17S14W15AEA1	331451.3	923159.8	3/16/2005	89.95	88.04	90.60		89.45	-2.56		-1.41
Union	17S14W22BAB1	331354.37	923224.17	2/22/2005	317.24	-116.24						
Union	17S15W06BAA1	331645.6	924133.99	3/16/2005	254.95	-36.95	-69.15			2.20		
Union	17S15W08CDD1	331504.77	924027.41	3/16/2005	325.58	-150.66	-141.35			-9.31		
Union	5W18DBB1-VCNSA	331438.96	924129.21	2/22/2005	331.10	-143.17	-163.55	-177.42	-174.65	15.38	29.25	26.48
Union	17S15W28DBA1	331246.08	923909.78	3/28/2005	384.75	-154.75	-157.40	-183.90		2.65	26.15	
Union	17S15W29CDC1	331228.71	924039.39	3/17/2005	378.46	-153.46	-167.20	-217.40	-205.57	13.74	63.94	52.11
Union	17S15W31CCA1	331145.05	924115.74	3/16/2005	425.27	-153.27	-162.15	-136.50	-200.58	8.88	33.23	47.31
Union	17S15W31CCA1	331143.75	924104.87	3/14/2005	414.99	-153.99	-161.80			7.81		
Union	17S16W01EAA1	331649.04	924232.96	3/16/2005	308.53	-119.69	-124.50			4.81		
Union	17S16W02CCC1	331559.23	924403.41	3/16/2005	336.32	-158.32						
Union	17S16W02DCD1	331602.12	924325.72	3/16/2005	387.68	-169.68						
Union	17S16W12CCC1	331505.81	924232.01	3/16/2005	406.31	-184.73						
Union	17S16W24BDB1	331357.24	924248.47	3/17/2005	394.04	-189.04	-189.50			0.46		
Union	17S17W25CEA2	331256	924837	2/22/2005	359.00	-109.00						
Union	17S17W30DCD1	331257.41	925355.54	3/15/2005	321.93	-41.93			-24.38			-17.55
Union	18S11W09AEC1	331011.92	921443.35	3/16/2005	97.33	37.62	37.50		46.65	0.12		-9.03
Union	18S12W33BBB1	330650.66	922119.32	3/16/2005	141.18	-29.18	-27.20	-25.22	-10.58	-1.98	-3.95	-18.60
Union	18S14W06CCA1	331040	923531	3/15/2005	396.58	-173.58						

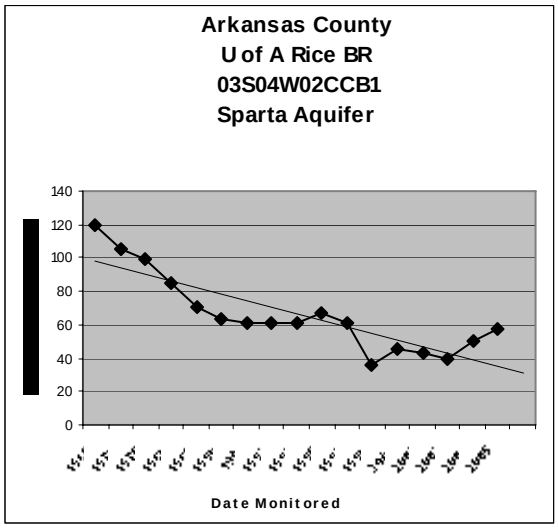
Sparta/Memphis Aquifer Water Level Data

'95 - '00 – '04 – '05

County	Station	Latitude	Longitude	WL Date	WL Measure	WL ALT 2005	WL ALT 2004	WL ALT 2000	WL ALT 1995	04-05 Change	00-05 Change	95-05 Change
Union	'8S'5w03DAB1	331103.78	923302.12	2/23/2005	373.72	-133.72						
Union	18S15W07BAC2	33'035	924'38	3/17/2005	364.47	-81.47		-75.50			-5.97	
Union	'8S'5w33ADA1	330659.32	923858.43	3/15/2005	374.03	-121.03	-123.64		-108.02	2.61		-13.01
Union	'8S'5W35DAC1	330635	923707	3/15/2005	290.20	-39.20		-104.60	-105.73		15.40	16.53
Union	18S16w10CDD1	331000.36	924445.32	3/16/2005	327.54	-145.54						
Union	16S16W11AAE1	331041.13	924314.1	3/14/2005	375.97	-150.97		-173.26			22.29	
Union	16S16W11CAC1	331101.23	924316.37	3/15/2005	422.53	-152.53			-156.59			4.06
Union	18S16w12ACB1	331028.75	924231.85	3/15/2005	468.65	-239.35	-153.70	-256.07	-182.23	-85.35	16.42	-57.42
Union	'8S'6w28BBB1	330609.22	924611.13	3/15/2005	331.22	-106.22	-101.10		-125.44	-5.12		19.22
Union	'8S'7w22BDD1	330855.91	925056.43	5/9/2005	353.54	-58.54	-71.80	-86.20		3.26	17.66	
Union	18S18w11ACD2	331050.31	925615.1	3/16/2005	271.33	-26.33	-44.55			18.22		
Union	19S10w16CBC1	330329	922903	3/16/2005	66.64	-4.64		-1.38			-3.26	
Union	19S11w23ACA1	330255.38	921228.80	3/16/2005	151.93	-9.93	-10.42			0.44		
Union	19S11w25AAA1	330217.84	921113.03	3/16/2005	152.27	-17.27	-14.50	-15.19		-2.77	-2.08	
Union	19S12w13AAA1	330411.26	921716.78	3/16/2005	157.83	-33.17	-20.24			12.93		
Union	19S15w01CCA1	330534.81	923845.01	3/15/2005	68.42	-118.58	-110.16		-117.46	9.42		2.12
Union	'9S'6w35DDC1	330108.86	924325.54	3/15/2005	247.08	-72.08	-65.25	-80.66	-44.77	-6.83	8.58	-27.31
Union	19S18w14ADA1	330451.70	925607.90	3/15/2005	191.33	-51.62	-63.30			-16.68		
							Declines/Wells:			12/32	8/18	11/20
							Average Change:			-1.54	10.28	-2.08
Woodruff	05N01W11ABA1	350425.81	910407.19	4/4/2005	55.73	-155.24	-152.60	-156.10		2.64	-0.86	
Woodruff	05N01W17DBB1	350310.68	910727.11	4/4/2005	45.61	-164.39	-164.05	-166.35		0.34	-1.96	
Woodruff	05N02W31DCB3	350026.9	911455.9	4/4/2005	11.54	-181.36	-179.70	-179.31	-181.30	-1.66	2.05	0.06
Woodruff	06N01W13ABA1	350651	910255	4/4/2005	63.04	-148.96	-139.80			-9.16		
Woodruff	06N01W13ADC1	350627.39	910246.74	4/4/2005	66.03	-145.97						
Woodruff	07N01W12BCB1	351441.58	910326.17	4/4/2005	61.52	-160.48	-157.40			-3.08		
Woodruff	06N01W12CDA1	351932	910310	4/4/2005	72.04	-152.96		-156.10			-5.14	
Woodruff	08N02W26ADC1	351725.76	911004.14	4/4/2005	32.56	-179.44						
							Declines/Wells:			0/5	3/4	
							Average Change:			3.38	-1.48	
							Total Average Change:			1.95	4.35	-4.99
							Total Declines/Wells:			88/250	48/94	89/127
										35.2%	51.0%	70.0%

Appendix D

Selected Sparta / Memphis Aquifer Well Hydrographs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03S04W02CCB1
Sparta Aquifer
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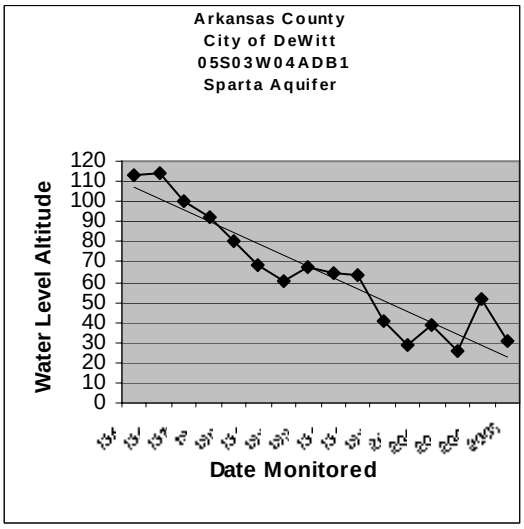
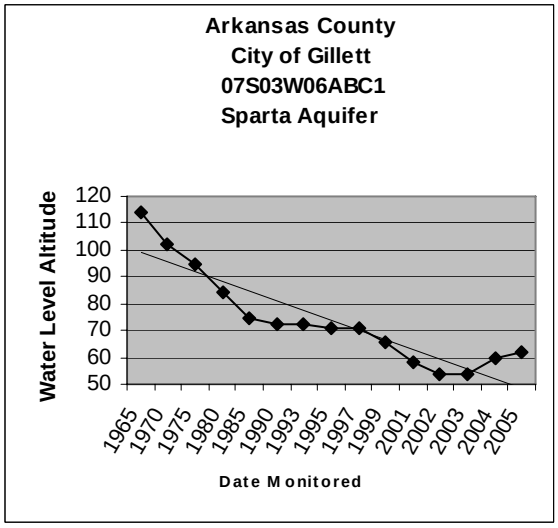
120
100
80
60
40
20
0
Date Monitored


Arkansas County
City of DeWitt
05S03W04ADB1
Sparta Aquifer
Water Level Altitude
120
110
100
90
80
70
60
50
40
30
20
10
0
Date Monitored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City of Gillett
07S03W06ABC1
Sparta Aquifer
Water Level Altitude
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110
100
90
80
70
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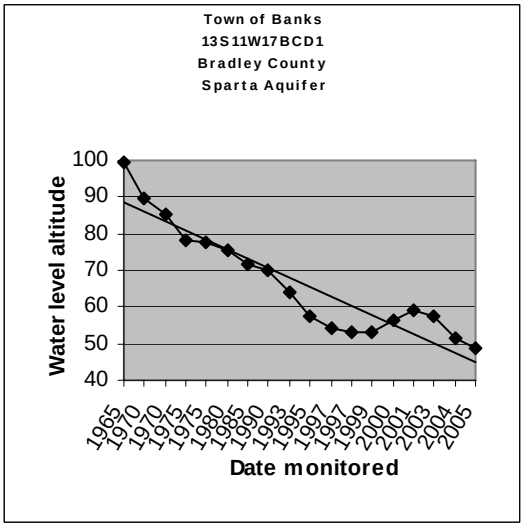
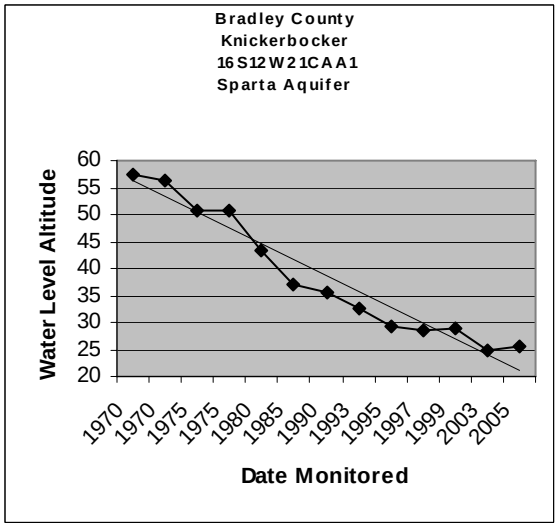
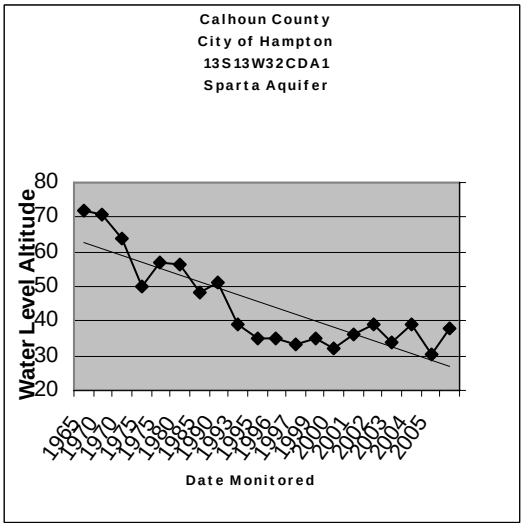
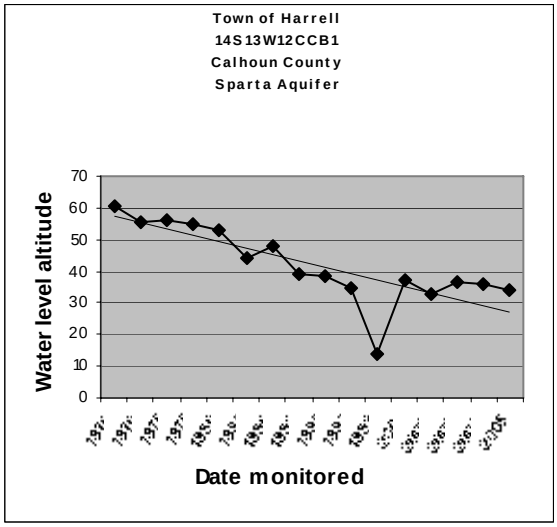
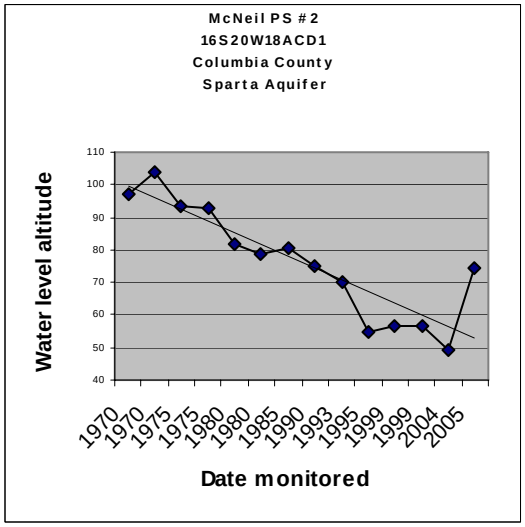
50
1965
1970
1975
1980
1985
1990
1993
1995
1997
1999
2001
2002
2003
2004
2005
Date Monitored

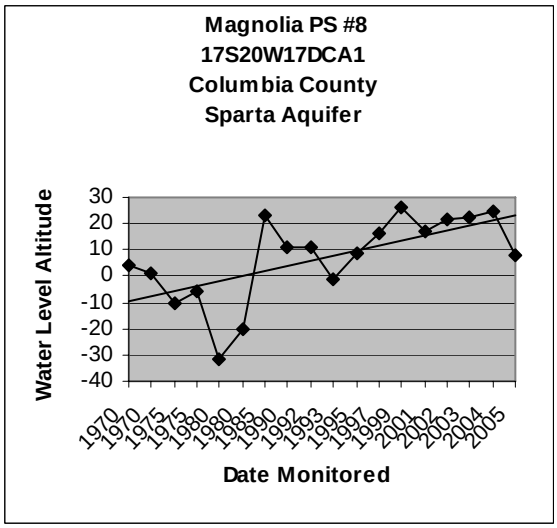

Town of Banks
13S11W17BCD1
Bradley County
Sparta Aquifer
Water level altitude
100
90
80
70
60
50
40
1965
1970
1970
1975
1980
1985
1990
1993
1995
1997
1999
2000
2001
2003
2004
2005
Date monitored


Bradley County
Knickerbocker
16S12W21CAA1
Sparta Aquifer
Water Level Altitude
60
55
50
45
40
35
30
25
20
1970
1970
1975
1975
1980
1985
1990
1993
1995
1997
1999
2003
2005
Date Monitored


Calhoun County
City of Hampton
13S13W32CDA1
Sparta Aquifer
Water Level Altitude
80
70
60
50
40
30
20
1965
1970
1970
1975
1975
1980
1985
1990
1993
1995
1997
1999
2000
2001
2002
2003
2004
2005
Date Monitored


Town of Harrell
14S13W12CCB1
Calhoun County
Sparta Aquifer
Water level altitude
70
60
50
40
30
20
10
0
Date monitored


McNeil PS #2
16S20W18ACD1
Columbia County
Sparta Aquifer
Water level altitude
110
100
90
80
70
60
50
40
1970
1970
1975
1975
1980
1980
1985
1990
1993
1995
1999
1999
2004
2005
Date monitored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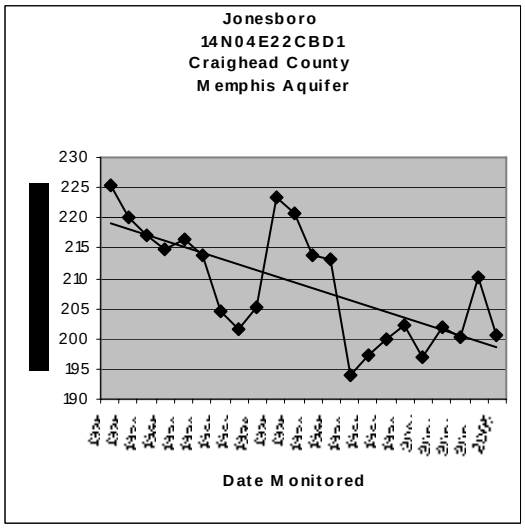
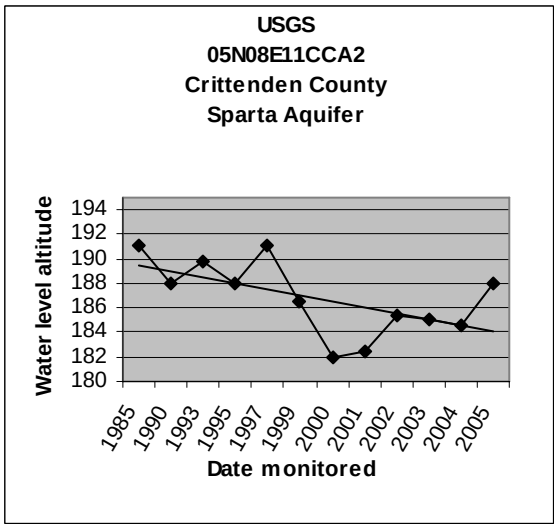
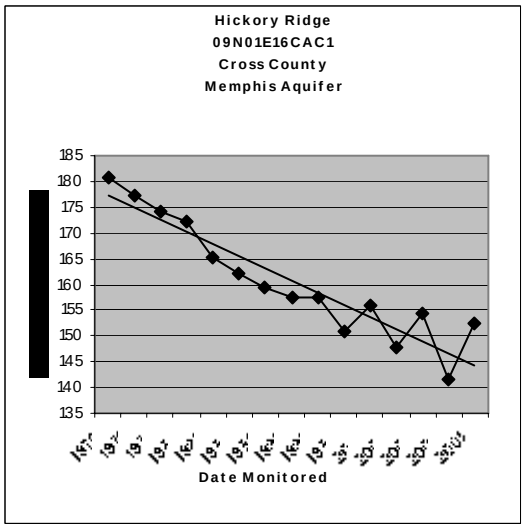
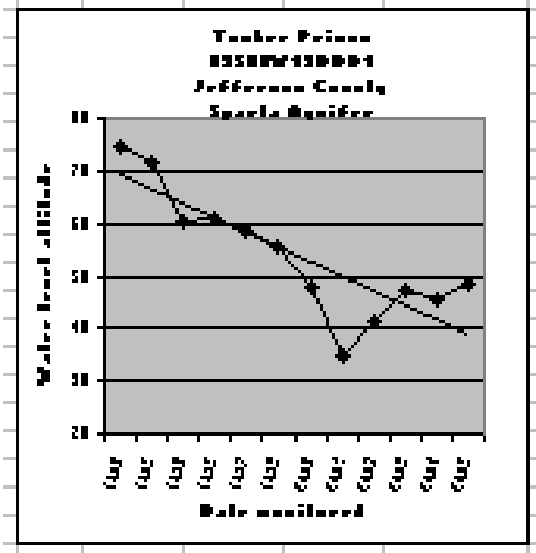
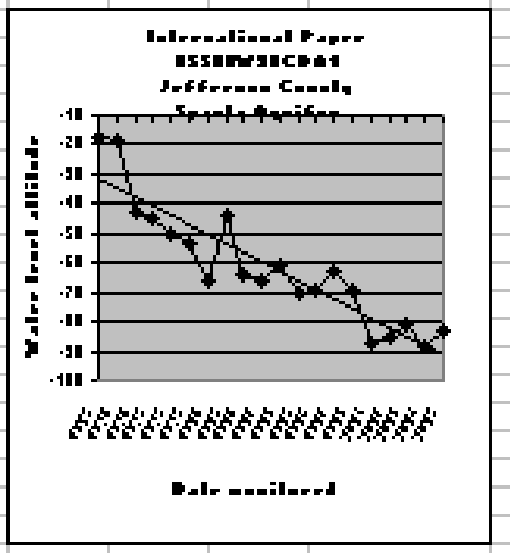
17S20W17DCA1
Columbia County
Sparta Aquifer
Water Level Altitude
30
20
10
0
-10
-20
-30
-40
1970
1970
1975
1975
1980
1980
1985
1990
1992
1993
1995
1997
1999
2001
2002
2003
2004
2005
Date Monitored

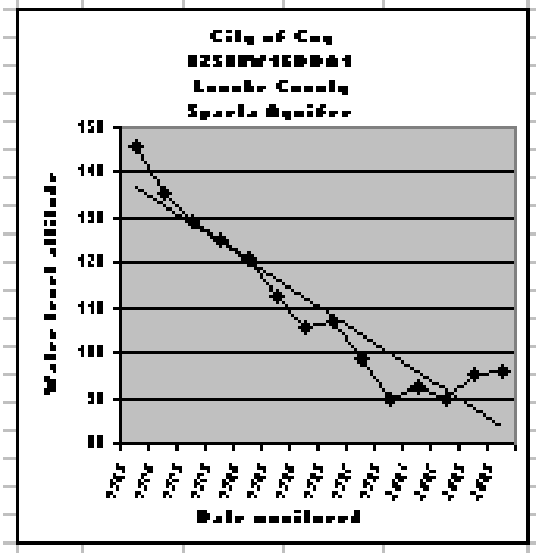

Jonesboro
14N04E22CBD1
Craighead County
Memphis Aquifer
230
225
220
215
210
205
200
195
190
Date Monitored

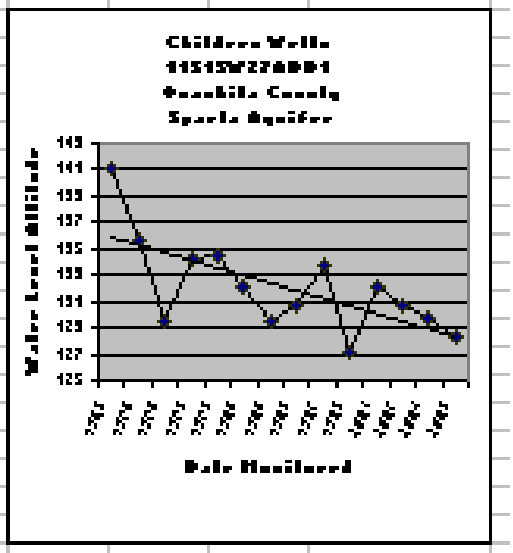

USGS
05N08E11CCA2
Crittenden County
Sparta Aquifer
Water level altitude
194
192
190
188
186
184
182
180
1985
1990
1993
1995
1997
1999
2000
2001
2002
2003
2004
2005
Date monitored

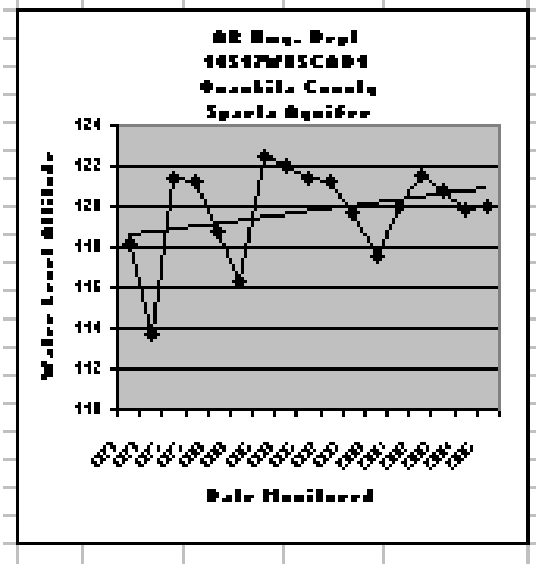

Hickory Ridge
09N01E16CAC1
Cross County
Memphis Aquifer
185
180
175
170
165
160
155
150
145
140
135
Date Monitored

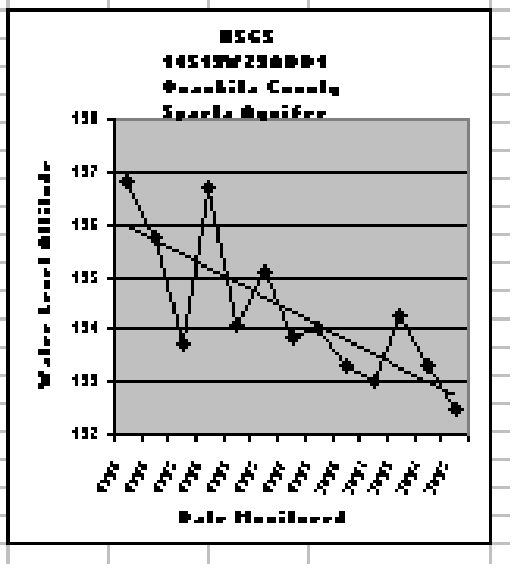

Tanker Prison
Jefferson County
Sparta Aquifer
Water level altitude
Date monitored

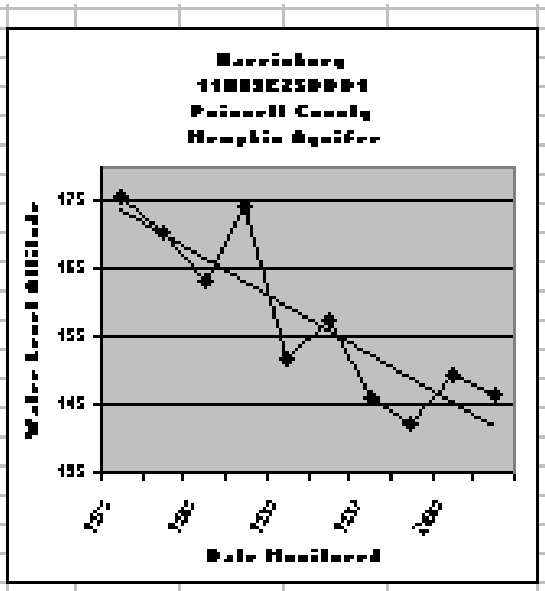

International Paper
Jefferson County
Sparta Aquifer
Water level altitude
Date monitored

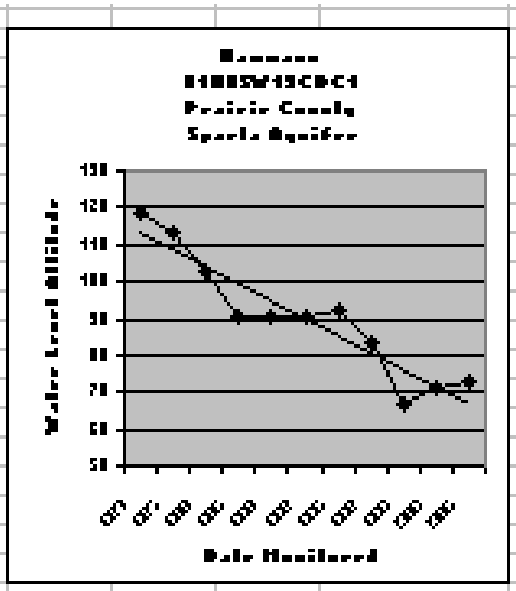

City of Coy
Lonoke County
Sparta Aquifer
Water level altitude
Date monitored

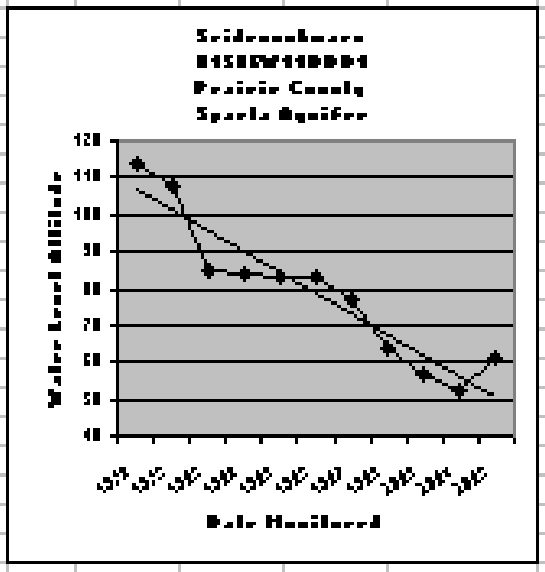

Childress Wells
Ouachita County
Sparta Aquifer
Water Level Altitude
Date Monitored

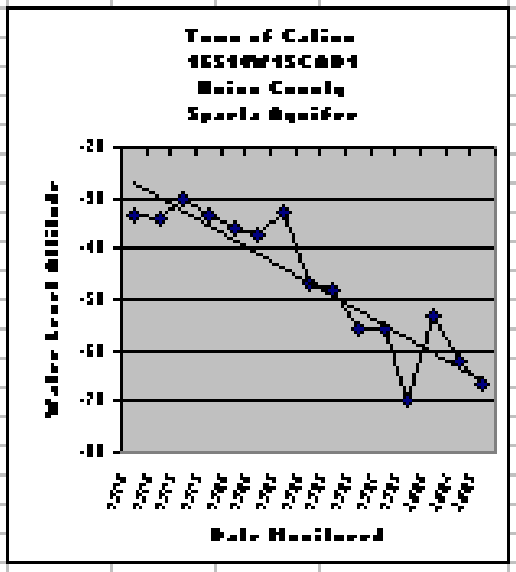

AR Hwy. Dept
Ouachita County
Sparta Aquifer
Water Level Altitude
Date Monitored

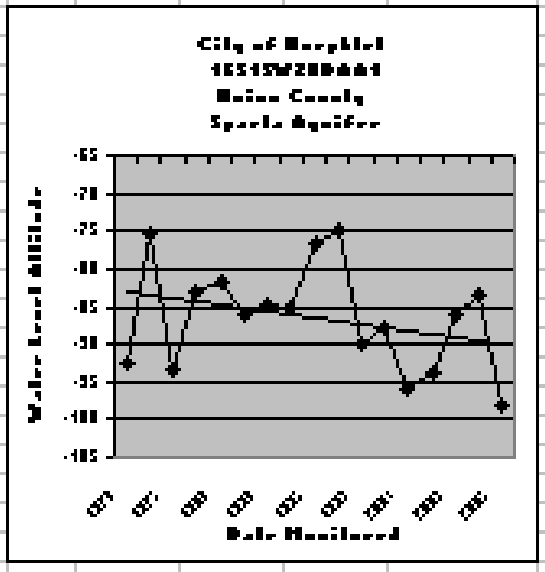

USGS
Ouachita County
Sparta Aquifer
Water Level Altitude
Date Monitored

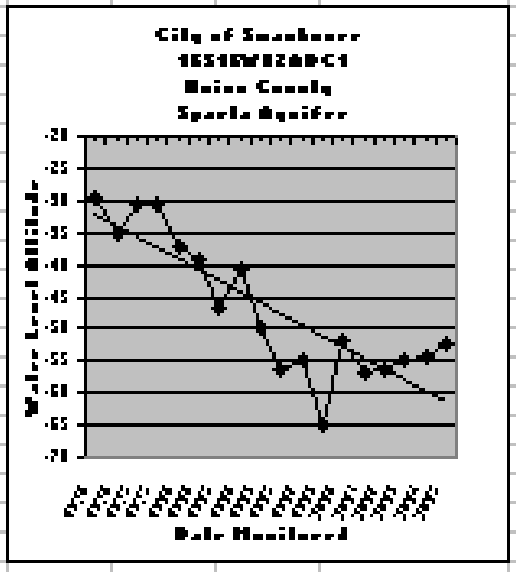

Water Level Altitude
Date Monitored

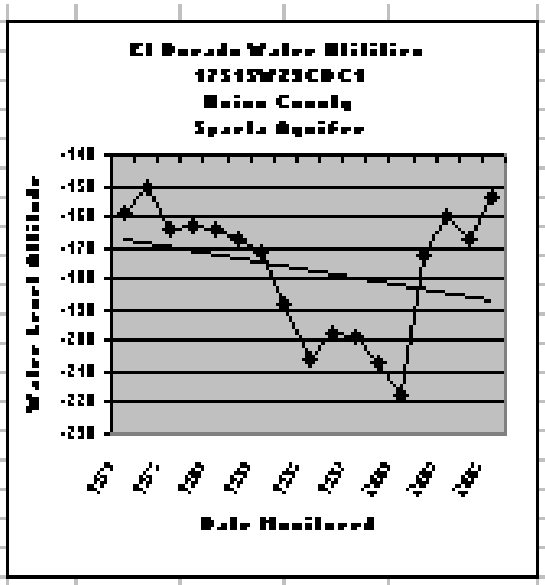

Water Level Altitude
Date Monitored

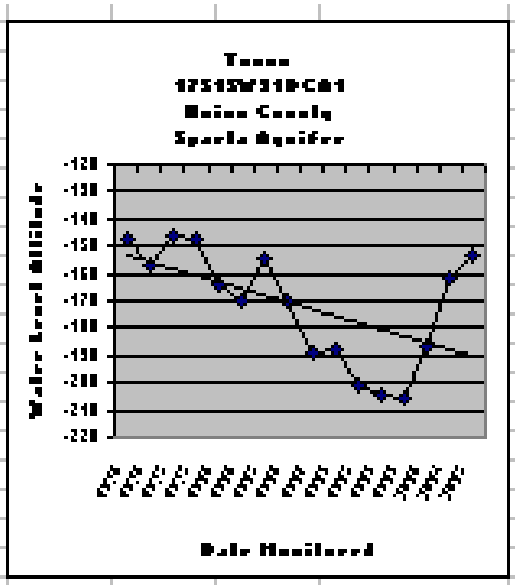

Water Level Altitude
Date Monitored

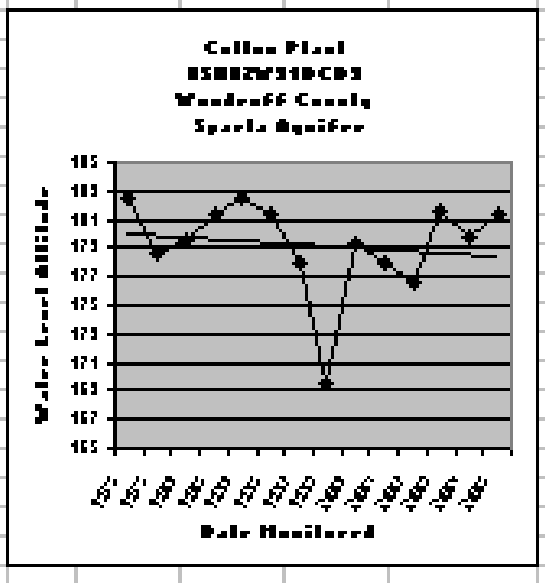

Water Level Altitude
Date Monitored


Water Level Altitude
Date Monitored


Water Level Altitude
Date Monitored


El Dorado Water Utilities
Water Level Altitude
Date Monitored


Water Level Altitude
Date Monitored


Water Level Altitude
Date Monitored

Appendix E

Tokio Aquifer Water Level Data

Tokio Aquifer

99 -02 -05 WL Change

					05 WL	2005 WL	2002 WL	1999 WL	WL Change	WL Change
County	Station	Lat	Long	Date	Measure	Alt.	Alt.	Alt.	2005-2002	2005-1999
Clark	08S22V05CCC1	360408	932255	2/15/2005	31.40	358.60	358.30		0.30	
Clark	08S22V15AEB2	360312.77	932017.91	2/15/2005	52.48	272.52	271.03	267.46	1.49	5.06
Clark	09S22V05BBB1	359950.53	932258.75	2/15/2005	105.18	206.82	205.41	213.74	1.41	-6.92
Clark	09S22V05BCA1	359936.13	932256.76	2/15/2005	32.63	282.37	283.36	288.31	-0.99	-5.94
Clark	09S22W10DBA1	359831.65	932021.45	2/14/2005	141.12	220.88	223.82	232.19	-2.94	-11.31
Clark	09S22W16ACA1	359753.53	932120.02	2/14/2005	13.07	219.93	220.32	220.16	-0.39	-0.23
							Declines/ Wells:		**3/6**	**4/5**
							Average Change:		**-0.19**	**-3.37**
Hempstead	09S23V20BDA1	335710	932858	2/9/2005	-1.20	251.20	251.20	251.20	0.00	0.00
Hempstead	09S23V33CDA1	335457.24	932802.43	2/9/2005	0.90	269.10	270.90	270.90	-1.80	-1.80
Hempstead	09S24V25BBB1	335633.39	933131.9	2/9/2005	0.50	267.50	268.50	268.50	-1.00	-1.00
Hempstead	09S24V28ACC1	335617.26	933414.51	2/9/2005	2.10	274.90	279.10	279.10	-4.20	-4.20
Hempstead	09S24V30DCC1	335555.81	933607.46	2/9/2005	16.15	373.85	374.83	373.02	-0.98	0.83
Hempstead	09S24V33ADC1	335526.07	933355.97	2/9/2005	46.02	282.98	283.93	284.96	-0.95	-1.98
Hempstead	09S26V08ADA2	335919.86	934716.71	2/9/2005	1.67	436.33	436.37	436.11	-0.04	0.22
Hempstead	09S26V08ADD1	335917.85	934716.84	2/9/2005	0.38	436.62	436.72	436.51	-0.10	0.11
Hempstead	09S26V09CDC1	335845.81	934656	2/9/2005	3.08	421.92	422.77	421.62	-0.85	0.30
Hempstead	09S26W16CBB1	335815.46	934920.92	2/9/2005	22.37	402.63	403.09	404.68	-0.46	-2.05
Hempstead	10S25V09CDB1	335328.56	934051.57	2/9/2005	69.27	291.73	291.15	291.38	0.58	0.35
Hempstead	10S25V30CCD1	335047.51	934310.18	2/9/2005	59.14	318.86	318.88	323.81	-0.02	-4.95
Hempstead	10S26V03BBA1	335506.74	934611.68	2/9/2005	0.96	366.04	366.32	365.89	-0.28	0.15
Hempstead	11S26V08BEB1	334909.23	934903.22	2/9/2005	69.97	302.03	302.44	305.08	-0.41	-3.05
Hempstead	11S26V23BEB1	334719.87	934601.93	2/9/2005	94.67	324.33	325.78	327.72	-1.45	-3.39
Hempstead	12S24V06DAD1	334359.68	933701.28	2/8/2005	216.00	139.00	148.13	133.20	-9.13	5.80
Hempstead	12S25V02DDD1	33434113	9333018	2/8/2005	236.27	130.73	134.40	138.22	-3.67	-7.49
Hempstead	12S27V04BBC1	334449.54	935357.5	2/9/2005	173.58	261.32	262.34	265.48	-1.02	-4.16
Hempstead	12S27V05AAC1	334448.86	935421.32	2/9/2005	174.43	260.57	262.39	264.24	-1.82	-3.67
Hempstead	12S27V36DBC1	333959.72	935006.34	2/8/2005	63.29	197.71	228.21	232.65	-30.50	-34.94
							Declines/ Wells:		**18/20**	**12/20**
							Average Change:		**-2.91**	**-3.25**
Howard	09S27V03DBD1	340000	935152	2/10/2005	72.41	493.59	491.02	493.11	1.43	-3.52
Howard	09S27W10BCB1	335930	935231	2/10/2005	106.25	427.75	425.84	423.36	1.91	4.39
Howard	09S27W18ADB1	335840	935452	2/10/2005	77.71	414.29	414.66	416.15	-0.37	-1.86

Tokio Aquifer

99 -02 -05 WL Change

					05 WL	2005 WL	2002 WL	1999 WL	WL Change	WL Change
County	Station	Lat	Long	Date	Measure	Alt.	Alt.	Alt.	2005-2002	2005-1999
Howard	09S27W32BDB1	335606	935423	2/10/2005	53.83	397.17	397.94	368.80	-0.77	-1.63
Howard	09S27W32BDB2	335606	935423	2/10/2005	31.06	368.94	370.02	400.09	-1.08	-31.14
Howard	09S28W20DAC1	335740	940013	2/10/2005	11.74	468.26	468.84	467.70	-0.58	0.56
Howard	10S27W02ACD1	335454	935055	2/10/2005	74.67	283.33		283.33		0.00
Howard	10S27W04BBD1	335512	935329	2/10/2005	54.42	337.58	338.44	341.03	-0.86	-3.45
Howard	10S27W12CAE1	335356	935020	2/10/2005	76.08	306.92	308.82	310.86	-1.90	-3.94
Howard	10S27W18BAC1	335336	935534	2/10/2005	106.22	315.78	317.19	340.71	-1.41	-24.93
Howard	11S27W21CDA1	334602.51	935417.84	2/10/2005	74.33	-74.33				
							Declines/Wells:		8/9	7/10
							Average Change:		-0.72	-6.55
Little River	11S30W25DDC1	334618.44	940852.31	2/7/2005	22.75	262.25	263.74	266.02	-1.49	-3.77
Nevada	09S22W33DCC1	335437.37	932130.47	2/14/2005	5.19	219.81	219.27	220.43	0.54	-0.62
Nevada	10S23W12AAA1	335344.31	932420.89	2/14/2005	19.64	236.36	235.13	236.22	1.23	0.14
Nevada	11S22W08DAC1	334757.94	932315.14	2/14/2005	90.57	214.43	213.74	217.51	0.69	-3.08
Nevada	11S22W08DAC8	334756.76	932311.82	2/14/2005	90.09	214.91	214.61	218.33	0.30	-3.42
							Declines/Wells:		0/4	3/4
							Average Change:		0.69	-1.74
Pike	08S23W19ADC1	340213	932930	2/10/2005	-1.30	351.30	350.85	351.30	0.45	0.00
Pike	08S23W35DCA1	340004	932530	2/10/2005	-1.15	258.15	258.15	258.50	0.00	-0.35
Pike	08S24W14AAC1	340324	933134	2/10/2005	92.61	430.39	433.16	438.89	-2.77	-8.50
Pike	09S23W17BBC2	335804	932924	2/10/2005	-2.85	282.85	281.93	282.85	0.92	0.00
Pike	09S24W14AAD1	335810	933138	2/10/2005	-1.50	286.50	286.50	286.50	0.00	0.00
							Declines/Wells:		1/5	2/5
							Average Change:		-0.28	-1.77
Sevier	10S28W31DCC1	335026.12	940145.37	2/7/2005	37.38	292.62	292.84	290.45	-0.22	2.17
Sevier	11S29W05DCA1	334949.3	940652.64	2/7/2005	116.93	363.07	364.94	320.93	-1.87	42.14
Sevier	11S29W08DBE1	334907.44	940703.8	2/7/2005	145.91	319.09	320.83	358.53	-1.74	-39.44
Sevier	11S29W10CCD1	334750.48	940317.44	2/7/2005	84.11	275.89	277.78	279.73	-1.89	-3.84
							Declines/Wells:		4/4	2/4
							Average Change:		-1.43	0.26
							Total Average Change:		-1.46	-3.44
							Declines/Wells:		34/48	30/48
									70.8%	62.5%

Appendix F

Nacatoch Aquifer Water Level Data

Nacatoch Aquifer

99 -02 -05 WL Change

					WL	WL	2005	2002	1999	WL Change	WL Change
County	Stnid	Station	Latitude	Longitude	Date	Measure	WL Alt.	WL Alt.	WL Alt.	05-02	05-99
Clark	340322093023001	08S19W09ACC1	340323.35	930229.33	2/15/2005	0.85	179.15	177.85	177.65	1.70	1.70
Clark	340220093024301	08S19W15CAB1	340225.62	930247.1	2/15/2005	0.59	172.41	171.11	171.17	1.30	1.24
Clark	335953093073501	08S20W34DAB1	335954.15	930744.35	2/15/2005	17.13	182.87	183.23	183.31	-0.36	-0.44
Clark	335707093084201	09S20W16DBC1	335708.15	930847.37	2/15/2005	75.77	165.23	164.36	162.43	0.87	2.80
Clark	335656093084001	09S20W16DDC1	335656.77	930844.75	2/15/2005	74.21	158.79	157.88	156.89	0.91	2.20
Clark	335455093093201	09S20W28DCB1	335516.13	930900.79	2/15/2005	17.41	184.59	184.47	181.61	0.12	3.38
Clark	335435093111101	09S20W31CAC1	335434.79	931111.15	2/15/2005	112.70	146.30	140.23	179.47	6.07	-33.17
Clark	335447093085201	09S20W33ABD1	335447.13	930852.09	2/15/2005	33.27	175.73	176.43	175.61	-0.70	0.12
Clark	335455093093202	09S20W33BCC2	335446.06	930929.02	2/15/2005	25.89	181.11	180.13	182.25	0.98	-1.14
Clark	335638093143501	09S21W21CAD1	335625.47	931453.39	2/14/2005	100.27	244.73	242.16	239.78	2.57	4.95
Clark	335052093083401	10S20W22DCB1	335054.14	930757.21	2/15/2005	81.14	178.86	178.68	180.75	0.18	-1.89
Clark	335327093123601	10S21W12BAB1	335321.39	931225.22	2/15/2005	68.52	152.48	151.98	150.61	0.50	-7.13
								Declines/Wells:		**3/12**	**6/12**
								Average Change:		**0.90**	**-2.59**
Clay	361903090055902	19N04E01BDB1	361909.66	900559.97	2/16/2005	10.73	259.27	258.22	270.75	1.05	-1.48
Clay	361601090175101	19N07E23BAC1	361601.75	901748.02	2/16/2005	73.77	243.23	238.74	242.31	3.49	5.92
Clay	361552090172801	19N07E23CBC1	361548.58	901730.31	2/16/2005	36.37	248.63	246.08	248.64	0.55	-2.01
Clay	361528090173101	19N07E25AAA1	361531.55	901732.61	2/16/2005	40.07	135.93	144.01	143.97	-8.08	-8.04
Clay	361927090354201	20N04E36DCC1	361928.53	903542.09	2/16/2005	14.75	284.24	282.91	286.39	1.33	-2.15
Clay	362312090120201	20N08E10ABC1	362312.6	901201.74	2/16/2005	87.06	252.94	251.00	252.98	1.61	-0.04
Clay	362227090112001	20N08E14BAB2	362227.05	901115.62	2/16/2005	42.73	243.27	242.22	241.67	1.05	1.60
Clay	362225090120801	20N08E15BAA1	362225.5	901207.7	2/16/2005	167.34	233.66	233.22	238.68	0.44	-5.02
Clay	362617090232801	21N06E23CAC1	362618.79	902329.21	2/16/2005	26.62	273.38	272.21	277.27	1.17	-3.89
Clay	362549090160601	21N07E25AAC1	362549.74	901606.97	2/16/2005	71.39	270.61	269.00	274.22	1.61	-3.61
								Declines/Wells:		**1/10**	**8/10**
								Average Change:		**1.02**	**-1.87**
Greene	361118090242201	18N05E14CCD1	361114.55	902419.59	2/16/2005	45.18	240.82	239.06	242.85	1.76	-2.03
Greene	361120090225601	18N06E24ABB2	361112	902256	2/16/2005	38.59	237.41				
Hempstead	334334093382501	11S24W09BDB1	334336.62	933819.25	2/9/2005	27.39	442.61	445.11	447.42	-2.50	-4.81
Hempstead	334641093344701	11S24W21ADD1	334643.64	933446.8	2/9/2005	49.33	320.67	322.78	321.69	-2.11	-1.02
Hempstead	334618093344601	11S24W21DDD1	334620.53	933447.12	2/9/2005	34.07	338.93	338.71	338.06	1.78	1.43
Hempstead	334543093333401	11S24W22ADD1	334547.25	933342.5	2/9/2005	32.41	332.59	334.36	333.41	-1.77	-0.82

Nacatoch Aquifer

99 -02 -05 WL Change

					WL	WL	2005	2002	1999	WL Change	WL Change
County	Site Id	Station	Latitude	Longitude	Date	Measure	WL Alt.	WL Alt.	WL Alt.	05-02	05-99
Hempstead	334441093343801	11S24W34CBC1	334443.82	933437.9	2/9/2005	25.08	294.61	296.55	297.69	-1.95	-2.98
Hempstead	334605093464501	11S23W27BDC1	334610.5	934644.59	2/9/2005	7.23	422.72	423.45	424.70	-0.73	-1.98
Hempstead	334005093353901	12S24W28CDC1	334012.41	933535.89	2/9/2005	200.35	152.35	115.34	132.88	33.01	19.47
Hempstead	334046093433001	12S25W07ABB1	334345.37	934340.05	2/9/2005	41.10	393.90	395.01	398.34	-1.11	-4.44
Hempstead	334212093403101	12S25W15DBC1	334213.66	934035.55	2/9/2005	27.21	293.79	295.22	292.38	-1.43	1.59
Hempstead	334002093405E01	12S25W34BAC1	334001.94	934055.44	2/9/2005	72.87	247.13	248.77	254.38	-1.64	-7.25
Hempstead	334158093473201	12S26W21AAC1	334156.03	934735.04	2/9/2005	31.93	356.07	356.27	367.68	-0.20	-1.81
Hempstead	334152093443001	12S26W24ABC1	334153.15	934436.21	2/9/2005	0.04	314.36	312.78	311.36	2.18	3.10
Hempstead	333913093423101	13S25W05ABD1	333915.43	934231.65	2/9/2005	25.08	256.92	253.21	262.32	-1.29	-5.40
Hempstead	333737093433101	13S25W18AAB1	333739.54	934331.59	2/9/2005	61.41	221.59	222.53	231.52	-0.94	-9.93
Hempstead	333405093393001	13S25W35DDC1	333406.39	933930.91	2/9/2005	186.59	136.41	137.74	220.12	-1.33	-83.71
Hempstead	333705093484501	13S26W17DDB1	333705.19	934844.69	2/9/2005	57.88	233.12	233.96	235.28	-0.84	-2.16
Hempstead	333316093412701	14S25W04DDD1	333317.01	934126.68	2/9/2005	104.76	155.24	156.28	211.59	-1.04	-56.45
							Declines/Wells:			15/17	16/17
							Average Change:			0.85	-7.07
Little River	333509094C2E101	13S26W31BCC1	333509.35	94C250.97	2/7/2005	52.06	258.94	258.72	259.23	0.22	-0.29
Little River	333423094C51D01	14S3CW01DAA1	333426.16	94C904.22	2/7/2005	43.53	238.47	239.64	252.99	-1.17	-14.52
Miller	333419093512901	14S27W02AAB1	333418.42	935121.43	2/7/2005	28.43	226.57	228.89	232.36	-2.31	-5.79
Miller	333200093572501	14S28W13CCB1	333156.09	935726.62	2/7/2005	28.77	237.23	238.12	240.09	-0.89	-2.86
Nevada	335105093193501	10S22W20DCB1	335105.16	931934.65	2/14/2005	0.80	241.40	241.26	240.94	0.14	0.46
Nevada	334726093104201	11S20W08DCC1	334727.45	931037.28	2/14/2005	2.29	178.71	176.54	175.34	2.07	3.37
Nevada	334622093090401	11S20W15CDC1	334622	930904	2/14/2005	7.55	167.45				
Nevada	334626093093001	11S20W22AAA1	334623.78	930925.95	2/14/2005	-2.04	177.04	176.10	177.05	0.94	-0.01
Nevada	334645093141101	11S21W14CABB1	334652.02	931434.14	2/14/2005	-1.23	197.23	197.36	197.00	-0.13	0.23
Nevada	334759093231302	11S22W08DAC2	334759.75	932314.18	2/14/2005	39.80	256.20	251.92	256.42	4.28	-0.22
Nevada	334756093231804	11S22W08DDB4	334757.45	932313.82	2/14/2005	21.97	234.03	230.63	233.52	3.35	0.51
Nevada	334840093272601	11S23W03DCC1	334840.23	932726.19	2/14/2005	83.06	301.54	298.19	306.40	3.45	-4.79
Nevada	334832093254001	11S23W12ABB1	334837	932536	2/14/2005	69.92	311.08	309.69	310.95	1.39	0.13
Nevada	334230093224901	12S22W09CDD1	334229.58	932250.15	2/11/2005	6.42	222.58	225.29	228.02	-2.71	-5.44
Nevada	334107093213201	12S22W22ACD1	334107.66	932134.83	2/11/2005	126.73	215.27	219.14	224.74	-3.87	-9.47
Nevada	334103093210501	12S22W23CBA1	334102.42	932057.36	2/11/2005	112.77	216.23	219.42	221.72	-3.19	-5.49
Nevada	333742093225201	13S22W07BDC1	333744.12	932514.03	2/11/2005	133.71	209.29	211.08	227.39	-1.79	-18.10
							Declines/Wells:			5/12	7/12
							Average Change:			0.33	-3.27

Nacatoch Aquifer

99 -02 -05 WL Change

					WL	WL	2005	2002	1999	WL Change	WL Change
County	Site Id	Station	Latitude	Longitude	Date	Measure	WL Alt.	WL Alt.	WL Alt.	05-02	05-99
							Total Average Change:			**0.66**	**-4.19**
							Declines/Wells:			**24/51**	**37/51**
										47.0%	**72.5%**

Appendix G

Comparative Table of Selected Spring/Fall Water Level Changes

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	WL	Spring/Fall
					Measured	Water	Alt. Spring '05	Measured	Alt. Fall '05	05 Change
Arkansas	03S03W18CCC1	342553	912251	196.00	2/14/2005	97.56	98.44	9/14/2005	96.19	-2.25
Arkansas	03S05W13AC1	342330	913007	211.00	2/14/2005	106.20	104.80	9/14/2005	104.71	-0.09
Arkansas	04S04W02ABB1	3423132	912423.69	200.00	2/14/2005	108.50	91.50	9/14/2005	88.50	-3.00
Arkansas	04S04W35ABC1	341835	912437	197.00	4/25/2005	105.50	91.50	10/17/2005	91.00	-0.50
Arkansas	05S03W16ABB1	34155'	9120'5	196.00	2/24/2005	113.90	82.10	9/14/2005	76.85	-5.25
Arkansas	06S03W10EBA1	341135.97	911553.82	184.00	2/24/2005	81.50	102.50	9/14/2005	94.80	-7.70
Arkansas	06S03W32DDA	340740	912115	180.00	2/22/2005	56.38	123.62	9/14/2005	119.74	-4.88
								Avg. Change:		**-3.38**
Ashley	15S4W23DBC1	332245	912852	126.00	2/21/2005	31.30	96.70	9/14/2005	84.92	-11.78
Ashley	16S04W10ABB	331902	913002	130.00	2/16/2005	26.40	103.60	9/14/2005	87.27	-16.33
Ashley	18S05W22CDA1	330712	913555	125.00	4/4/2005	16.11	108.89	10/18/2005	102.70	-6.19
Ashley	19S05W22CCD1	330139	913915	107.00	4/4/2005	14.60	92.40	10/18/2005	83.00	-9.40
Ashley	19S05W08ACA1	330405	913815	111.00	4/4/2005	12.20	98.80	10/18/2005	91.50	-7.20
Ashley	19S05W15AEB1	330323	913716	116.00	4/4/2005	20.30	95.70	10/18/2005	90.80	-4.90
								Avg. Change:		**-9.30**
Chicot	13S03W34EAA1	33310.24	912508.38	103.00	2/16/2005	39.49	93.51	9/14/2005	90.84	-2.67
Chicot	13S03W27AAA1	333253	9123'0	136.00	3/29/2005	43.00	95.00	10/17/2005	92.00	-3.00
Chicot	14S02W18BEA1	332959	912038	130.00	3/29/2005	33.00	97.00	10/12/2005	97.00	0.00
Chicot	14S02W09EDD1	332959	911729	133.00	3/29/2005	28.00	105.00	10/17/2005	103.00	-2.00
Chicot	15S03W18BEB1	332226	911919.63	125.00	3/29/2005	35.00	90.00	10/17/2005	95.00	5.00
Chicot	15S02W20CDC1	332226.59	911919.63	170.00	2/10/2005	28.20	81.80	10/12/2005	73.00	-8.80
Chicot	17S03W18CEC1	331257	912736	177.00	3/30/2005	31.00	86.00	10/18/2005	83.00	-3.00
Chicot	18S01W33BCA1	330543	911245	175.00	3/30/2005	10.00	105.00	10/12/2005	98.00	-7.00
								Avg. Change:		**-2.68**
Clay	18N03E03DAB1	361323.23	901153.03	257.00	3/23/2005	7.30	249.70	9/13/2005	246.35	-3.35
Clay	19N03E27DAA1	361459	901140	251.00	3/22/2005	3.97	257.03	9/13/2005	251.40	-5.63
Clay	21N03E15CBC1	362738	904453	292.00	4/27/2005	12.00	280.00	10/27/2005	277.00	-3.00
Clay	21N04E09DEC1	362828	903853	291.00	4/27/2005	10.80	280.20	10/27/2005	277.00	-3.20
Clay	20N04E03AA1	362425	903725	290.00	4/27/2005	15.80	274.20	10/27/2005	271.00	-3.20
Clay	20N06E28CCD1	362005	902530	290.00	4/27/2005	26.00	264.00	10/27/2005	269.00	5.00
Clay	20N05E09BE1	362327	902520	290.00	4/27/2005	19.60	270.40	10/27/2005	278.00	7.60
Clay	21N07E01DDC1	362335	901607	300.00	4/27/2005	18.50	281.50	10/26/2005	282.00	2.50

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	WL	Spring/Fall
					Measured	Water	Alt. Spring '05	Measured	Alt. Fall '05	05 Change
Clay	19N03E08DCA1	361729	901402	270.00	4/27/2005	7.70	262.30	10/26/2005	260.00	-2.30
Clay	19N07E25BCB1	361519	901700	258.00	4/27/2005	16.30	251.70	10/26/2005	247.00	-4.70
Clay	20N09E09ABC1	362306	900542	279.00	4/27/2005	7.50	271.50	10/26/2005	265.00	-6.50
Clay	20N05E22CAD1	362116	903102	290.00	4/27/2005	27.10	262.90	10/26/2005	260.00	-2.90
Clay	21N08E03CC1	362842	901211	308.00	4/27/2005	18.80	289.20	10/26/2005	280.00	-9.20
Clay	19N06E18DBC1	361642	902815	297.00	4/27/2005	32.20	264.80	10/27/2005	257.00	-7.80
Clay	20N08E22BDC1	362111	901220	275.00	4/27/2005	7.90	267.10	10/26/2005	262.00	-5.10
Clay	18N08E11EAA1	361253	901117	259.00	4/27/2005	6.60	252.40	10/26/2005	249.00	-3.40
Clay	19N05E15BBD1	361716	903152	289.00	4/27/2005	32.60	256.40	10/27/2005	264.00	7.60
Clay	21N06E11EEB1	362839	902421	296.00	4/27/2005	11.70	284.30	10/27/2005	278.00	-6.30
Clay	21N09E31BDA1	362447	900851	294.00	4/27/2005	5.70	288.30	10/26/2005	283.00	-5.30
Clay	20N05E30CAC1	362003	903454	283.00	4/27/2005	16.80	266.20	10/26/2005	263.00	-3.20
Clay	19N04E15BAA1	361649	904125	279.00	4/27/2005	21.00	258.00	10/26/2005	253.00	-5.00
Clay	21N05E22BAB1	362704	903132	288.00	4/27/2005	6.50	281.50	10/26/2005	276.00	-5.50
Clay	20N09E33DDC1	361904	900828	270.00	4/27/2005	6.60	263.40	10/26/2005	258.00	-5.40
								Avg. Change:		**-3.19**
Craighead	13N01E23DAA1	3544354	90565'.69	242.00	4/5/2005	69.50	172.50	9/13/2005	'69.90	-2.60
Craighead	14N02E27AA	354518	905125	255.00	3/30/2005	76.35	178.35	9/13/2005	'74.82	-3.83
Craighead	15N03E15ADA1	355502.21	904302.05	252.00	4/5/2005	46.00	214.00	9/13/2005	212.00	-2.00
Craighead	14N07E07BCB1	355124	902323	230.00	3/7/2005	4.00	226.00	10/5/2005	219.60	-6.40
Craighead	15N07E21DAB1	355444	902043	236.00	3/7/2005	6.00	230.00	10/5/2005	227.80	-2.20
Craighead	15N07E15DAB1	355622	901934	235.00	3/7/2005	7.70	227.30	10/5/2005	223.10	-4.20
Craighead	13N05E06DCC1	354637	903547	229.00	3/2/2005	18.50	210.50	10/5/2005	206.50	-4.00
Craighead	15N05E04BAD1	355744	902706	239.00	3/2/2005	10.50	228.50	10/5/2005	222.90	-5.60
Craighead	13N04E15DBA1	354521	903857	230.00	3/2/2005	24.00	206.00	10/7/2005	204.10	-1.90
Craighead	14N02E15DD1	354852	905044	255.00	3/8/2005	72.00	183.00	10/5/2005	'77.60	-5.40
Craighead	15N02E12DCB1	355626	904930	250.00	3/7/2005	32.00	218.00	10/5/2005	214.10	-3.90
Craighead	14N01E10EAB1	355204	905928	246.00	3/8/2005	50.50	195.50	10/5/2005	'82.50	-13.00
Craighead	13N02E02AAB1	354731	905032	251.00	3/8/2005	86.30	164.70	10/5/2005	158.10	-6.60
Craighead	13N01E03AAA1	354739	905753	240.00	3/8/2005	52.40	187.60	10/5/2005	'82.90	-4.70
Craighead	14N01E31CCA1	354817	910121	251.00	3/8/2005	60.00	191.00	10/5/2005	190.10	-0.90
Craighead	13N03E23CDA1	354419	904434	249.00	3/8/2005	78.20	170.80	10/7/2005	169.10	-1.70
Craighead	13N07E35BCD1	354233	901837	221.00	3/7/2005	11.10	209.90	10/5/2005	207.20	-2.70
Craighead	13N04E26BCC1	354340	903829	225.00	3/2/2005	25.60	199.40	10/7/2005	'96.00	-3.40
Craighead	14N01E03ACB1	355246	905816	249.00	3/8/2005	49.50	199.50	10/5/2005	'96.60	-2.90
Craighead	13N02E03AAA1	354733	905129	250.00	3/8/2005	84.50	165.50	10/5/2005	'62.00	-3.50

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Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring '05	Date Measured	WL Alt. Fall '05	Spring/Fall 05 Change
Craighead	13N01E21CAB1	354434	905945	240.00	3/8/2005	60.70	179.30	10/6/2005	175.40	-3.90
Craighead	13N03E28CDB1	354322	904652	250.00	3/8/2005	101.70	148.30	10/7/2005	143.00	-5.30
Craighead	13N01E26BC1	353932	905800	245.00	3/8/2005	64.50	180.50	10/6/2005	179.00	-1.50
Craighead	15N07E35DCB1	355241	901831	231.00	3/7/2005	11.00	220.00	10/5/2005	217.00	-3.00
Craighead	14N06E06BAA1	355234	902934	240.00	3/2/2005	19.20	220.80	10/5/2005	215.50	-5.30
Craighead	15N05E22BAB1	355513	903241	260.00	3/2/2005	34.50	225.50	10/5/2005	225.00	-0.50
Craighead	13N05E02CCC1	354548	903202	230.00	3/8/2005	11.90	218.10	10/5/2005	216.60	-1.50
Craighead	14N07E14DDC1	354956	901831	230.00	3/7/2005	3.50	226.50	10/5/2005	216.30	-10.20
Craighead	13N07E05ABB1	354716	902158	225.00	3/7/2005	5.50	219.50	10/5/2005	212.00	-7.50
Craighead	13N05E24BAC1	354451	903045	225.00	3/2/2005	8.30	216.70	10/5/2005	211.60	-5.10
Craighead	15N03E31ADA1	355313	904805	270.00	3/7/2005	58.70	211.30	10/6/2005	208.60	-2.70
Craighead	13N03E10BDB1	354525	904546	265.00	3/8/2005	81.90	183.10	10/7/2005	181.20	-1.90
Craighead	13N07E02CAB1	354542	901901	226.00	3/7/2005	4.70	221.30	10/5/2005	215.30	-6.00
Craighead	13N03E35AAA1	354308	904401	249.00	3/7/2005	91.20	157.80	10/7/2005	156.00	-1.80
Craighead	13N06E21ADI	354421	902743	220.00	3/7/2005	12.00	208.00	10/5/2005	207.80	-0.20
								Avg. Change:		**-3.94**
Crittenden	08N07E10CCC2	358828.34	901811.95	221.00	4/4/2005	28.40	192.60	9/14/2005	191.90	-0.70
Crittenden	09N07E20DCC1	352256	902158	215.00	3/29/2005	28.00	187.00	9/14/2005	185.00	-2.00
Crittenden	08N07E32DAA1	351618	902146	215.00	4/27/2005	28.80	186.20	10/19/2005	183.60	-2.60
Crittenden	09N08E09CCB1	352501	901608	214.00	4/27/2005	23.40	190.60	10/20/2005	186.80	-3.80
Crittenden	06N07E13BAA1	350849.53	901807.57	205.00	4/19/2005	17.40	187.60	10/20/2005	182.00	-5.60
Crittenden	08N06E01DCC1	352021	902408	215.00	4/27/2005	31.90	183.10	10/20/2005	182.50	-0.60
Crittenden	05N07E34CDD1	350010	902028	205.00	4/27/2005	9.60	195.40	10/19/2005	183.40	-12.00
Crittenden	09N07E02CCB1	352537	901905	225.00	4/27/2005	32.80	192.20	10/20/2005	189.00	-3.20
Crittenden	07N08E24CCC1	351227	902445	213.00	4/27/2005	35.40	177.60	10/20/2005	176.40	-1.20
Crittenden	09N07E31BAB1	352159.85	902326.57	221.00	3/29/2005	32.30	188.70	10/20/2005	189.00	0.30
Crittenden	08N08E06AEB1	352103	901644	223.00	4/27/2005	31.90	191.10	10/20/2005	191.30	0.20
								Avg. Change:		**-2.83**
Cross	07N01E05CDA1	351517.52	910045.05	217.00	2/24/2005	72.50	144.50	9/14/2005	141.60	-2.90
Cross	07N02E02CD	351510	905113	225.00	2/24/2005	80.57	144.43	9/14/2005	142.33	-2.10
Cross	07N02E29DDC1	351136.09	905409.17	220.00	2/24/2005	71.00	149.00	9/14/2005	147.00	-2.00
Cross	08N04E27AEB1	351745	903916	205.00	4/20/2005	28.00	177.00	10/19/2005	178.00	1.00
Cross	07N03E05ADA1	351548	904738.6	254.00	2/24/2005	110.80	143.20	10/14/2005	151.00	7.80
Cross	07N01E33BBA1	351134	910010	215.00	4/19/2005	72.00	143.00	10/14/2005	145.00	2.00

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Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	wL	Spring/Fall
					Measured	Water	Alt. Spring 05	Measured	Alt. Fall 05	05 Change
Cross	07N05E25ABA1	351228.87	903044.79	205.00	2/23/2005	36.10	168.90	10/27/2005	166.00	-2.90
Cross	09N04E03DBE1	352614	903918	215.00	4/18/2005	28.00	187.00	10/18/2005	188.00	1.00
Cross	9N01E36AAB1	352155	905605	225.00	4/18/2005	82.00	143.00	10/13/2005	139.00	-4.00
Cross	09N05E32BCE1	352150.53	9035'2.11	210.00	2/23/2005	30.70	179.30	10/18/2005	178.00	-1.30
Cross	08N01E16DBB1	351955	905933	225.00	4/18/2005	87.00	138.00	10/14/2005	140.00	2.00
Cross	08NC2E17AAA1	351923	905354	225.00	4/13/2005	80.00	145.00	10/12/2005	136.00	-9.00
Cross	08NC2E12DCC1	351938	905002	230.00	4/14/2005	84.00	146.00	10/20/2005	14100	-5.00
Cross	09NC1E36AAB1	352155	905605	225.00	4/18/2005	82.00	143.00	10/13/2005	139.00	-4.00
Cross	07N02E23DDC1	351136.09	9054C9.17	220.00	2/24/2005	71.00	145.00	10/14/2005	148.00	-1.00
Cross	13N02E30CBB1	352243	905551	225.00	4/18/2005	86.00	139.00	10/13/2005	136.00	-3.00
Cross	07N02E02CD1	3515IC	905'13	225.00	2/24/2005	80.57	144.43	10/12/2005	143.00	-1.43
								Avg. Change:		**-1.46**
Desha	10S04W12BBB1	335048	912754	155.00	2/9/2005	31.50	123.50	9/14/2005	121.46	-2.04
Desha	10S04W19DAC1	334901	913233	160.00	2/28/2005	25.51	134.49	9/14/2005	133.15	-1.34
Desha	11S02W15BADI	334446	911635	148.00	3/23/2005	34.00	114.00	10/14/2005	112.00	-2.00
Desha	09S01W15CBB1	335501	911055	152.00	3/23/2005	35.00	117.00	10/14/2005	115.00	-2.00
Desha	10S02w11ADD1	335045	91'517	146.00	3/23/2005	27.00	119.00	10/14/2005	117.00	-2.00
Desha	09S02w17CBC1	355502	911920	153.00	3/23/2005	31.00	122.00	10/14/2005	12100	-1.00
Desha	09S04W02CCA1	335823	912621	160.00	3/23/2005	35.00	125.00	10/14/2005	129.00	4.00
Desha	09S01W03BCA1	335608	911234	156.00	3/23/2005	18.00	138.00	10/14/2005	130.00	-8.00
Desha	12S01W23DBC1	333803	91'019	146.00	3/23/2005	16.00	130.00	10/14/2005	115.00	-15.00
Desha	13S02W05CDC1	333535	911938	146.00	3/23/2005	44.00	102.00	10/14/2005	100.00	-2.00
Desha	13S02W32DBC1	333126	91'917	135.00	3/23/2005	38.00	97.00	10/14/2005	91.00	-6.00
Desha	10S03w11CABI	333503	912241	142.00	3/23/2005	50.00	92.00	10/14/2005	90.00	-2.00
Desha	11S03W21ABBI	334416	912412	139.00	3/23/2005	31.00	108.00	10/14/2005	107.00	-1.00
Desha	07S01E19ABA1	340428	91C303	154.00	4/28/2005	10.60	143.40	10/26/2005	132.00	-11.40
								Avg. Change:		**-3.70**
Drew	1'S04w35CC1	334144	912842	154.00	2/21/2005	24.56	129.44	9/14/2005	129.54	0.10
Drew	13S04W36DCC	333110	912757	140.00	2/21/2005	24.05	115.95	9/15/2005	114.44	-1.51
Drew	13S05W21DAA1	333324	914253	207.00	4/18/2005	73.00	134.00	10/15/2005	129.00	-5.00
Drew	12S04W25DBE1	333739	912739	149.00	2/21/2005	27.60	121.40	10/15/2005	117.00	-4.40
Drew	13S04W09ACC1	333512	913034	145.00	4/18/2005	18.00	127.00	10/15/2005	127.00	0.00
Drew	14S04W05CBA1	333047	913218	131.00	4/18/2005	12.00	119.00	10/15/2005	112.00	-7.00
Drew	14S04W03CBA1	333039	912944	140.00	2/21/2005	20.85	119.15	10/15/2005	113.00	-6.15

Spring/Fall WL Changes on

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County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring 05	Date Measured	WL Alt. Fall '05	Spring/Fall 05 Change
Drew	14S04w05CBC1	333042	913226	131.00	4/18/2005	11.00	120.00	10/18/2005	113.00	-7.00
								Avg. Change:		**-3.87**
Greene	16N06E28ABB1	355938.31	902657.01	251.00	3/10/2005	22.40	228.60	9/13/2005	223.00	-5.60
Greene	18N07E20BBA1	361110.37	902103.23	257.00	3/10/2005	5.50	251.50	9/13/2005	241.50	-10.00
Greene	17N07E29CBC1	360419	902201	245.00	4/14/2005	3.30	241.70	10/11/2005	235.90	-5.80
Greene	17N07E03CCC1	360744	901951	246.00	4/14/2005	5.90	240.10	10/11/2005	237.50	-2.60
Greene	16N03E29ACC1	355926	904722	257.00	4/14/2005	29.40	227.60	10/7/2005	223.70	-3.90
Greene	18N07E17BAB1	361203	902105	262.00	4/14/2005	6.60	255.40	10/11/2005	236.30	-19.10
Greene	15N06E21BAA1	360001	902705	249.00	4/14/2005	23.80	225.20	10/7/2005	218.60	-6.60
Greene	19N05E34AAD1	361437	903102	282.00	4/14/2005	31.50	250.50	10/7/2005	245.90	-4.60
Greene	16N06E09ABB1	360215	902651	261.00	4/14/2005	48.80	212.20	10/7/2005	215.80	3.60
Greene	17N03E02DCC1	360806	904352	267.00	4/14/2005	31.30	235.70	10/7/2005	228.20	-7.50
Greene	16N03E05BBB1	360316	904750	257.00	4/14/2005	28.90	228.10	10/7/2005	224.40	-3.70
Greene	15N03E16DDD1	360049	904547	258.00	4/14/2005	31.60	226.40	10/7/2005	223.90	-2.50
Greene	17N04E07DDA1	360712	904129	271.00	4/14/2005	36.90	234.10	10/7/2005	231.30	-2.80
Greene	18N03E24ACA1	361119	904216	271.00	4/14/2005	35.20	235.80	10/7/2005	239.40	3.60
Greene	18N04E04AAC1	361356	903954	273.00	4/14/2005	32.00	241.00	10/7/2005	239.50	-1.50
Greene	19N03E33DDD1	361413	904516	276.00	4/14/2005	34.50	241.50	10/7/2005	238.70	-2.80
Greene	18N06E23ACB1	361056	902357	277.00	4/14/2005	12.60	264.40	10/11/2005	257.20	-7.20
								Avg. Change:		**-4.64**
Independence	14N03w14CBB1	355101	911703	235.00	3/14/2005	0.50	234.50	10/12/2005	226.80	-7.70
Independence	14N03w12CCB1	355205	911559	237.00	4/6/2005	1.90	235.10	10/12/2005	211.70	-23.40
Independence	17N04w02ABB1	353650	912416	227.00	4/6/2005	9.00	218.00	10/12/2005	197.50	-20.50
								Avg. Change:		**-17.20**
Jackson	09N02w32CBB1	352151.79	911047.79	220.00	3/17/2005	29.00	191.00	9/15/2005	188.60	-2.40
Jackson	10N01w04DCB1	353114	910602	225.00	3/16/2005	52.00	173.00	9/15/2005	167.00	-6.00
Jackson	11N01W10DA	353358	910428	231.00	3/17/2005	51.37	179.63	9/15/2005	175.67	-3.96
Jackson	13N03w15DCB1	354540	911718	238.00	4/22/2005	12.90	225.10	9/12/2005	217.90	-7.20
Jackson	14N01w33CCD1	354759	910510	245.00	3/17/2005	38.80	206.20	9/27/2005	204.50	-1.70
Jackson	14N01w26BCB1	354922	910407	245.00	4/20/2005	42.70	202.30	9/27/2005	202.30	-0.00
Jackson	14N01w08AAA1	355216	910623	252.00	3/17/2005	33.30	218.70	9/27/2005	217.60	-1.10
Jackson	14N01w19BBB1	355032	910823	246.00	3/17/2005	29.80	216.20	9/29/2005	215.70	-0.50
Jackson	14N02w22BBC1	355026	911145	250.00	3/17/2005	25.80	224.20	9/20/2005	214.00	-10.20

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring '05	Date Measured	WL Alt. Fall '05	Spring/Fall 05 Change
Jackson	11N02V23ADC1	353357	911002	221.00	4/5/2005	25.00	196.00	9/13/2005	193.80	-2.20
Jackson	10N01V35ACD1	353132	910702	227.00	4/5/2005	45.90	181.10	9/13/2005	176.50	-4.60
Jackson	09N01w15DCD1	352357	910433	220.00	4/5/2005	58.70	161.30	9/13/2005	157.80	-3.50
Jackson	09N02w32EBB1	352215	911044	220.00	4/20/2005	29.60	190.40	9/13/2005	187.10	-3.30
Jackson	10N01V10ABA1	353055	910445	220.00	4/20/2005	56.60	163.40	9/20/2005	160.60	-2.80
Jackson	11N01V25BDA1	353322	910228	227.00	4/20/2005	65.60	161.40	9/20/2005	157.60	-3.80
Jackson	12N01V30CCC2	353812	910321	227.00	3/17/2005	31.50	195.50	9/20/2005	192.00	-3.50
Jackson	13N03V33ABB1	354337	911532	241.00	3/17/2005	13.20	227.80	9/12/2005	217.00	-10.80
Jackson	09N01V33BAC1	352258	910913	216.00	4/5/2005	42.50	173.50	9/12/2005	171.90	-3.60
Jackson	12N01V36CEC1	353724	910917	236.00	4/20/2005	51.70	184.30	9/27/2005	179.00	-5.30
Jackson	12N01w11BCB1	354127	910416	233.00	3/17/2005	37.40	195.60	9/27/2005	189.10	-6.50
Jackson	11N03V35AEA1	353722	912012	224.00	4/21/2005	11.50	212.50	9/20/2005	197.60	-14.90
Jackson	13N02V34CBB1	354336	911151	240.00	3/17/2005	18.00	222.00	9/20/2005	218.00	-4.00
								Avg. Change:		**-4.62**
Jefferson	03S09w24EBC1	342820.37	914953.19	202.00	3/3/2005	49.00	153.00	9/21/2005	150.90	-2.10
Jefferson	04S07w08CBB1	342226	914745	195.00	3/3/2005	49.40	145.60	9/21/2005	146.15	0.55
Jefferson	04S08w13DCB1	342122.85	914926.45	204.00	4/5/2005	40.80	163.20	9/21/2005	159.90	-3.30
Jefferson	03S10V35BCA2	342537	920241	215.00	4/22/2005	15.50	199.50	10/24/2005	185.40	-14.10
Jefferson	03S10V26BEB2	342427	920249	215.00	4/22/2005	11.50	203.50	10/24/2005	197.10	-6.40
Jefferson	04S09w32CDA1	341859	920008	212.00	4/22/2005	18.50	193.50	10/24/2005	190.00	-3.50
Jefferson	03S09w22AAA1	342839.83	915726.40	216.00	4/22/2005	42.90	175.10	10/24/2005	174.80	-0.30
Jefferson	03S09w14BCD1	342712	915712	224.00	4/22/2005	62.20	161.80	10/24/2005	115.50	-46.30
Jefferson	03S09w36ACC1	342428	915555	214.00	4/22/2005	39.00	175.00	10/24/2005	195.10	20.10
Jefferson	04S09w02CBD1	342325	915717	212.00	4/22/2005	32.50	179.50	10/24/2005	178.60	-0.90
Jefferson	04S07w35CDB1	341836	914347	185.00	4/22/2005	25.80	159.20	10/24/2005	156.50	-2.70
Jefferson	03S09w28CCC1	342452	915303	195.00	4/21/2005	11.50	183.50	10/24/2005	178.50	-5.00
								Avg. Change:		**-5.33**
Lawrence	16N02E35AAA1	360439	905304	256.00	4/7/2005	48.20	207.80	10/18/2005	206.00	-1.80
Lawrence	16N02E34CEB1	355831	905208	255.00	4/7/2005	44.80	210.20	10/18/2005	208.10	-2.10
Lawrence	15N01E11ADD1	355857	905538	255.00	4/7/2005	44.00	211.00	10/18/2005	208.90	-2.10
Lawrence	17N02E25CED1	360423	904948	265.00	4/8/2005	37.40	227.60	10/18/2005	225.50	-2.10
Lawrence	17N02E19CDC1	360515.31	905449.43	265.00	4/8/2005	38.20	226.80	10/18/2005	225.00	-1.80
Lawrence	17N02E21ABC1	360554	905225	268.00	4/8/2005	42.00	226.00	10/18/2005	223.60	-2.40
Lawrence	17N02E04DCA1	360758	905224	270.00	4/8/2005	39.40	230.60	10/18/2005	227.60	-3.00

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	WL	Spring/Fall
					Measured	Water	Alt. Spring '05	Measured	Alt. Fall '05	05 Change
Lawrence	17N01E32EBA1	383901	905707	260.00	4/6/2005	12.90	247.10	10/6/2005	244.90	-2.20
Lawrence	17N01E27AAA1	383519	905732	270.00	4/12/2005	34.50	235.50	10/6/2005	235.50	0.00
Lawrence	16N01W30DDC1	385936.93	910723.26	255.00	4/13/2005	21.50	233.50	10/6/2005	230.60	-2.90
Lawrence	16N02E19ACA1	383931	905442	260.00	4/14/2005	40.00	220.00	10/6/2005	220.00	0.00
Lawrence	16N02E09AAC1	383219	905212	261.00	4/15/2005	38.20	222.80	10/6/2005	220.90	-1.90
								Avg. Change:		**-1.86**
Lee	02N02E07ACA1	344752	905602	200.00	2/15/2005	45.70	154.30	9/13/2005	153.33	-0.97
Lee	02N02E21ABC1	344621.57	905358.16	200.00	2/15/2005	36.85	163.15	9/13/2005	162.62	-0.53
Lee	01N02E33CBB1	343858	905434	188.00	4/20/2005	9.00	177.00	10/21/2005	161.00	-16.00
Lee	01N02E33CCB1	343851	905433	185.00	4/20/2005	8.00	177.00	10/21/2005	161.50	-15.50
Lee	01N01E03CCC1	344215	910054	182.00	4/20/2005	26.50	155.50	10/21/2005	134.00	-21.50
Lee	03N01E32BCC1	344951	910150	200.00	4/20/2005	62.00	138.00	10/21/2005	134.00	-4.00
Lee	03N02E12CDC1	345239	905053	210.00	4/20/2005	44.00	166.00	10/21/2005	163.00	-3.00
Lee	01N02E22CBA1	344056	905316	200.00	4/20/2005	18.50	181.50	10/21/2005	163.50	-18.00
Lee	02N04E03ABD1	344855	903954	192.00	4/25/2005	21.00	171.00	10/26/2005	167.00	-4.00
Lee	03N05E26ADC1	345020	903216	185.00	4/25/2005	4.00	181.00	10/26/2005	172.00	-9.00
Lee	01N01E24CBD1	344033	905729	185.00	4/20/2005	9.30	175.70	10/21/2005	156.70	-19.00
Lee	01N02E11BAB1	344255	905208	202.00	4/20/2005	17.00	185.00	10/21/2005	169.00	-16.00
Lee	01N02E12ABB1	344254	905040	206.00	4/20/2005	18.00	188.00	10/21/2005	177.00	-11.00
Lee	03N03E05CDD1	345327	904807	204.00	5/3/2005	45.00	159.00	10/22/2005	147.00	-12.00
Lee	03N04E07CBB1	345245	904312	200.00	4/19/2005	25.00	175.00	10/26/2005	169.00	-6.00
Lee	02N03E29CAD1	344500	904846	215.00	5/3/2005	30.00	185.00	10/26/2005	167.50	-17.50
Lee	03N03E18DAB1	345206	904919	198.00	5/3/2005	28.00	170.00	10/21/2005	165.00	-5.00
Lee	01N02E01ADD1	344330	905016	207.00	5/3/2005	17.00	190.00	10/21/2005	170.00	-20.00
Lee	02N01W34DDC1	344410	910520	180.00	5/3/2005	47.00	133.00	10/21/2005	120.00	-13.00
Lee	01N01E04ABB1	344358	910015	175.00	5/3/2005	20.00	155.00	10/21/2005	148.70	-6.30
Lee	02N01E21EAA1	344633	910005	185.00	4/22/2005	39.00	146.00	10/21/2005	136.70	-9.30
Lee	02N02E22BBB1	344628	905327	200.00	5/3/2005	22.00	178.00	10/27/2005	169.00	-9.00
Lee	01N01E21CCC1	344030	910055	209.00	4/22/2005	52.00	157.00	10/21/2005	150.00	-7.00
Lee	01N03E27ADC1	343952	904605	204.00	5/3/2005	3.00	201.00	10/6/2005	181.00	-20.00
Lee	02N03E05DDD1	344723	904707	220.00	4/22/2005	42.00	178.00	10/21/2005	166.00	-12.00
								Avg. Change:		**-11.02**
Lincoln	09S05W14ABC1	335550.02	913439.08	172.50	2/15/2005	37.20	135.30	9/14/2005	134.03	-1.27
Lincoln	10S05W05CB	335529	913632	170.00	2/15/2005	25.30	146.70	9/15/2005	145.12	-1.58

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	WL	Spring/Fall
					Measured	Water	Alt. Spring '05	Measured	Alt. Fall '05	05 Change
Leflore	07S06W03CCA2	340823	914114	190.00	4/15/2005	18.00	172.00	10/18/2005	167.00	-5.00
Leflore	08S04W06AEDI	340341	913116	171.00	4/15/2005	13.00	158.00	10/18/2005	147.00	-11.00
Leflore	08S05W12DBA1	340229	913222	171.00	4/15/2005	21.00	150.00	10/18/2005	146.00	-4.00
Leflore	08S05W21DCD1	340027	913533	159.00	4/15/2005	25.00	134.00	10/18/2005	132.00	-2.00
Leflore	09S05W29AECI	343021	913044	175.00	4/15/2005	45.00	131.00	10/18/2005	130.00	-1.00
Leflore	09S05W32DCCI	335843	913644	172.00	4/15/2005	44.00	128.00	10/18/2005	127.00	-1.00
Leflore	09S04W06CEBI	335721	913252	163.00	4/15/2005	39.00	124.00	10/18/2005	121.00	-3.00
Leflore	09S06W24DAAI	335452	913954	177.00	4/15/2005	33.00	144.00	10/18/2005	143.00	-1.00
Leflore	09S06W04BCDI	335759	914035	179.00	4/15/2005	37.00	141.00	10/18/2005	136.00	-5.00
Leflore	07S07W36CEDI	340411	914529	193.00	4/15/2005	37.00	156.00	10/18/2005	143.00	-3.00
								Avg. Change:		**-3.24**
Lonoke	01S10W11CCB1	343839	920337	235.00	2/23/2005	30.17	204.83	9/15/2005	199.01	-5.82
Lonoke	02N07W16BABI	344815.2	914539.5	240.00	3/1/2005	137.40	102.60	9/14/2005	89.40	-13.20
Lonoke	02N08W34BA1	344543	915106	230.00	2/25/2005	127.22	102.78	9/14/2005	97.56	-5.22
Lonoke	02S08W06AABI	343430	915447	221.00	2/23/2005	66.69	154.31	9/15/2005	152.27	-2.04
Lonoke	02S08W28CDC	343008	915207	211.00	2/23/2005	59.68	151.32	9/15/2005	149.25	-2.07
Lonoke	01N08W33DDA1	344411	915050	229.00	4/19/2005	144.40	84.60	10/14/2005	84.20	-0.40
Lonoke	02N08W23CABI	344659	915116	229.00	4/19/2005	143.40	85.60	10/14/2005	86.20	0.60
Lonoke	02N07W07DAAI	344845	914707	232.00	4/19/2005	143.60	88.40	10/14/2005	89.40	1.00
Lonoke	01N09W07DAA1	344330	900023	240.00	4/19/2005	47.80	192.20	10/14/2005	189.80	-2.40
Lonoke	01N10W15CDA1	344238	920414	240.00	4/19/2005	22.40	217.60	10/14/2005	215.00	-2.60
Lonoke	01S09W36CCC1	343435.31	915618.98	220.00	2/23/2005	61.94	158.06	10/14/2005	156.00	-2.06
Lonoke	01S08W32BBB1	343501	914056	201.00	4/19/2005	81.30	119.70	10/14/2005	118.50	-1.20
Lonoke	01S09W32DDD1	343857	915623	230.00	4/19/2005	83.30	146.70	10/14/2005	144.00	-2.70
Lonoke	02N10W15ACD1	344807	920352	242.00	4/19/2005	30.60	211.40	10/14/2005	208.70	-2.70
Lonoke	02S09W34AB1	343008	915652	217.00	4/19/2005	54.80	162.20	10/14/2005	162.60	0.40
Lonoke	02S07W05CDCI	343328	914715	205.00	4/19/2005	70.50	134.50	10/14/2005	132.50	-2.00
Lonoke	02S07W20ACDI	343112	914655	201.00	4/19/2005	59.60	141.40	10/14/2005	121.00	-20.40
								Avg. Change:		**-3.11**
Mississippi	10N09E09ACD1	352949.05	900925.68	230.00	3/28/2005	12.70	217.30	9/14/2005	214.50	-2.80
Mississippi	11N09E34BBB1	353217.73	900715.17	235.00	3/9/2005	12.90	222.10	9/14/2005	217.90	-4.20
Mississippi	14N11E33CAA1	354727	895503	240.00	4/1/2005	8.50	231.50	10/7/2005	220.00	-11.50
Mississippi	15N12E01BCD1	355704	894531	258.00	4/1/2005	4.00	254.00	10/7/2005	247.00	-7.00
Mississippi	15N10E28BBC1	355908.13	900156.03	238.00	4/5/2005	8.55	229.45	10/7/2005	222.50	-6.95

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County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring '05	Date Measured	WL Alt. Fall '05	Spring/Fall 05 Change
Mississippi	15N10E21AEC1	355447	900135	240.00	4/14/2005	8.50	231.50	10/7/2005	227.00	-4.50
Mississippi	13N08E24ABB1	354428	901112	230.00	4/14/2005	15.00	214.00	10/7/2005	217.00	3.00
Mississippi	12N10E04CAA1	354124	900136	235.00	3/7/2005	8.00	227.00	10/7/2005	215.00	-12.00
Mississippi	12N10E21DEA1	353842	900122	236.00	3/7/2005	8.00	228.00	10/7/2005	218.00	-10.00
Mississippi	11N10E03BCB1	353530	900202	236.00	3/7/2005	14.00	222.00	10/7/2005	220.00	-2.00
Mississippi	10N08E21ABA1	352852	901411	224.00	3/7/2005	25.00	199.00	10/7/2005	195.00	-4.00
Mississippi	10N08E21EDC1	352830	901407	224.00	3/7/2005	24.00	200.00	10/7/2005	194.40	-5.60
Mississippi	12N08E28DDB1	353707	901406	225.00	3/7/2005	12.00	213.00	10/7/2005	202.00	-11.00
Mississippi	12N09E12ABC1	354054	900449	232.00	3/7/2005	9.00	223.00	10/7/2005	202.00	-21.00
Mississippi	12N10E07ECD1	354006	900434	234.00	3/7/2005	11.00	223.00	10/7/2005	205.50	-17.50
Mississippi	14N08E20DAA1	354321	901458	225.00	4/14/2005	10.00	215.00	10/7/2005	218.00	3.00
Mississippi	14N08E28DCC1	354803	901235	230.00	3/7/2005	4.00	226.00	10/7/2005	223.00	-3.00
Mississippi	14N11E17CDE1	354955	895639	240.00	4/14/2005	3.50	236.50	10/7/2005	229.00	-7.50
								Avg. Change:		**-6.92**
Monroe	01N01W15CBD1	344139	910542	185.00	3/22/2005	46.94	138.06	9/13/2005	135.31	-2.75
Monroe	01N02W12CBC1	344242.3	911031.9	182.00	3/22/2005	37.08	144.92	9/13/2005	142.09	-2.83
Monroe	01S01W13CDD1	343810.94	910340.54	178.00	3/22/2005	17.80	160.20	9/13/2005	177.00	16.80
Monroe	04N02W05BBB1	345957	911311	188.00	4/15/2005	11.00	177.00	10/7/2005	171.00	-6.00
Monroe	04N02W01BCC1	345929	911004	175.00	4/15/2005	38.00	137.00	10/7/2005	135.00	-2.00
Monroe	02N01W15ADD1	344624	910814	188.00	4/13/2005	52.00	136.00	10/12/2005	132.00	-4.00
Monroe	01S01W16CE	343815	910532	175.00	4/13/2005	22.00	153.00	10/13/2005	157.00	4.00
Monroe	02S01W01BCD1	343305	910408	176.00	4/13/2005	18.00	158.00	10/13/2005	154.00	-4.00
Monroe	01S02W20BBB1	343612.7	911456.1	170.00	3/22/2005	7.00	163.00	10/13/2005	157.00	-6.00
Monroe	1N03W23EAC1	344124	911743	170.00	4/13/2005	10.50	159.50	10/13/2005	155.00	-4.50
Monroe	02N03W35BCA1	344455	911745	168.00	4/13/2005	28.00	140.00	10/12/2005	133.50	-6.50
Monroe	1S03W20DCD1	343626	912121	210.00	4/6/2005	77.00	133.00	10/7/2005	130.50	-2.50
								Avg. Change:		**-1.69**
Phillips	02S01E23CAC1	343004	905842	175.00	4/6/2005	13.50	161.50	9/14/2005	154.35	-7.15
Phillips	02S02E33DCA1	342912	905347	185.00	4/12/2005	14.00	171.00	9/14/2005	158.37	-12.63
Phillips	01S01E09CBB1	343718.73	905434.38	185.00	4/12/2005	7.20	177.80	10/24/2005	160.50	-17.30
Phillips	01S03E10ABB1	343741	904634	205.00	4/25/2005	8.60	196.40	10/24/2005	178.00	-18.40
Phillips	C1S03E02ADD1	343914	904511	200.00	4/25/2005	9.00	191.00	10/24/2005	176.60	-14.40
Phillips	C1S04E05DCD1	343802	904151	230.00	4/15/2005	41.37	188.63	10/24/2005	176.40	-12.23
Phillips	01S01E20CDB1	343529	910058	185.00	4/25/2005	18.00	167.00	10/24/2005	158.00	-9.00

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	WL	Spring/Fall
					Measured	Water	Alt. Spring '05	Measured	Alt. Fall '05	05 Change
Philips	01S03E20BDD1	343533	904846	210.00	4/25/2005	24.00	186.00	10/24/2005	168.00	-18.00
Philips	01S02E32BCC1	343350	905526	200.00	4/25/2005	36.00	164.00	10/24/2005	161.00	-3.00
Philips	02S02E33ACC1	342824	905412	177.00	4/25/2005	20.00	157.00	10/24/2005	146.40	-10.60
Philips	02S02E29CDD1	34290'	905444	180.00	4/25/2005	20.00	160.00	10/24/2005	147.40	-12.60
Philips	02S03E34ECD1	342828	904653	165.00	4/28/2005	12.50	152.40	10/24/2005	145.00	-7.40
Philips	02S04E27AAC1	34293'.57	904001.09	179.00	4/12/2005	4.90	174.10	10/24/2005	164.00	-10.10
Philips	03S04E02CAA1	342732	903518	176.00	4/12/2005	8.15	167.85	10/24/2005	159.00	-8.85
Philips	04S01E14CCD1	342014	905837	155.00	4/28/2005	9.00	146.00	10/26/2005	141.20	-4.80
Philips	04S02E01DBB1	342220	905053	163.00	4/28/2005	12.00	151.00	10/26/2005	147.40	-3.60
Philips	04S01E01AAD1	342238	905700	156.00	4/28/2005	15.00	141.00	10/26/2005	142.40	1.40
Philips	04S01E29CDC1	341844	910148	150.00	4/28/2005	4.00	146.00	10/26/2005	141.00	-5.00
								Avg. Change:		**-9.65**
Poinsett	11N01E17DDC1	353436.83	910013.21	230.00	4/8/2005	76.30	153.70	9/16/2005	146.80	-6.90
Poinsett	11N02E26AAB1	353350.31	905034.19	241.00	4/6/2005	105.50	135.50	9/16/2005	131.80	-3.70
Poinsett	12N07E25DC1	353740	901302	226.00	4/4/2005	14.32	211.68	9/16/2005	205.38	-6.30
Poinsett	11N06E34AB1	353224	902646	211.00	4/5/2005	12.22	198.78	9/16/2005	192.53	-6.25
Poinsett	12N01E22DAB1	353922	905809	235.00	4/19/2005	72.00	163.00	10/19/2005	160.00	-3.00
Poinsett	10N01E33ACB1	352746	905931	220.00	4/19/2005	76.00	144.00	10/13/2005	141.00	-3.00
Poinsett	12N03E04DAD1	354158.01	904600.16	247.00	4/27/2005	103.00	144.00	9/29/2005	143.00	-1.00
Poinsett	12N03E01CBD1	354154	904329	250.00	4/27/2005	92.00	158.00	9/29/2005	154.00	-4.00
Poinsett	12N02E25DCC1	353820	904944	245.00	4/27/2005	111.00	134.00	10/24/2005	134.00	0.00
Poinsett	11N02E30BBB1	353352	905540	239.00	4/6/2005	100.00	139.00	10/13/2005	135.00	-4.00
Poinsett	12N05E16AEA1	354039	903333	221.00	4/20/2005	6.00	215.00	9/29/2005	209.00	-6.00
Poinsett	11N04E36AEA1	35325'	903654	211.00	4/20/2005	15.00	196.00	9/28/2005	192.00	-4.00
Poinsett	10N04E35BBA1	352745	903631	215.00	4/20/2005	18.00	197.00	9/28/2005	194.00	-3.00
Poinsett	12N07E10BCC1	354042	902022	226.00	4/20/2005	6.00	220.00	10/7/2005	216.00	-4.00
Poinsett	11N01E34AAA1	353256	905759	229.00	4/6/2005	87.00	142.00	10/19/2005	140.00	-2.00
Poinsett	10N01E02AAA1	353205	905654	235.00	4/6/2005	97.00	138.00	10/13/2005	135.00	-3.00
Poinsett	12N04E08CDA1	354053	904112	250.00	4/27/2005	86.00	164.00	9/29/2005	161.00	-3.00
Poinsett	12N03E35DDA1	353735	904355	245.00	4/27/2005	101.00	144.00	10/24/2005	142.00	-2.00
Poinsett	11N03E17AAA1	353534	904713	243.00	4/19/2005	104.00	139.00	10/19/2005	137.00	-2.00
Poinsett	10N02E15CAA1	352939	905026	237.00	4/27/2005	102.00	135.00	10/13/2005	132.00	-3.00
Poinsett	10N03E19BCB1	352906	904021	239.00	4/27/2005	97.00	142.00	10/13/2005	140.00	-2.00
Poinsett	10N03E26BBD1	352817	904449	257.00	4/27/2005	114.00	143.00	10/24/2005	141.00	-2.00
Poinsett	10N03E13BCB1	35300'	904352	270.00	4/27/2005	129.00	141.00	10/13/2005	139.00	-2.00
Poinsett	11N04E13DDA1	353447	903631	210.00	4/20/2005	14.00	196.00	9/29/2005	192.00	-4.00

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	WL	Spring/Fall
					Measured	Water	Alt. Spring '05	Measured	Alt. Fall '05	05 Change
Poinsett:	11N05E28EDE1	353318	903155	213.00	4/20/2005	6.00	207.00	9/26/2005	200.00	-7.00
Poinsett:	11N07E28CBE1	353250	902125	218.00	4/20/2005	21.00	197.00	9/26/2005	194.00	-3.00
Poinsett:	10N07E28CBB1	352743	902128	215.00	4/20/2005	29.00	186.00	9/26/2005	184.00	-2.00
Poinsett:	10N01E32CBE1	352657	910053	222.00	4/19/2005	74.00	148.00	10/13/2005	147.00	-1.00
Poinsett:	11N02E34CBA1	353238	905222	240.00	4/18/2005	106.00	134.00	10/24/2005	130.00	-4.00
Poinsett:	12N02E34CCC1	353724	905230	245.00	4/18/2005	111.00	134.00	10/15/2005	133.00	-1.00
								Avg. Change:		**-3.27**
Prairie	01S06W12BAB1	343626	913813	228.00	3/7/2005	117.97	110.03	9/14/2005	108.49	-1.54
Prairie	02N05W21CB1	344649	913300	225.00	3/7/2005	107.57	117.43	9/14/2005	115.50	-1.93
Prairie	02N05W21ACB	344659	912937	225.00	3/7/2005	86.74	138.26	9/14/2005	131.30	-6.96
Prairie	02S05W14BEB1	343213.08	913728.52	231.00	3/7/2005	77.90	153.10	9/14/2005	152.27	-0.83
Prairie	02N05W21DAA1	344653	913827	225.00	3/7/2005	116.61	108.39	9/14/2005	119.10	8.71
Prairie	02N06W24CAA1	344651	913551	223.00	3/7/2005	117.74	105.26	9/14/2005	114.48	9.22
Prairie	05N05W28DDA1	350119	913228	191.00	5/18/2005	29.40	161.60	10/27/2005	142.10	-19.50
Prairie	01S04W28BEC1	343529	912650	208.00	5/6/2005	114.80	91.20	10/27/2005	88.90	-2.30
								Avg. Change:		**-1.89**
Pulaski	01S10W29CC1	343537.78	920707.66	239.00	4/19/2005	13.50	225.50	9/21/2005	220.68	-4.82
Pulaski	02S10W14DC1	343204.71	920033.75	225.00	4/19/2005	21.50	203.50	9/21/2005	205.10	1.60
Randolph	18N03E17CBE1	361204	905355	265.00	4/12/2005	23.00	242.00	10/13/2005	241.00	-1.00
Randolph	18N01E29AC1	361040	905820	265.00	4/12/2005	21.50	243.50	10/13/2005	241.50	-2.00
Randolph	19N02E09DCA1	361758	905158	267.00	3/23/2005	11.30	255.70	10/13/2005	248.00	-7.70
Randolph	19N03E33CCB1			285.00	4/6/2005	26.00	259.00	10/13/2005	257.50	-1.50
Randolph	19N02E22DAB1	361622	905049	268.00	4/6/2005	14.50	253.50	10/15/2005	252.00	-1.50
Randolph	20N02E21CDD1	362117	905107	270.00	4/6/2005	13.00	257.00	10/15/2005	257.50	0.50
Randolph	19N02E03DAD1	361336	905043	280.00	4/6/2005	54.50	225.50	10/15/2005	224.00	-1.50
Randolph	20N02E14DAB1	362232	904930	274.00	4/6/2005	12.00	262.00	10/13/2005	259.50	-2.50
Randolph	20N02E06DAD1	362410	905339	281.00	4/6/2005	20.00	261.00	10/13/2005	258.50	-2.50
Randolph	19N02E34BAB1	360933	905150	270.00	4/12/2005	31.00	239.00	10/15/2005	237.50	-1.50
Randolph	19N02E20BDA1	361125	905332	274.00	4/12/2005	42.00	232.00	10/13/2005	231.00	-1.00
Randolph	20N02E12BAA1	362352	904943	281.00	4/6/2005	7.00	274.00	10/15/2005	268.50	-5.50
								Avg. Change:		**-2.31**

Spring/Fall WL Changes on

Selected Alluvial Wells 2005

County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring '05	Date Measured	WL Alt. Fall '05	Spring/Fall 05 Change
St. Francis	04N01W17CBC1	345736	910801	209.00	2/16/2005	66.90	149.10	9/15/2005	146.20	-2.90
St. Francis	04N02E19BBB1	345701	905633	209.00	2/16/2005	59.60	149.40	9/15/2005	148.50	-0.90
St. Francis	05N01E15BCB1	350302.57	905942.41	209.00	2/16/2005	65.80	143.20	9/15/2005	142.80	-0.40
St. Francis	06N05E05BB1			190.00	4/12/2005	34.00	156.00	10/27/2005	155.00	-1.00
St. Francis	04N04E15AEA1	345752	903948	20100	4/12/2005	33.00	168.00	10/27/2005	167.00	-1.00
St. Francis	04\C1W20BBB1	345716	910759	200.00	4/12/2005	58.00	142.00	10/27/2005	140.00	-2.00
St. Francis	04\C1W25DBD1	345549	910303	199.00	4/12/2005	74.00	125.00	10/27/2005	123.00	-2.00
St. Francis	06N01E16CCC1	350804	905403	210.00	4/12/2005	64.50	145.50	10/27/2005	143.00	-2.50
St. Francis	05\C6E17DC1	350312	902853	200.00	4/12/2005	34.00	166.00	10/27/2005	165.00	-1.00
St. Francis	06N03E17CAA1	350822	904610	258.00	4/12/2005	103.00	155.00	10/27/2005	148.00	-7.00
St. Francis	05\C5E33BCC1	350004	903506	196.00	4/12/2005	29.00	167.00	10/27/2005	167.00	0.00
St. Francis	04\C2E27AAA1	345604	905220	211.00	4/12/2005	47.00	164.00	10/27/2005	163.00	-1.00
St. Francis	04N02E16ACD1	345733	906341	209.00	4/12/2005	50.00	159.00	10/27/2005	166.00	7.00
								Avg. Change:		**-1.13**
White	06N06W04AAC1	351037	913939	217.00	3/9/2005	38.24	178.76	9/12/2005	178.30	-0.46
White	06\C6W18BBC1	35085'.33	91415'.92	210.00	3/10/2005	13.20	196.80	9/12/2005	183.90	-12.90
White	06\C6W13DBB1	350918	913552	213.00	4/14/2005	49.10	163.90	10/31/2005	167.00	3.10
White	06\C6W18BCA1	350835	914150	210.00	4/14/2005	17.00	193.00	10/31/2005	186.00	-7.00
White	06N06W04EAC1	351037	913903	22100	4/14/2005	37.70	183.30	10/31/2005	182.00	-1.30
								Avg. Change:		**-3.71**
Woodruff	06N01W33AED2	350600	910559C1	216.00	2/22/2005	67.70	148.30	9/14/2005	145.80	-2.50
Woodruff	08N03W04EBE1	352128	911319	22100	3/24/2005	14.08	206.92	9/14/2005	202.67	-4.25
Woodruff	08\C3W31AAD1	351655	912028	212.00	3/24/2005	21.50	190.50	9/14/2005	189.00	-1.50
Woodruff	09N03W32ACA1	352205	911935	217.00	4/5/2005	15.70	201.30	9/27/2005	197.80	-3.50
Woodruff	07\C3W31BBA1	351'52	912103	190.00	4/5/2005	11.10	178.90	10/28/2005	173.40	-5.50
Woodruff	07\C1W04ABC1	35154'	910526	225.00	4/5/2005	80.00	145.00	10/31/2005	162.60	17.60
Woodruff	05N01W31CCC1	350106	910900	210.00	4/5/2005	57.80	152.20	10/28/2005	149.90	-2.30
Woodruff	05N03W25CDB1	350103	911531	190.00	4/5/2005	8.50	181.50	10/28/2005	177.10	-4.40
Woodruff	06N04W22BDA1	350807	912428	186.00	4/5/2005	3.20	182.80	10/28/2005	176.10	-6.70
Woodruff	05N01W10CCC1	350244	910331	210.00	4/5/2005	75.40	134.60	10/28/2005	134.70	0.10
Woodruff	08N02W27CDB1	351711	911107	213.00	4/5/2005	25.50	187.50	10/28/2005	186.00	-1.50
								Avg. Change:		**-1.31**
							Total Average Change:			**-4.36**

Appendix H

Water Quality Data from Selected ANRC Wells

Arkansas Water Resources
Center Water Quality Lab

ANRC Monitoring
Enhancement Wells
Water Quality Analysis

Well ID	Units	AR1-01	AR2-02	AR3-03	AR4-04	AR5-05	AR6-06	PR1-01	PR2-02
Location	Latitude	342036	341343	342552	342736	341245	341318	345718	344254
	Longitude	910743	911102	912252	912251	912947	912909	914728	912850
Sampling date	mm/dd/yyyy	06/05/02	06/05/02	06/11/02	06/11/02	06/12/02	06/12/02	06/04/02	06/04/02
Sample	Characteristics	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered
Parameter	Aquifer	Alluvial	Alluvial	Alluvial	Alluvial	Sparta	Sparta	Alluvial	Alluvial
Calcium	mg/L	82.19	73.46	93.36	86.63	3.57	3.38	61.10	129.53
Magnesium	mg/L	20.46	22.15	25.51	32.08	0.97	0.93	15.04	40.79
Sodium	mg/L	11.26	14.84	52.79	53.57	60.74	37.23	13.14	46.44
Potassium	mg/L	1.1	1.8	2.7	4.6	2.9	3.4	1.0	2.6
Iron	mg/L	0.046	1.753	1.663	1.507	0.042	0.057	0.026	4.384
Lead	mg/L	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Manganese	mg/L	0.018	0.193	0.236	0.172	0.023	0.011	0.005	0.190
Copper	mg/L	-	-	-	-	-	-	-	-
Zinc	mg/L	0.014	0.021	0.036	0.020	0.158	0.155	0.019	0.041
Alkalinity	mg/L as $CaCO_3$	281	264	407	385	140	96	197	364
Bicarbonate#	mg/L	340	320	491	466	170	117	240	441
Carbonate#	mg/L	0.94	1.12	2.72	2.14	0.47	0.19	0.42	1.28
Chloride	mg/L	13.66	12.79	45.42	35.62	3.89	4.23	11.37	66.30
Sulfate	mg/L	17.08	9.50	13.46	27.09	1.39	0.11	2.46	117.92
Bromide	mg/L	0.156	0.040	0.112	0.110	0.000	0.000	0.105	0.401
Fluoride	mg/L	0.050	0.220	0.190	0.210	0.400	0.310	0.05	0.18
Nitrate***	mg/L as N	0.083	0.037	0.016	0.017	0.000	0.000	0.076	0.000
Ammonia	mg/L	-	-	-	-	-	-	-	-
Orthophosphate **	mg/L	0.0719	0	0	0	0.1357	0.1054	0.1399	0
pH	standard units	7.78	7.88	8.08	8.00	7.78	7.56	7.58	7.80
Conductivity	uS/cm	573	541	880	844	280	195	405	1044
Turbidity	NTU	-	-	-	-	-	-	-	-
TSS	mg/L	0.40	0.30	1.12	0.56	0.00	0.08	0.65	8.00
TDS	mg/L	361	335	561	491	159	113	263	729
Total Coliform	MPN/100 ml	3	>200.5	3	15	59	1	<1	<1
E. coli	MPN/100 ml	<1	>200.5	<1	<1	<1	<1	<1	<1
	* Exceeded holding time			SW wells are ASWCC wells, other wells are private					
	**Orthophosphate is measured by IC, therefore sample filtered in instrument through 0.20 um pore-size membrane								
	***Nitrate was analyzed for samples collected before 10/12/03 and nitrate+nitrite thereafter and both are reported as N								
	- Not analyzed								
	? Questionable data								
	# Bicarbonate and carbonate concentrations were calculated from measured alkalinity and pH								
	## pH value is calculated value from bicarbonate and carbonate concentrations								

Arkansas Water Resources
Center Water Quality Lab

ANRC Monitoring
Enhancement Wells
Water Quality Analysis

Well ID	PR3-03	LO1-01	LO2-SW1	LO3-SW2	PR4-SW3	PR5-SW4	PR6-SW5	PR7-SW6	PR5-SW4D
Location	345844	345059	343007	343430	344653	344651	344649	344659	344651
	914629	915309	915237	915447	913827	913551	913300	912937	913551
Sampling date	06/06/02	06/06/02	06/19/02	06/18/02	03/04/03	02/16/03	03/05/03	02/19/03	03/12/03
Sample	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Sparta
Calcium	54.94	17.56	112.51	107.62	127.273	103.829	99.998	86.387	64.419
Magnesium	12.90	6.56	29.50	24.83	25.569	22.113	22.403	22.950	16.300
Sodium	18.68	13.34	47.12	33.09	29.09	26.57	37.99	21.34	44.95
Potassium	1.2	0.9	1.8	1.6	1.43	1.37	2.12	1.77	3.86
Iron	0.027	3.373	10.918	9.775	2.198	2.020	2.162	0.965	2.310
Lead	0.00	0.01	0.01	0.01	0.013	0.004	0.004	0.965	0
Manganese	0.001	2.054	0.297	0.215	0.308	0.193	0.191	0.166	0.050
Copper	-		-	-	-	-	-	-	-
Zinc	0.019	0.022	0.022	0.027	0.013	0.017	0.011	0.014	0.037
Alkalinity	206	62	338	282	368	124?	270	124?	280
Bicarbonate#	250	76	411	340	447	149?	329	149?	334
Carbonate#	0.79	0.01	0.56	1.80	1.03	1.062?	0.42	0.948?	3.44
Chloride	14.86	11.57	48.94	32.73	21.99	28.13	57.34	4.71	21.99
Sulfate	1.83	25.01	92.64	105.01	88.20	32.93	78.52	32.58	7.64
Bromide	0.146	0.108	0.216	0.162	0.17	0.076	0.45	0.00	0.093
Fluoride	0.19	0.28	0.12	0.11	0.13	0.09	0.14	0.14	0.14
Nitrate***	0.231	0.019	0.026	0.037	0.03	0.02	0.08	0.14	0.01
Ammonia	-	-	-	-	-	-	-	-	-
Orthophosphate **	0.636	0	-	-	0.0332	0	0	0.013	0
pH	7.84	6.36	7.47	8.06	7.70	8.19	7.44	8.14	8.35
Conductivity	439	212	929	818	880	288	820	279	616
Turbidity	-	-	-	-	-	-	-	-	-
TSS	0.18	0.60	17.20	42.24	15.0	7.8	30.1	13.8	11.44
TDS	279	173	539	765	569	463	514	401	346
Total Coliform	70	<1	12	>200.5	59,000	>200.5	165	95	-
E. coli	<1	<1	<1	2	<1	<1	<1	<1	-
	* Exceeded holding time				SW wells are ASWCC wells, other wells are private				
	**Orthophosphate is measured by IC, therefore sample filtered in instrument through 0.20 um pore-size membrane								
	*** Nitrate was analyzed for samples collected before 10/12/03 and nitrate+nitrite thereafter and both are reported as N								
	- Not analyzed								
	? Questionable data								
	# Bicarbonate and carbonate concentrations were calculated from measured alkalinity and pH								
	## pH value is calculated value from bicarbonate and carbonate concentrations								

Arkansas Water Resources
Center Water Quality Lab

ANRC Monitoring
Enhancement Wells
Water Quality Analysis

Well ID	PR7-SW6D	PR8-SW7	AR7-SW8	MN1-SW10	LO4-SW9	AR1-01	AR2-02	AR3-03	AR4-04
Location	344659	343826	340740	344139	343841	342036	341343	342552	342736
	912937	913613	912115	910542	920337	910743	911102	912255	912251
Sampling date	03/27/03	05/28/03	06/11/03	06/18/03	06/25/03	10/15/03	10/15/03	10/16/03	0/16/2003
Sample	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered
Parameter	Sparta	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	48.524	89.612	162.130	142.411	52.696	82.420	88.772	103.951	88.957
Magnesium	10.774	26.064	39.511	53.309	14.520	19.636	24.898	28.119	32.907
Sodium	52.85	51.330	79.52	43.89	69.30	11.250	27.750	58.650	53.460
Potassium	3.68	1.390	2.702	1.978	2.244	1.220	2.390	2.890	4.530
Iron	1.226	1.463	3.352	4.917	10.605	0.017	2.012	2.674	2.545
Lead	0.005	0.001	0	0	0	0.001	0.015	0.000	0.004
Manganese	0.063	0.185	0.324	0.317	0.296	0.021	0.232	0.263	0.194
Copper	-	-	-	-	-	0.003	0.253	0.001	0.000
Zinc	0.012	0.000	0.000	0.000	0.000	0.000	0.117	0.000	0.000
Alkalinity	240	274	432	432	242	250	302	404	390
Bicarbonate#	289	334	526	526	295	304	368	492	475
Carbonate#	1.96	0.11	0.44	0.57	0.09	0.30	0.45	0.47	0.60
Chloride	24.01	28.125	156.971	71.918	19.874	12.053	30.795	43.985	34.880
Sulfate	1.01	85.398	38.482	92.961	0.000	21.532	16.916	13.801	20.000
Bromide	0.225	0.213	0.285	0.410	0.000	0.154	0.147	0.138	0.132
Fluoride	0.20	0.149	0.000	0.047	0.069	0.078	0.082	0.082	0.130
Nitrate***	0.77	1.894*	0.008*	0.058*	0.140*	0.000	0.000	0.000	0.000
Ammonia	-	-	-	-	-	0.010	0.374	0.672	0.859
Orthophosphate **	0.047	0.0509	0	0	0	0.094	0.021	0.000	0.000
pH	8.17	6.85##	7.26	7.370	6.830	7.320	7.420	7.310	7.430
Conductivity	536	770	1296	1133	606	547.000	686.000	900.000	860.000
Turbidity	-	-	-	-	-	1.000	8.000	16.000	20.000
TSS	21.68	-	-	-	-	-	-	-	-
TDS	291	511*	824*	773*	390*	-	-	-	-
Total Coliform	-	-	-	-	-	-	-	-	-
E. coli	-	-	-	-	-	-	-	-	-
	* Exceeded holding time				SW wells are ASWCC wells, other wells are private				
	**Orthophosphate is measured by IC, therefore sample filtered in instrument through 0.20 um pore-size membrane								
	*** Nitrate was analyzed for samples collected before 10/12/03 and nitrate+nitrite thereafter and both are reported as N								
	- Not analyzed								
	? Questionable data								
	# Bicarbonate and carbonate concentrations were calculated from measured alkalinity and pH								
	## pH value is calculated value from bicarbonate and carbonate concentrations								

Arkansas Water Resources
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ANRC Monitoring
Enhancement Wells
Water Quality Analysis

Well ID	AR5-05	AR6-06	PR2-02	PR3-03	LO2-SW1	LO3-SW2	AR1-01	AR2-02	AR3-03
Location	341245	341318	344254	345844	343007	343430	342036	341343	342552
	912947	912909	912850	914629	915237	915447	910743	911102	912252
Sampling date	10/15/03	10/15/03	10/16/03	10/16/03	10/14/03	10/13/03	10/15/03	10/15/03	10/16/03
Sample	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Filtered	Filtered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	9.510	3.660	137.119	54.770	118.360	121.914	78.789	84.787	99.957
Magnesium	2.649	0.975	44.008	12.030	27.336	32.048	19.125	24.214	27.272
Sodium	180.320	37.770	47.120	20.870	28.380	36.480	11.210	27.230	56.810
Potassium	4.680	3.730	2.900	1.410	1.890	2.140	1.230	2.340	2.950
Iron	0.116	0.130	9.284	0.100	12.166	11.308	0.028	0.800	2.407
Lead	0.003	0.004	0.006	0.003	0.010	0.005	0.002	0.009	0.003
Manganese	0.033	0.125	0.221	0.000	0.207	0.442	0.021	0.224	0.266
Copper	0.060	0.001	0.007	0.001	0.000	0.000	0.000	0.000	0.000
Zinc	0.184	0.151	0.028	0.000	0.000	0.000	0.003	0.000	0.000
Alkalinity	394	98	376	204	288	320	-	-	-
Bicarbonate#	476	119	458	248	351	390	-	-	-
Carbonate#	2.33	0.34	0.30	0.42	0.16	0.17	-	-	-
Chloride	13.350	3.971	94.911	13.336	32.795	125.213	-	-	-
Sulfate	0.034	0.083	115.448	1.826	104.071	139.343	-	-	-
Bromide	0.068	0.038	0.672	0.132	0.175	0.303	-	-	-
Fluoride	0.753	0.137	0.042	0.115	0.108	0.113	-	-	-
Nitrate***	0.051	0.000	0.000	0.008	0.000	0.000	-	-	-
Ammonia	1.083	0.383	0.910	0.012	0.435	0.340	-	-	-
Orthophosphate **	0.115	0.130	0.000	0.084	0.000	0.000	-	-	-
pH	8.020	7.790	7.150	7.560	6.990	6.960	-	-	-
Conductivity	766.000	202.000	1152.000	446.000	846.000	961.000	-	-	-
Turbidity	0.000	0.000	48.000	0.000	93.000	84.000	-	-	-
TSS	-	-	-	-	-	-	-	-	-
TDS	-	-	-	-	-	-		-	-
Total Coliform	-	-	-	-	-	-	-	-	-
E. coli	-	-	-	-	-	-	-	-	-
	* Exceeded holding time				SW wells are ASWCC wells, other wells are private				
	** Orthophosphate is measured by IC, therefore sample filtered in instrument through 0.20 um pore-size membrane								
	*** Nitrate was analyzed for samples collected before 10/12/03 and nitrate+nitrite thereafter and both are reported as N								
	- Not analyzed								
	? Questionable data								
	# Bicarbonate and carbonate concentrations were calculated from measured alkalinity and pH								
	## pH value is calculated value from bicarbonate and carbonate concentrations								

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ANRC Monitoring
Enhancement Wells
Water Quality Analysis

Well ID	AR4-04	AR5-05	AR6-06	PR2-02	PR3-03	L02-SW1	AR8 SW11	AR3 SW12	AR3 03	L05 SW13
Location	342736	341245	341318	344254	345844	343007	342630	342553	342552	344543
	912251	912947	912909	912850	914629	915237	913007	912251	912252	915106
Sampling date	10/16/03	10/15/03	10/15/03	10/16/03	10/16/03	10/14/03	04/20/04	04/21/04	04/21/04	04/23/04
Sample	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	86.265	9.496	3.579	133.538	54.972	116.256	74.207	95.838	99.280	46.182
Magnesium	32.102	2.688	0.958	43.302	12.209	26.999	20.171	29.312	28.924	13.117
Sodium	52.620	176.550	37.440	46.720	20.870	28.390	33.30	63.33	56.87	63.85
Potassium	4.430	4.610	3.700	2.900	1.420	2.050	1.89	3.04	2.92	1.01
Iron	2.252	0.122	0.028	3.373	0.000	11.961	1.908	0.384	1.190	1.954
Lead	0.007	0.002	0.003	0.005	0.000	0.006	0.008	0.006	0.013	0.001
Manganese	0.197	0.034	0.013	0.213	0.001	0.204	0.140	0.224	0.223	0.100
Copper	0.000	0.008	0.000	0.000	0.001	0.010	0.006	0.005	0.009	0.002
Zinc	0.000	0.191	0.140	0.002	0.000	0.020	0.123	0.046	0.105	0.017
Alkalinity	-	-	-	-	-	-	280	398	414	246
Bicarbonate#	-	-	-	-	-	-	341	484	503	294
Carbonate#	-	-	-	-	-	-	0.47	0.81	1.01	2.96
Chloride	-	-	-	-	-	-	17.598	44.796	45.785	16.365
Sulfate	-	-	-	-	-	-	10.593	15.224	13.936	30.995
Bromide	-	-	-	-	-	-	0.000	0.112	0.116	0.083
Fluoride	-	-	-	-	-	-	0.069	0.070	0.066	0.143
Nitrate***	-	-	-	-	-	-	0.089	0.000	0.000	0.000
Ammonia	-	-	-	-	-	-	0.383	0.622	0.635	0.103
Orthophosphate **	-	-	-	-	-	-	0.0398	0.046	0	0.025
pH	-	-	-	-	-	-	7.45	7.53	7.61	8.31
Conductivity	-	-	-	-	-	-	611	885	924	563
Turbidity	-	-	-	-	-	-	36	15	14	24
TSS	-	-	-	-	-	-	-	-	-	-
TDS	-	-	-	-	-	-	-	-	-	-
Total Coliform	-	-	-	-	-	-	-	-	-	-
E.coli	-	-	-	-	-	-	-	-	-	-
	* Exceeded holding time				SW wells are ASWCC wells, other wells are private					
	**Orthophosphate is measured by IC, therefore sample filtered in instrument through 0.20 um pore-size membrane									
	***Nitrate was analyzed for samples collected before 10/12/03 and nitrate+nitrite thereafter and both are reported as N									
	- Not analyzed									
	? Questionable data									
	# Bicarbonate and carbonate concentrations were calculated from measured alkalinity and pH									
	## pH value is calculated value from bicarbonate and carbonate concentrations									

Arkansas Water Resources
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ANRC Monitoring
Enhancement Wells
Water Quality Analysis

Well ID	PN1 SW14	PN2 SW15	CH1-SW16	JK1-SW17	W01-SW18	CS1-SW19	SF1-SW20	LN1-SW21	DR1-SW22
Location	353740	353224	354916	353550	352128	351508	345735	335228	334144
	901802	902646	905125	910428	911919	905113	910801	913833	912842
Sampling date	04/27/04	04/28/04	05/04/04	05/06/04	05/07/04	05/11/04	05/12/04	05/18/04	05/19/04
Sample	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	74.608	89.638	59.962	81.302	60.176	126.640	64.047	22.647	30.074
Magnesium	12.612	22.795	17.115	23.199	13.885	56.522	19.662	6.884	10.267
Sodium	7.30	10.35	28.85	24.10	19.40	30.98	15.04	14.87	12.08
Potassium	2.08	1.19	2.00	2.35	2.22	1.77	1.53	1.95	1.62
Iron	14.620	9.903	0.878	2.575	3.427	0.427	0.626	16.362	23.765
Lead	0.008	0	0.004	0.001	0.005	0.003	0.003	0.007	0.001
Manganese	0.532	0.744	0.245	0.634	1.530	0.239	0.904	0.617	0.414
Copper	0.001	0.003	0.005	0.002	0.001	0.006	0.001	0.003	0.000
Zinc	0.015	0.021	0.010	0.015	0.012	0.029	0.017	0.038	0.008
Alkalinity	240	256	268	256	192	472	316	100	116
Bicarbonate#	292	312	326	310	233	571	382	122	141
Carbonate#	0.29	0.31	0.70	1.08	0.71	2.19	1.64	0.03	0.06
Chloride	2.412	8.511	26.649	15.171	6.061	15.948	17.538	1.986	7.148
Sulfate	16.651	51.682	49.327	61.752	54.832	54.722	23.360	1.129	7.894
Bromide	0.008	0.000	0.231	0.113	0.000	0.169	0.115	0.006	0.000
Fluoride	0.099	0.093	0.0637	0.0554	0.0700	0.0525	0.0776	0.062	0.092
Nitrate***	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ammonia	0.616	0.092	0.278	0.402	0.196	0.152	0.164	0.287	0.222
Orthophosphate **	0.0265	0	0.0261	0	0	0	0.1059	0.0282	0
pH	7.30	7.30	7.64	7.85	7.79	7.89	7.94	6.62	6.94
Conductivity	480	578	713	653	480	1007	688	214	277
Turbidity	42	48	3	11	16	12	20	91	37
TSS	-	-	-	-	-	-	-	-	-
TDS	-	-	-	-	-	-	-	-	-
Total Coliform	-	-	-	-	-	-	-	-	-
E. coli	-	-	-	-	-	-	-	-	-
	* Exceeded holding time				SW wells are ASWCC wells, other wells are private				
	**Orthophosphate is measured by IC, therefore sample filtered in instrument through 0.20 um pore-size membrane								
	*** Nitrate was analyzed for samples collected before 10/12/03 and nitrate+nitrite thereafter and both are reported as N								
	- Not analyzed								
	? Questionable data								
	# Bicarbonate and carbonate concentrations were calculated from measured alkalinity and pH								
	## pH value is calculated value from bicarbonate and carbonate concentrations								

Arkansas Water Resources
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ANRC Monitoring
Enhancement Wells
Water Quality Analysis

Well ID	CD1-SW23D	MN1-SW10D	PR8-SW7D						
Location	-	-	-						
	-	-	-						
Sampling date	09-28-2004	09-28-2004	09-28-2004						
Sample	Filtered	Filtered	Filtered						
Parameter	Sparta	Sparta	Sparta						
Calcium	19	52	87						
Magnesium	9.4	14	20						
Sodium	7.6	100	36						
Potassium	7.6	6.6	4.3						
Iron	16*	1*	2						
Lead	0.001*	<0.001*	<0.001*						
Manganese	0.24*	0.074*	0.094*						
Copper	0.004*	0.006*	0.002*						
Zinc	0.028*	0.011*	0.015*						
Alkalinity	102	372	294						
Bicarbonate#	-	-	-						
Carbonate#	-	-	-						
Chloride	1.27	28.21	23.73						
Sulfate	6.90	0.77	11.76						
Bromide	-								
Fluoride	0.06	0.16	0.14						
Nitrate***	0	0	0						
Ammonia	0.513	1.466	0.361						
Orthophosphate **	0	0.0216	0						
pH	-	-	-						
Conductivity	-	-	-						
Turbidity	-	-	-						
TSS	-	-	-						
TDS	-	-	-						
Total Coliform	-	-	-						
E coli	-	-	-						
	* Exceeded holding time. The metal analyses were conducted within 180 days and the holding time is 6 months, thus these analyses maybe								
	viewed as having been analyzed within holding time.								
	** Orthophosphate is measured by IC, therefore sample filtered in instrument through 0.20 um pore-size membrane								
	- Not analyzed								